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## Original Communications.

## SYMPATHETIC INSANITY IN TWIN SISTERS.

By GEO. S. WALKER, M. D., Staunton, Va.,

First Assistant Physician in charge of Female Department, Western [Va.] State Hospital, etc.

As a matter of special interest to alienists, and of interest also to other medical brethren, I send the history of two very peculiar cases of insanity, which have been in this hospital for some time. Their special peculiarities are that they are twin sisters, and that the mental trouble of one came on suddenly, without any heredity, and that of the other came on as soon as she saw her sister.

An important question is, How much influence was exerted by sympathy of twinning in these cases? The bond of sympathy in members of the same family is known to all; but the extent and intensity of it in cases of twins is not fully comprehended. Of course, in the case of the Siamese twins, on account of the physical union which existed, the manifest sympathy between them was not so surprising. We would naturally expect in such cases, where there was a continuity of the physical as well as of the nervous system, that anything affecting one would naturally affect the other. That they would think and act alike is reasonable. But in similar cases of those who are the subjects of separate physical and nervous organization, it is yet a subject of conjecture, and so far as I can learn, unknown to the medical or scientific professions.

According to the testimony of their mother, they were from childhood intelligent, refined, and exemplary in their deportment. They were all their lifetime intimately associated in their relations, and remarkably sympathetic with one another—sharing intensely each other's joys and pleasures, and strangely bearing one another's burdens and sorrows. And strange to say, the bond of sympathy was singularly

manifested in their sickness. If one became sick, the other was almost sure to get sick, manifesting the same symptoms.

As an evidence of this not being assumed, it was related that one had an attack of pneumonia, and in a day or two the other was similarly affected. Under ordinary circumstances, this would have been considered a coincidence. This is only one of many instances in which their peculiar sympathy was manifested.

Every medical man is familiar with the sympathy existing between organs of the same individual—for instance, in cases of sympathetic blindness, owing, of course, to the sympathy of contiguity of the nervous system. But how such sympathy can exist in separate and distinct individuals is inexplicable. With this preliminary, I will now proceed to give an account of these two cases from the inception of their mental trouble:

Their home was in Campbell county, Va. Just preceding their attack, they had gone from home. One went to Lynchburg to visit relatives, in fine health and spirits, and to be present at the marriage of a friend. On the 1st day of February, 1900, without any premonition, she was attacked with acute mania of a violent form, which was, of course, a complete transformation, a subversion of her previous modest, retiring, and ladylike disposition to one of the very opposite. Suddenly she became terribly excited, talking incessantly and incoherently, making wild gesticulations, using profane and obscene language, was noisy, and tore up her clothes and books—everything in her reach that was breakable. She became unmanageable, and had to be forcibly controlled by her friends.

Her condition was unaccountable to her physician and friends; and hoping it might be acute delirium, resulting from some unknown physical trouble, they undertook to treat and control her at home. They kept this plan up about a week, and then telegraphed her sister, who was visiting friends in Portsmouth, Va., to come

and help nurse her. As soon as she beheld her sister, she became violently insane, and in precisely the same way. We sent for, and brought the two to this hospital. They were received in a deplorable condition, both exactly alike, with all the symptoms of violent acute mania, as related in the first case. As a precautionary measure, they were placed in different wards, and had no intercourse with each other. Neither knew the other was here. They continued to be violent for some time; and a curious and most remarkable psychological fact is the similarity of the progress of their attacks. How far such conditions were due to the usual course of such individual cases, or to the unaccountable sympathy existing between them, are matters for conjecture. If they had been entirely distinct individuals, of different families, one might think this condition not so strange, as such cases run very much the same course—differing, however, somewhat in intensity, and also in duration, owing to the direct and indirect heredity and severity of the existing cause in each case, and their susceptibility to mental shock.

Thus, in the second one of these sisters, without, however, any inherited predisposition, we might say her attack was due to the shock of beholding her sister in such a deplorable condition. But here is presented a mystery—why, she, too, should have exactly the same form of insanity, acute mania in a violent form?

Now comes the most wonderful similarity of these cases, and that which makes them peculiar in their remarkable sympathy: As related above, they were placed in different wards, and kept entirely separate, unconscious of each other's presence in the same building, or even in the hospital. After awhile one got better, and it was observed that the other was better at the same time. Both continued to improve, and both became more rational. After awhile both relapsed at the same time. This continued for awhile, and at one time great hope was entertained of their recovery. They were allowed to visit each other, at one time, and recognized one another, but never realized their situation or became rational enough to object to their environment.

Subsequently they both relapsed and continued violent, until finally both became demented about the same time, and both have continued since in this condition.

Thus have I related an exact history of the

above cases, without going into their physiological and psychological condition.

### RELAPSE IN TYPHOID FEVER.\*

By CLIFTON MAYFIELD, M. D., Washington, D. C.

That relapse in typhoid fever is a subject of great interest to all practitioners of medicine is my only excuse for bringing the subject to your notice to-night.

I do not propose to weary you with any great array of facts or figures, especially as in the past I have kept no notes of my cases; but briefly to call attention to two cases occurring during the past season, and to make a few remarks upon the subject in a general way.

By true relapse I mean a recurrence of fever in the course of well-established convalescence, after an interval of complete defervescence, and attended by many or all of the typical symptoms of the disease.

Out of twenty cases during the past season, from May to October, I had two cases of true relapse, which will well serve to illustrate.

Mr. G., an electrician, 24 years of age, after a moderate run of fever, suffered a recurrent relapse on the 31st day of the disease, but was finally convalescent on the 44th day, and in three weeks was discharged from hospital.

Thirty-eight days from the establishment of convalescence, and twenty-eight days from the first allowance of solid food, his fever recurred. His rise of temperature was rather abrupt, reaching 104° on the third day of relapse, and gradually declining until convalescence was re-established on the thirteenth day. Constipation existed throughout the disease. The most marked symptom was the eruption. This appeared on the fourth day, was plentifully distributed over abdomen, chest and arms, and only completely disappeared a few days before the normal point of temperature was reached.

As a rule, I have observed that relapses are most prone to occur in those cases where the temperature in the first week or two of convalescence hovers about the normal line, and but rarely when the temperature becomes subnormal and persistently remains so. It has appeared to me that, though reactionary, subnormal

\* Read before the Medical and Surgical Society of the District of Columbia, March 6, 1902.

temperature is somewhat of an index of the completeness of the process of immunization. The case under consideration was an exception, however, the reading for the two weeks during which the record was kept, being never above  $98^{\circ}$  in the morning, and  $97^{\circ}$  in the evening.

The foregoing case was a typical example of true relapse both in course and duration. The second case was, as regards temperature, of a most irregular type, with several recrudescence and one true relapse.

Mr. A., druggist, 38 years of age, had probably been sick for one or two weeks when I found him with an evening temperature of  $102^{\circ}$ , and ordered him to bed. After a moderate fever of nine days, the temperature dropped to normal, only to start on the ascent the next day, reaching  $103.8^{\circ}$  one week later.

I should say here that the days of reckoning I give are from the day of going to bed, as I was unable to fix the previous duration of sickness.

On the eighteenth day the temperature was again normal, and remained so until the twenty-sixth day, when there was a sudden rise to  $102.6^{\circ}$ , from which point it gradually dropped to normal on the thirtieth day. Owing to the fact that this last rise was considered not to be a recrudescence, but due to auto-infection, I mistakenly allowed the patient solid food on the thirty-fifth day, and he still more mistakenly, five days later, feeling quite strong, without my knowledge, went out of doors. This error was promptly followed by a chill and recurrence of fever. Again the temperature became normal, and continued so usually between  $98^{\circ}$  and  $98.4^{\circ}$ , but occasionally as high as  $98.8^{\circ}$ .

Relapse came on the seventy-first day, twenty-eight days after convalescence had commenced, and eighteen days after the first solid food had been allowed.

The rise of temperature was gradual, reaching  $103.8^{\circ}$  in about twelve days. Eruption appeared in the second week, and was marked.

There was but slight delirium, indeed almost none, a rather remarkable fact in view of the run of temperature and intensity of the symptoms in general. Temperature became normal on the morning of the twenty-fourth day of disease, followed at once by recrudescence, with gradual rise for five days, and equally as gradual decline for a week more, reaching normal on the thirty-sixth day of relapse. Until the forty-fifth day the temperature did not go above  $94.8^{\circ}$  except on one occasion, and then only to  $98.8^{\circ}$ .

On this latter day there was a sudden rise to

$104.2^{\circ}$ , a nearly similar temperature the following evening, and then a fall as sudden as the rise had been. From the forty-eighth to the fifty-fifth day temperature was never higher than  $98.8^{\circ}$ , and then came another rise, maintained for two days, going as high as  $104^{\circ}$ , and again reaching normal on the fifty-seventh day.

From this time on temperature ran persistently subnormal—that is  $98^{\circ}$  and below.

The allowance of food (solids) was delayed a few days by the rise on the forty-fifth day, but seeing in it none of the elements of a relapse, food was given on the forty-ninth day, and was persisted in, in spite of the rise five days later, and without any bad effect.

There could be found no reasonable cause for relapse in either of these cases other than such as would operate in all cases of typhoid fever. The patients had been carefully supervised in the matter of diet long after the commencement of solids and until moderate exercise and returning strength would appear to have removed all danger.

The recrudescences of fever in the second case are of considerable interest.

It is my conviction that the recurrence, beginning on the twenty-fourth day, was a true renewal of activity of the specific germ, a recurrent relapse, and its course of twelve days would tend to confirm this belief. The two following renewals of fever, I feel equally sure, were due to auto-intoxication, and the source intestinal.

Indeed, I believe that many, if not most, recurrent relapses, so-called, those running a brief course, may be accounted for in this way.

The fecal matter of man has been shown to be toxic, and in such a disease as typhoid fever we can readily believe that there is unusual toxicity owing to increased activity and greater virulence of ordinary intestinal bacteria.

The statistics of typhoid relapses vary greatly as to frequency, various authors giving anywhere from 3 per cent. to as high as 19 or 20 per cent.

This great variation may probably, to some extent, be accounted for by a failure on the part of some to properly differentiate between true and recurrent (or recrudescence) relapse.

Eleven thousand six hundred and forty cases from various sources show about 6 per cent. Jaccoud's statistics show 9 to 10 per cent. Frauchenhauser's 9.5 per cent. As near as I can recall, my own experience confirms the former figures.

Statistics, too, would go to show that patients

over 30 years of age are more prone to relapse than younger persons, and that in children they are quite infrequent. While I have seen recrudescences, I cannot recall a single instance of true relapse in childhood.

Two relapses are by no means infrequent, and I recall one very severe case several years ago in which there were three.

Pepper says that immunity from second attacks is usually complete and lasting; but Leidy reports the case of a man who had typhoid fever at sixteen years of age, a second attack six months later, and a third at thirty-four years, followed by four relapses, in the third of which bowel hemorrhage took place.

Out of 829 cases, with 86 relapses (including intercurrent relapses), Osler found the greatest period of apyrexia to be thirty-six days; the next greatest twenty-three days, in one case, and none others longer than nineteen days. It will be observed that my two cases recorded here show twenty-eight and thirty-eight days, respectively.

The usual period of apyrexia, however, I believe, will be found to be from one to two weeks, most frequently relapsing near the fifth week of the disease.

As a rule, the symptoms are more rapid in their appearance than in the original attack, but most or all of the typical symptoms reappear. Contrary to the opinion generally entertained by our patients, the duration and severity of relapse is, as a rule, less than that of the first attack, usually running a moderate course in about two weeks and ending in recovery.

Opportunities for post-mortem findings are not frequent, but autopsies have shown the healing ulcers of the primary disease and the newly ulcerating patches of the relapse.

Sometimes these new lesions are found above, but more frequently below the original ones. Various causes have been assigned for relapse: Constipation, too early indulgence in food and exercise, the passage of sloughs over previously uninvolved Peyer's patches, and reinfection from the gall bladder.

The first essential, however, to make relapse possible, is, of course, incomplete immunization, the direct cause may be one of those enumerated or some one not yet determined. Constipation and too early or overindulgence in food or exercise may quite reasonably be assumed to be capable of causing it. Especially is this the case with regard to food, since Chiari has shown the presence of the typhoid bacilli in the gall

bladder a long time after recovery. For with the ingestion of solids, we not only have more material to act as irritants, passing over the freshly or imperfectly healed intestinal ulcers, but with the greater outpouring of bile thus induced we have fresh invoices of bacilli in goodly numbers to increase the chances of reinfection. Then, too, with premature or excessive feeding there is likely to follow incomplete digestion and fermentative changes, and with the absorption of the toxins produced, may possibly come renewed activity of the typhoid bacilli where full immunization has not been established.

P. Horton Smith, in the Goulstonian Lectures, says: "Typhoid fever can no longer be regarded as a local disease of the intestines only. It is rather a form of septicæmia with secondary dissemination of the bacilli. The bacilli can always be found in the mesenteric glands, spleen and liver, often in bone marrow, bile and urine, and occasionally in other organs and the blood.

"But though the bacillus typhosus plays an important part in the production of the disease, it is not the sole factor. Its virulence is enhanced by the presence in the system of some of the normal intestinal inhabitants, the bacillus coli and the bacillus proteus vulgaris. These facts afford a clue to the explanation of relapses. In the incomplete immunization of the primary attack some typhoid bacilli escape destruction. If now a fresh absorption of toxins takes place, the virulence of these bacilli is renewed, a second invasion of the system occurs, and we have a relapse."

Inasmuch as there is no way to determine whether or not immunization has been completely established, we can only direct our efforts toward reducing the danger of such an onward happening as relapse to a minimum.

Perhaps at no far distant day complete immunization may be accomplished by injections of typhoid toxins or anti-typhoid serum; recent progress in the prevention and cure of other diseases makes this appear highly probable.

As toxicity exists in the stools fecal accumulation must be avoided. Ordinarily the enema will effect complete and satisfactory unloading of the bowel, but occasionally casters may be cautiously given with advantage.

Intestinal antiseptics, I believe, are of service, and so far as my experience goes, there is none better than cresote. Bouehard recommends for this purpose, by reason of their insolubility, iodoform and naphthalin.

After all, however, most benefit is to be ob-

tained from careful avoidance of too rapid feeding. In a disease so prolonged as are even the milder cases of typhoid fever, patients are prone to chafe under dietary restraint as they approach convalescence, and much more so when they become afebrile. Even the physician, though fully alive to the need for greatest care in early convalescence, is too much inclined to leave the patient to be his own guide as to exercise and diet after the first week of solid food. More than one relapse, I have felt, I might justly attribute to the patient's perverse indiscretion or my own lack of forcible insistence upon a conscientious adherence to the directions I gave.

Broadly speaking, I would say that no typhoid convalescent should be allowed solid food, and under this head I include semi-solids as well, less than ten days after normal evening temperature has been established, and in some cases the period should be even longer. The larger my experience the more I become convinced of the wisdom of such delay in feeding, good authority to the contrary notwithstanding.

On the tenth day of convalescence, then, I give toast, eggs the second and third days of feeding, and on the following day meat. Starchy foods I do not give until the fifteenth or sixteenth day. Later I allow a baked apple, but beyond this no other article of diet until after two weeks of solid food.

Exercise must, of course, be regulated after proper consideration of the severity of the attack and the resulting muscle degeneration, bearing always in mind the fact that fatigue reacts injuriously upon the digestive function.

1335 Thirtieth street, N. W.

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## GONORRHEAL RHEUMATISM.

By DOUGLAS WESTERVELT, M. D., Shreveport, La.

The *etiology* of this disease has for many years given rise to much discussion without adding any reliable information on the subject matter under investigation.

The disease is recognized by many able writers as a toxic effect of the gonococcus upon the general system, either by its presence in the circulation or that of the toxius of this micro-organism. They maintain that the specific urethritis is the local manifestation of the

micro-organism, and the accompanying arthritis is a localized product of a general infection. They go so far as to claim that the synovitis is in no way related to rheumatism, and even discard the name under which the disease is generally known, calling it gonorrhœal arthritis instead of gonorrhœal rheumatism. The reasons set forth for such views are, that the articular inflammation concurring with gonorrhœal urethritis is different from that of ordinary rheumatism. These writers seem to ignore what is universally conceded, that the clinical features of a fixed disease are entirely different from the typical features of the diseases forming the complication.

The fact that an articular inflammation associated with gonorrhœa is dissimilar to an ordinary synovitis, furnishes no ground for believing that these conditions have no interrelation. It is claimed by these authorities that gonorrhœal urethritis causes the articular disease, and yet they cannot explain its mode of action in producing the two forms of inflammation. If the pyæmic theory is accepted, why are the joints alone involved? Why are not other tissues invaded? Why is the arthritis sometimes non-articular and sometimes poly-articular? Why should the large joints be more liable to invasion than the small joints, and why is the knee joint so much more frequently involved than others?

A general pyæmic infection should not be so restricted in its operations. It is claimed in behalf of the pyæmic theory that gonorrhœal arthritis does not require for its production the usual exciting causes which invite rheumatic attacks, but can any one name any special exciting causes which invariably give rise to an attack of rheumatism? Gonorrhœal rheumatism occurs more frequently in the early part of middle life, so does rheumatism. It occurs more frequently in males than in females; this is also the case with rheumatism. Gonorrhœal rheumatism occurs in only about 2 per cent. of gonorrhœal cases. If the gonococci or their toxius provoke the articular inflammation, it seems strange that they do so in only one or two cases in a hundred of gonorrhœal urethritis. According to the testimony of many trustworthy observers, the same forms of articular inflammation have been known to accompany urethritis not produced by the gonococcus. This weakens the theory of pyæmic infection and strengthens the contention by many writers of

concurrent rheumatic disease as a dominating factor.

Furthermore, it is very rare to find pyæmia or septicæmia resulting from inflammation of mucous membranes, and if it should, other contiguous structures would be likely to suffer as well as the joints.

Is it possible that gonorrhœal pyæmia will produce gonorrhœal rheumatism, and at the same time never cause pyæmia disease in any neighboring tissues or organs? It is true that pyæmic theory is now more generally accepted than any other, but the clinical evidence upon which it rests will not bear a critical examination? It would seem, in the absence of any positive evidence to support the theory of pyæmia, accidental rheumatism as an intercurrent complication would be a logical inference in the determination of factors in gonorrhœal arthritis. There is much more evidence in favor of this theory than that of pyæmia, but the tendency of most writers to reason from the standpoint of an unwarrantable bias leads them to ignore every argument which refutes the theory of gonorrhœal inflammation. They claim that the gonococcus has been found in these inflammatory lesions, but they overlook the fact that in the majority of cases it has not been found, and furthermore its presence does not prove it causes the lesion.

The writer does not claim that all cases of arthritis in gonorrhœal disease are rheumatic, nor that the gonococcus never exerts any provocative influence over the arthritic inflammation. The main contention of this paper is, that the variegated clinical history of rheumatism shows that it is a potent factor in many localized lesions, and there is no justification in a sweeping denial of its relationship to gonorrhœal arthritis.

The symptoms of gonorrhœal rheumatism during the course of gonorrhœal urethritis, are, a sense of uneasiness, aching stiffness or lancinating pain in one or several of the joints. The knee is oftener involved than any other articulation, especially the left knee. Other joints may become consecutively or simultaneously involved. The articular inflammation usually develops in the later stages of gonorrhœa, and often after the urethral discharge has almost entirely ceased. The articular symptoms arise gradually without any alteration in the external appearance of the joint. As long as the affected part is at rest there is not apt to be much pain, but the least movement provokes it

at once. The inflammatory process is of a sub-acute type, and it never announces its advent with a chill, as generally happens in pyæmic attacks. When the inflammatory attack reaches its culminating point the joint may become distended and give rise to considerable effusion. The articular inflammation may run an indefinite course, and last weeks or months. In these cases if the effusion is of a fibrinous character, anchylosis may result.

*In the treatment of this disease, we must not lose sight of the fact that we have to deal with a mixed form of disease. We have the gonorrhœal element confronting us, and we also probably have the rheumatic element to claim our attention. Besides these conditions, we may also be required to treat the general health of the patient. If there is a urethral discharge, it must be treated. If there is a rheumatic condition, it must be treated. If there is an impaired state of the health, this also must engage our attention. The local treatment of the articular inflammation will not differ materially from that of any inflammation of the joints. We must allay inflammation, stimulate absorption of effusions, and restore normal functions of the articulation.*

There are many methods of accomplishing these objects. For the urethritis we may resort to instillations of permanganate of potash, with the internal administration of cordial of cod liver oil compound (Hagee), with five grains of iodide of potassium to each tablespoonful of this preparation—a tablespoonful to be given four times a day after meals and at bed time. The iodide of potassium may be increased or diminished according to the requirements of the particular case. This disease, with its painful accompaniments, has a depressing effect on the vital processes, and rapidly impairs nutrition. The iodide of potassium removes the cause of the pain by its eliminating properties, tones up the nervous system, and by regulating the kidneys allays the acidity of the urine. With such a constitutional corrective and suitable diet, and mild antiseptic injections or irrigations this disease is readily subdued. Besides the general restorative action of the above remedy, it directly increases the excretion of urine and uric acid, and renders the urine less irritating to the inflamed mucous membrane of the urethra. This preparation is therefore intended to meet both the rheumatic and gonorrhœal conditions of this troublesome disease.

It is palatable and efficient in the doses

named—a tablespoonful after each meal and at bedtime being the average quantity required for successful results.

### Four Cases of Mastoiditis, Which Serve to Illustrate Two of the Standpoints from Which the Question of Early Operative Intervention in Mastoid Inflammation Should Be Viewed.

OF THESE CASES THREE WERE OPERATED UPON;  
ONE WAS NOT.

By JOHN DUNN, M. D., Richmond, Va.,

Professor of Diseases of the Ear and Throat, etc., University College of Medicine, Richmond; Associate Physician and Surgeon to the Richmond Eye, Ear and Throat Infirmary, etc.

CASE I.—Mr. B., aged 21 years. History as follows: In October, 1901, he had a severe and prolonged attack of follicular tonsilitis, during the course of which the right middle ear became inflamed, and, although incision of the drum was resorted to, discharge from the middle ear appeared, and was purulent and profuse. There was from time to time some stiffness of the neck, and some tenderness on pressure over the lower back part of the tip of the mastoid. The discharge from the middle ear grew less as the condition of the throat improved. During the last week in November, while at his home in the mountains, Mr. B., having gotten well and the discharge from his ear having apparently ceased, took cold, and as the result had severe pain in the mastoid region. He came to Richmond, with much discharge from the middle ear and with unmistakable signs of mastoiditis. The usual operation for uncomplicated mastoiditis was performed November 29th. The whole of the process was found to be filled with pus and granulation tissue. *The sinus was found to be bare for a space nearly three-quarters of an inch long.* The wound healed without trouble. There was never any discharge from the middle ear after the operation. The hearing returned practically to normal.

CASE II.—Miss C., aged 18, was brought to Richmond November 30, 1901, by her physician, who gave the following history: There had never been any ear trouble prior to a severe head cold, which Miss C. had taken five weeks previously. At this time, however, right-sided earache set in. It was severe and could not be

relieved by puncture of the drum or by any medicines or external applications. Nor had it lessened, although the discharge from the middle ear was free. When I first saw Miss C., well marked symptoms of right-sided mastoiditis were present, and she was operated upon the same day. The whole mastoid was found to be converted into a mass of pus and granulations. The outer table was perforated in one place. *The inner table, as in Case I, had been destroyed for half an inch or more over the sigmoid sinus,* whose wall was in contact with the broken down mastoid contents. As in Case I, so here the wound healed without trouble, the discharge from the middle ear ceasing with the operation, and when the patient left the hospital, three weeks later, hearing for the watch in the right ear was four feet.

CASE III.—The third case was that of Mr. A., aged 35, who, when I first saw him, February 4, 1902, had been suffering for eight weeks from intense pain in the mastoid and temporal region. The drum membrane had been opened and cold applications had been given a full trial. Careful cleanings of the ear had not prevented great sagging of the upper posterior wall of the canal, nor had they been able to relieve the patient of his great pain, nor had they caused the discharge to cease. Fever from a half to one degree was pretty constantly present. I found the skin overlying the mastoid œdematous, and the mastoid region hypersensitive only over the fossa. The external canal was filled with pus. The usual operation for mastoiditis was begun. The tissues over the mastoid were found to be about three-quarters of an inch thick. The process was found to be unusually small, the patient being brachycephalic in a high degree. A large subperiosteal abscess was found over the mastoid fossa; this abscess communicated along the posterior wall of the canal with the pocket formed by the sagging of this wall into the external canal. The process was found to be devoid of cells, and the tip was not removed. While working my way into mastoid antrum my chisel took away a part of the upper posterior wall of the external canal. Through this enlargement of the canal I removed, with the dressing forceps, a piece of bone about the size of a black-eyed pea which had been separated as the result of the inflammatory process. This separated bone lay between the mastoid antrum and the external auditory canal, and its removal threw the external canal and mastoid antrum into one cavity.

While examining this cavity with a bent probe, the wall of the sinus was torn, and bled for some moments profusely. Hot bichloride solution was thrown plentifully into the wound, which was then packed with sterile gauze. This was removed after twenty-four hours, and the wound was found to be dry. There was no difficulty in the healing. There was no discharge from ear after the operation. Hearing returned practically to normal.

CASE IV.—Miss L., seen first in January, 1902. History as follows: Two years previously she had la grippe, which had caused purulent middle ear inflammation on the left side, as the result of which the hearing was much impaired. One year later there had been a second attack of la grippe, which had caused purulent inflammation of the right middle ear, right-sided mastoiditis, with facial paralysis and great swelling of the mastoid region. No operation, save puncture of the drum, was done. The patient remained in bed for one month, and in her room for three months. When I first saw Miss L., about a year later, the facial paralysis had disappeared; the outward appearance of the mastoid was normal; the drum membrane was so disfigured that I had to look at it more than once to be able to make out its details. It had, in a great measure, been destroyed and replaced by scar tissue, which was irregular for its outer surface, and which showed two holes through it. Only a small part of the mallens handle could be made out, and that near the upper end. The tuning fork could be heard when applied against the mastoid; hearing for the human voice, save when very loud and close to the ear, did not exist.

REMARKS.—Such, in brief, are the histories of four cases of mastoiditis.

The first three teach that *extensive destruction of the inner table does occur with mastoid inflammation in acute cases*. For in two, Cases II and III, at the time the attack began, there had never been, so far as the patients knew, trouble of any kind with the middle ear. In Case I there had been some catarrh of the middle ear, but not sufficient to impair, save slightly, if at all, the hearing.

Nor need there be any wonder that the inner table should be, from time to time, destroyed in acute mastoiditis, when we consider how often we find the external plate of the mastoid broken through in these cases. The impossibility of being able to decide how soon the inner table may be destroyed and thus the intra-cranial con-

tents be exposed to infection makes an early operation for mastoiditis advisable.

In neither of the first three cases were there any symptoms from which one could deduce the extensive baring of the sinus wall, which was found to exist.

The fourth case shows that mastoiditis, even with facial paralysis, does, from time to time, *apparently* get well, although the mastoid be not opened. I say *apparently*, for though all symptoms of disturbance disappear, no one can say positively that the vitality of the cells, in part or in whole, may not have been so much injured that later they will take on the process of sclerosis, become the seat of intense neuralgia, or inflame with undue readiness as a result of subsequent slight inflammations of the middle ear cavity.

The fourth case, however, shows another important fact. *The mastoiditis was permitted to run its course; the patient lost her hearing*. It is not good treatment to allow the middle ear to act for any length of time as a drainway for the mastoid pus, even if by so doing the patient can be spared an operation. Of course, in Case IV it is possible that the original middle ear inflammation was so intense, the myringitis so severe, that the drum membrane was destroyed, and the hearing lost, apart from any effect the mastoid pus might have produced. It is also, however, highly probable that the constant discharge of pus from the mastoid antrum into the middle ear, itself already the seat of inflammation, added to the intensity of this inflammation, prolonged it and increased the destructive effect upon the hearing. In the first three cases the hearing, after the mastoid wound had healed, returned practically, if not entirely, to normal.

Case III exemplifies the observation that in highly brachycephalic skulls the sinus lies proportionately near the posterior wall of the external canal, and that the development of the mastoid cells is accordingly proportionately poor. How long the inner table had been destroyed and the sinus wall had been thus in contact with the pus of the mastoid cannot in any of the three cases where this occurred be determined. We see, however, that the sinus wall has much resisting power, and that except in generally unhealthy individuals sinus thrombosis is unlikely to occur save in cases where the diseased condition of the mastoid has lasted a considerable time.

In Case III the separation by the inflammatory process of the large fragment of bone exter-



nal to and below, but extending to the mastoid antrum, is interesting. It suggests a necrosing process. The discharge from the external canal was, at the time of the operation, and had been all along, odorless! It is not likely that such would have continued to be the case.

316 E. Franklin street.

## RECTAL FEEDING.<sup>A</sup>

By Dr. PERCY HICKLING, M. D., Washington, D. C.

The old adage that we must not judge everybody by ourselves, has often appeared to me to be a fallacy, for with a vast majority of people self is the criterion from which judgment is rendered.

I must confess that it is in violation of this old saw which has prompted me to select the subject of Rectal Feeding for consideration this evening. I can well remember the impression the subject made upon my mind before I received my degree; when I was told that life, weight, and even a comfortable condition, might be maintained by having eggs, milk, beef, whiskey, and brandy, etc., injected into the rectum, and this might be maintained indefinitely to the satisfaction of all concerned. But alas, when I attempted the actual use of this method of alimentation, I am free to confess that I found several difficulties; for while a good meal of beef, eggs, milk, and whiskey was carefully prepared in as small a bulk as possible, and given with great care, the patient not only resented the method of use, but in a large number of cases promptly rejected the meal, which had been so carefully prepared, until rectal alimentation was gradually relegated to my cerebral shelf, to be used only in the most extreme cases, generally when the patient's hours are numbered. It would seem from my limited inquiries amongst nurses, students, and physicians that my own experience has merely been that of many others.

During the last six months, however, prompted by observation in several hospitals in one of the greatest of the Western cities, I have used this method of feeding almost constantly at the Washington Asylum Hospital, and in a number of private patients whose condition

seemed to require it. The method employed has been so successful and the benefits derived so encouraging, both to physician and patients, that I feel fully justified in bringing this subject to your attention.

According to a paper by the late Dr. D. W. Bliss, printed in the *Medical Record* in 1882, pancreatic enemata were first used in 1671; and since that time many careful observers have shown beyond question the power of the rectum to absorb food and probably digest it for long periods of time. The late Dr. Flint reported a case of a woman who lived five years almost entirely nourished by the rectum, and for the period of one year and three months life was entirely supported in this manner. Dr. Kauffman had nine patients in the Kolmer Burger Hospital, seven of whom had cancer of the œsophagus, one cancer of the pylorus, and one case of chronic ulcer of the stomach, each of whom lived nine months or more, and one of the patients walked about the ward, and solid, well-formed feces were discharged each day. The life of President Garfield was sustained for many weeks by this method of nourishment. In fact, the medical literature is well supplied with detailed reports of life being maintained for greater or longer periods of time by this method; so that I shall not devote any time to the physiology of absorption and assimilation by the rectum. I shall merely consider in this paper some of the conditions where this method of feeding is indicated, the kind and quantity of food required, the frequency of its use, and the methods of its administration.

Nutrient enemata are indicated in severe cases of acute gastritis, in chronic gastritis, in gastric ulcers, hemorrhages of the stomach, in excessive vomiting, in paralysis of the œsophagus, in strictures of the œsophagus, in surgical operations upon the liver and gall-bladder, in cancers of the stomach, where it may be located, and in obstructions of the bowels until operative measures may be undertaken to remove the cause. It is one of the best methods in my judgment of treating all cases of laparotomy during the three or four days following the operation. It would seem to me that it would prove the most valuable method of treatment of peritonitis that we have at our disposal, as it undoubtedly accomplishes that abnormal rest which can be only obtained by immense doses of opium. The claim of Dr. Ochsner that all cases of appendicitis after thirty-six hours are best treated

<sup>A</sup> Read before the Medical and Surgical Society of the District of Columbia, March 6, 1902.

in this way, reserving the knife for an interval or where a superficial circumscribed abscess is formed, has, according to my experience, been fully confirmed. While I am aware that this treatment will not cure every case, yet it reduces a mortality of 20 per cent. to 5 per cent. in perforated and gangrenous appendicitis, and where the treatment is started early it is believed by Dr. Oschner should not reach more than two and one-half per cent. And where diffuse peritonitis is present, a large number of cases give a mortality of only 55 per cent. in the hands of the same operator.

The kind of food is of great importance, and while the various formulas containing milk, eggs, and whiskey and the usual beef extracts may be retained occasionally and for a short period of time, yet in many patients and after a brief use, they are likely to cause irritation and to be promptly rejected even when the quantity does not exceed two ounces, and where it is not given more than twice in twenty-four hours. I believe that one ounce of peptonized beef and three ounces of normal salt solution, as suggested by Dr. Oschner, to be the proper and probably the best form of food to administer. The beef may be prepared by using five ounces of finely-scraped lean beef and an ounce and a half of finely-chopped pancreas, entirely free from fat; one ounce of this mixture to be added to three ounces of normal salt solution, warmed to about 99° and injected into the rectum every four hours, night and day; or one ounce of any of the standard makes of predigested beef may be substituted for the beef and pancreas when it may be found more convenient. Of course, the rectum should be empty. This may be brought about by washing with pure water at least one hour before the nutrient enema is to be given. The patient should be in a recumbent position, of course, and may be on the side or back. In surgical cases where the abdomen has been opened, I always have had it administered without moving the patient. A hard rubber or metal syringe, holding four ounces, should be used in place of the Davidson's syringe, or any of the forms of fountain syringes, as these are likely to admit air, or to allow the fluid to rush in too rapidly; they are likely also to cause waste. It is always difficult, if not impossible, to maintain an even and proper temperature of the solution. The syringe should be attached to a soft rubber catheter, about No. 20 French, introduced from four to six inches, and the injection made slowly

and gently. If these directions are carefully followed, there will be no irritation, and the injections will be retained so that the use of the opium suppositories will not be required. I have had occasion to use this in one case where the rectum was very irritable, and where there had been considerable tenesmus before the operation, but the method employed seemed to act as a sedative, rather than an irritant, and was retained without discomfort. I do not believe that this method of feeding would be contra-indicated in some of the forms of chronic diarrhoea.

221 Third street, N. W.

## BURNS, SCALDS AND THEIR TREATMENT.

By O. HENLEY SNIDER, A. M., M. D., Atlanta, Ga.,

Formerly Professor Surgery and Demonstrator of Anatomy National Medical College, and Secretary Board Trustees same; Editor Southern Medical Exchange, etc.

That the subject of burns and scalds and their treatment is one that has fallen far short of that degree of attention and consideration from the medical profession in the past that its importance and magnitude demands, a careful perusal of the literature of the times, not excluding the popular and creditable text-books on surgery, will verify.

The writer feels no apprehension of challenge in the assertion that the average recent graduate reaches his first cases of serious burn or scald without an adequate knowledge of the morbid conditions to be expected, the more logical remedial measures to be employed, and, most of all, the serious pathological changes and complications that frequently follow.

Moreover, error and unconcern in the curriculum of even the creditable and substantial medical colleges of the country, relative to this feature, is largely responsible for the ignorance and inability of the physician, in such cases.

The following news item, clipped from the *Atlanta Constitution*, February 15, 1902, which prompts the writing of this article, serves as an example of frequent experiences by those of the profession with ordinary skill and ability, without the essential experience in treating such cases:

"As the result of what appeared at the time a slight accident, Prentiss Beasley, the three-year-old son of Mr. and Mrs. W. L. Beasley, of

72 Cherry street, died yesterday morning at 7:30 o'clock.

"Wednesday morning he by some means knocked a coffee pot off the stove and the boiling contents was spilled upon his breast and left arm. Although the pot had only about a cup of coffee in it, a doctor was immediately summoned and the burned places were dressed. When he left, the doctor said that he did not consider the burns serious, and that it would not be necessary for him to come back again.

"Early yesterday morning the child became suddenly very ill. He vomited violently, and nothing given him would stop it. He died in a few hours."

What a sad spectacle! A most creditable (?) commentary upon the skill (sic) of our noble profession and our lofty calling!

Nor would the writer censure the physician in the case above mentioned, since he may be one of the most popular and highly-esteemed medical men in this city of 125,000 souls; the results in the case, speaking nothing *per se*, against the doctor, but volumes against a usage—a serious custom—of regarding slight burns or scalds as of little or no importance.

It follows, therefore, that the vast majority of the members of the profession learn to attach serious considerations to the various phenomena incident to this important class of lesions, and to successfully handle them with reasonably favorable results, only from actual experience in the daily routine of professional life.

It sometimes happens that seemingly favorable conditions attending an apparently trivial injury of this class will prove severely deceptive and disastrous.

Except for mere convenience in the several departments of medical practice, the writer would wholly ignore the clinical classification of burns and scalds as observed at this time by some more scientifically inclined, and would for the sake of results regard all cases as of equal importance.

It will not be denied by those familiar with the truth, that morbid changes following a burn of the first degree, according to present classification, may reach grave and even fatal proportions.

Shock, due to pain, or disturbances of the vaso-motor system, morbid change in blood corpuscles, thrombi of toxic substance set up by increased heat, has been known to bring about fatal results in cases of primary initial lesion, and, as in the instances of more serious injury,

the unfavorable results are increased or diminished according to the location of injury.

The features attending burns and scalds to be regarded with suspicion are imperfect reaction, susceptible of allowing asthenic febrile symptoms to ensue; a deceptive lull has been known to precede this form of reaction, the patient having walked to the hospital, but was dead in forty-eight hours.

Reaction of a sthenic type may prove excessive, life being endangered by the violent effects of "surgical" fever; the internal organs may suffer; unexpected complications here often causing unexpected and most serious results. But space will not admit mention of the many accompanying or resulting features that may prove most serious and unpleasant to the attending physician.

Probably the most serious, however, of the entire list is that of septicæmia or blood poison, often by reabsorption. This general constitutional disturbance often precedes and is immediately responsible for the kidney, stomach, lung, pleural or other complications that may come on, and serious accumulations about the brain may be unexpectedly encountered.

All these, the writer contends, should be kept constantly in mind, even though the injury may seem trivial and of but little importance, especially inasmuch as it is sometimes impossible for the physician to determine just to what extent a weak part or organ may be dependent.

*The prognosis* in a given case must depend, of course, upon the peculiar features surrounding—keeping in mind the location, nervous temperament, general habits, age and general systemic condition as of greater importance relatively than the extent *per se* of the traumatism.

*The treatment*, while also dependent to a degree upon location and other features present, should be directed mainly to a thorough antiseptic cleansing and the protection of the injured parts from the air, having due regard for attending symptoms, lessening pain, supporting the nervous system, and protecting against reabsorption.

The writer has removed considerable areas of destroyed cuticle as crusts, even when it was necessary to use cocaine, when contamination with lint or other burned material necessitated such a cleansing. Such should not be attempted, however, when reasonable precautions will otherwise admit, the raw and sensitive surface being allowed, rather, the greatest possible quiet and rest.

In the treatment of burns including considerable surface, serious results have followed the local application of toxic substances. Some of the more common agents should thus be employed quite cautiously, if at all. The bi-chloride of mercury solution for aseptic cleansing of surfaces, carbolic acid and other agents belong to this class.

The time-honored picric acid (1 per cent.) solution has proven quite valuable, but even with this strength it sometimes irritates, thus aggravating the situation.

The writer recently used a new germicidal preparation known as phenol-sodique in two cases of extensive surface burns, the means of the injury in one case being the explosion of powder, and in the other flames from lint cotton. Both patients were females, of about the same age, and both were pregnant at the time of sustaining the injuries, all of which, in connection with other peculiar features, induces the effort to briefly relate the essential particulars of each:

Mrs. S., aged 32, being about six months pregnant, was dressing a Christmas tree with rolls of cotton lint. Not over sensitive to gaudy costume, she essayed to act Santa Clans, and in the effort to light the miniature candles on the Christmas tree, her long, flowing lint beard and hair ignited from the match, followed by premature raising of the curtain and the combined efforts of the audience in extinguishing the flames.

Dr. J., for whom the writer entertains profound respect, was called to the patient an hour after the injury, but departed without rendering any assistance, only advising that the carron oil with lime, which had been hastily applied, be retained until the patient could secure early conveyance to the hospital. The doctor evidently regarded the case as a hopeless one.

I saw her an hour subsequently. The burns included the face from the margin of the hair down to the point of chin, and again over the right mammae, right shoulder, arm, and the scapula, behind, down to the waist, the true skin being completely destroyed in alternate circumscribed areas.

The most difficult task was the removal of the burnt "debris" from the greater portion of the surface, scorched lint having been rolled into adherent crusts at the points of greatest injury.

After thoroughly saturating the raw surface with 1 to 5,000 bi-chloride of mercury solution, sterilized gauze sheets wet with phenol-sodique

were placed next to the surface. Over this was placed oiled silk, and lastly, a light flexible cotton goods covering completed the dressing, which was allowed to remain undisturbed for forty-eight hours, when dead material, detached eschars, etc., were removed and the same dressing repeated.

On the fifth day it was determined that skin grafting over some of the larger destroyed patches would expedite recovery, if it was not, in fact, necessary, and the methods of Dr. Van-Schack (*Int. Jour. Surg.*, May, 1899) were followed with admirable results.

On the fourth day following there was visible an admirable state of granulations, with well-defined spicula of new skin growths, evidently from the transplanted epithelial cells.

The patient made an uninterrupted recovery, the phenol-sodique being poured over the injured parts at intervals, thus preventing hardened formation of crusts, etc.

At several points of the treatment threatening complications were duly apprehended and averted.

The other case which the writer desires to mention in this connection was a Mrs. C., pregnant for about five months, who was terribly burned over the face, neck and right forearm by powder explosion in an effort to build a "Christmas gun" on the hearth, being at the time "stooped over a pint bottle of powder," as she declared when seen about an hour after the accident. The patient's suffering was intense. Her eyes were severely swollen or infiltrated, with blisters almost continuous over the face and right hand and forearm. These were punctured to relieve tension, and the patient given strychnia and morphia tablets to lessen the severity of pain.

The surface was dressed as in the preceding case, the phenol-sodique being the antiseptic fluid employed. It was later found advisable to add about one-tenth its quantity of glycerine, thus increasing its pleasant effect over the hardened surfaces and coverings.

A pleasing feature of the results in these cases lies in the fact that the strongly-expected abortions in each failed to materialize in either, and the writer conducted the advent of normally robust and healthy offspring for both, at the period of maturity.

In conclusion, the writer desires to emphasize the several advantages possessed by phenol-sodique over the old and more common remedies as a dressing fluid, though, obviously,

with some feeling of misgiving (due to the fact that it is one of the eth-pharmal preparations); yet without the slightest knowledge of its manufacturers, Messrs. Hance Bros. & White, of Philadelphia.

Being non-toxic, it can be freely used without apprehension of untoward results by reason of absorption. In its shape as placed on the market it is ready for instant application, thus obviating useless lapse of time.

It renders the cloths and injured surface soft, and prevents hardening of crusts, etc. This quality is increased by adding glycerine.

Being antiseptic and strongly disinfectant, it favors healing process, being usually sufficient of itself as a local application.

It possesses the happy advantage of the two most prominent old and tried methods of treatment—to-dit, the carbolic acid and the bicarb. soda methods, being admirably anodyne in its local effect, and an anti-acrid.

By removing acrid secretions, it lessens cause of pain and the chances for inflammation.

It is the ideal local application, par excellence.

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### ACUTE PYELO-NEPHRITIS.

By J. RANDOLPH, M. A., M. D., Arvonis, Va.,  
Surgeon to Buckingham Slate Quarries.

Pyelo-nephritis signifies a form of interstitial inflammation of the kidney, with scattered points of suppuration, frequently associated with pyelitis, and almost always following disease of the lower urinary organs, being the result of a local infective process.

An acute attack of pyelo-nephritis generally supervenes, upon previous chronic interstitial inflammation, with more or less acute diffuse inflammation, and is produced, in most cases, by an accumulation of urine in the pelvis of the kidney.

*Etiology.*—Cystitis often causes pyelitis, and urethritis may do so. In cases of pyelitis the inflammation may not be confined to the pelvis, but pass to the kidney, inducing pyelo-nephritis. The foreign bodies which cause it are usually calculi. A stone or calculus lodged in the pelvis induces inflammation by its presence, or by the obstruction of the ureter, and causes a distension of the pelvis, with urine (hydro-nephrosis), or when pus is present with the urine (hydro-

pyo-nephrosis). Catheterism often sets up the disease; also, operations performed on the lower urinary tract. It not infrequently follows operations on the internal genital organs, having then either a reflex or septic origin probably. The disease may also be due to an extension upward of inflammation from other parts of the urinary tract, as urethritis, cystitis, or ureteritis, or to an obstruction to the act of urination, caused by an enlarged prostate, tumor, or stricture of the urethra, with over-distension of the bladder, ureters, and the renal pelvis, and ultimately destroying the kidney substance.

Pyelo-nephritis is generally bilateral, unless caused by renal calculus, or ureteral stricture on one side. Tuberculosis is a very frequent cause. Irritating blenorhetics, as cantharides, turpentine, copaiba, cubeb, etc., if used for too long a period of time in gonorrhoeal cases, may produce an active congestion of the kidney, from which we may have as a result pyelitis or pyelo-nephritis. An enlarged or pregnant uterus may induce pyelitis by pressure upon the uterus. Cold, also violence and over-exertion may bring it on. Peri-nephritis may also produce it. Infectious diseases, such as typhoid fever, smallpox, diphtheria, scarlet fever, and osteo-myelitis, and pyæmia, are often associated with pyelitis or pyelo-nephritis.

In these cases, however, the inflammation stops short of recognizable pus formation.

*Symptoms.*—In mild form, pain is frequently complained of in the region of the kidneys. It is a feeling of tension or aching. There may be tenderness on deep pressure on the affected side. The urine is turbid, sometimes almost clear, and contains an excess of mucus, generally some pus, and occasionally blood corpuscles. It is usually acid and of normal specific gravity, and may have a faint trace of albumen. Attacks of pain on the affected side, severe rigors, high fever, and profuse perspiration are manifest before pyuria is established. The urine now presents a smoky or turbid appearance from the presence of blood, and may contain mucous cells, triangular and tailed epithelium.

We have pyuria, when pyelo-nephritis has become chronic and suppurative. The pus is in variable amount, and may not be constant. Very often when one kidney is involved, as the ureter may be temporarily obstructed, and normal urine pass for a time; then we have a sudden passage of the retained urine and pus, which may be purulent. At the time of the retention

of urine an enlargement may be felt on the affected side. If the disease is one of progression, we have occasionally a portion of the kidney tuisse, and especially the pyramidal apices, may slough and appear in the urine. Casts of kidney tubules may be present. The reaction of the urine at first is acid, but if there has been retention it is ammoniacal. Frequently micturition and vesical irritability are sometimes complained of. The recurrence of chills at regular intervals causes the cases to be often mistaken for intermittent fever. The general condition indicates prolonged suppuration. There is debility, with anemia and wasting. Headache, delirium and coma supervene occasionally, and is caused by the absorption of the decomposing materials in the urine, and has been called ammoniemia.

In suppurative pyelo-nephritis following cystitis, the patients complain of pain in the back, high fever, severe rigors, and in some cases a typhoid state develops, in which death results.

*Diagnosis.*—Pyelitis and pyelo-nephritis are nearly always associated with old, standing cases of cystitis, enlarged prostate, and urethral stricture. In pyelo-nephritis of long standing, an elastic, fluctuating enlargement on one side of the abdomen, occupying the situation of a renal tumor, may be made out by deep palpation. Tubercular disease elsewhere might suggest tubercular pyelitis.

A careful urinary examination is the most important point in diagnosis. The pain suddenly disappearing, the decline in temperature, and pus discharged with an acid urine, and signs of disease of the bladder, prostate, and urethra absent, the *prima facie* inference is that it comes from the pelvis of the kidney. This inference is strengthened almost to a certainty, if tenderness exists in either loin, or if there be any history of antecedent nephro-lithiasis. But when it co-exists with, and is, perhaps, the consequence of chronic disease of the lower urinary passage, it is not so easily recognized. The reaction of the urine to litmus paper is important. The urine is acid in pyelitis, while in cystitis without kidney involvement, the urine is neutral or perhaps alkaline from ammoniacal decomposition.

The microscopical examination shows pus and mucous cells, possibly hyaline and granular casts, epithelial cells, and blood corpuscles. The cystoscope is of value, whether the disease be unilateral or bilateral. Another ready means of diagnosis consists in washing out the bladder,

and after some twenty minutes, collect the urine by means of a Nelaton catheter. If there is considerable pus evenly mixed with the urine, it undoubtedly is of renal origin.

*The treatment* will be considered in this case illustrative of the disease:

E. R. E—s, male, age about 65. In March, 1901, he had an attack of severe hæmaturia, but was not sufficiently alarmed at his condition to put himself under the care of a physician. He had one sister that developed tuberculosis.

Some time after the attack of hæmaturia he complained of dull pains in the loins and lower limbs, and he thought that he had rheumatism. I put him, some time in May, 1901, under anti-rheumatic treatment, and there was very decided improvement in his symptoms, and he remained in comparatively good health, attending to his business until July 25th, when he was taken with a severe pain in his loins, followed by high fever; urine passed frequently in small quantities, and was slightly turbid, with a deposit.

I was called to see him on July 26th, and he complained of having had a chill before I arrived. I found him with a quick pulse, temperature 102° F., and in a profuse perspiration. I prescribed quinine in five-grain doses, *ter in die*, opened his bowels by enema; put him on a milk diet, and for his inactive kidneys used citrate of potash. He improved rapidly under this treatment. His temperature became normal, his bowels acted regularly, and his kidneys resumed their normal functions in about a week from this time.

In about a week from this time I was called again at night. I found him with a severe chill, very quick pulse, temperature 104°, followed by profuse sweats. He was very tender in the right loin, and I could feel the enlarged kidney distinctly. Urine acid and scanty, with some pus; but slight amount of albumen, and bowels constipated. He was so ill that I remained with him until the next day. I had thought that his first attack was of malarial origin. I now diagnosed his trouble acute pyelo-nephritis, resulting from cystitis, the chronic form of which he was still suffering from. In his earlier years he had an attack of gonorrhœa, and subsequently cystitis from an extension of the gonorrhœal inflammation, and was treated for it. He had these severe rigors every third day, with high temperature and profuse perspiration. He was comparatively well between the rigors, except that he was very weak, anæmic, and emaciated.

His appetite was very poor, and he was kept on milk and soup, as anything of a solid nature seemed to bring on an attack. His bowels were kept open with salines. The tinct. ferri chloridi in ten-drop doses, largely diluted with water, every three or four hours, seemed to aggravate his trouble. Quinine upset his stomach, and failed to control his temperature, but *sali-cylate of soda*, 10 grains every three hours, acted well on him, and kept his temperature down. Salol and oil of gaultheria appeared to irritate his kidneys and made him worse. Citrate of potash in 30-grain doses, largely diluted with water, and administered three times a day, acted well as a diuretic.

At this time, Dr. W. B. Pettit, of New Canton, Va., was called in consultation, and agreed with me as to the serious nature of his trouble, and the means that were being used for his relief. He complained of having a slight headache every morning, and for which we prescribed citrate of caffeine, in 2-grain capsules, three times a day. This remedy always relieved the cephalalgia. He improved so much under this course of treatment, that he was able to walk to the post-office, half a mile from his residence. He continued to improve for two weeks or more, when on Saturday morning, September 21st, he walked to my office, and said that he could not urinate, and that he was in great pain. I introduced the catheter and relieved him. He experienced some pain when the catheter reached the prostatic portion of the urethra, also, the neck of the bladder. On the next day (Sunday) he made arrangements to go with me to Richmond on the early morning train on Monday, and on that day (September 22d) I referred his case to Dr. Lewis C. Boshier. He suffered greatly from inability to pass his urine, and Dr. Boshier relieved him with the catheter. Dr. Boshier corroborated my diagnosis, and in operating found that his pyelo-nephritis was bilateral. He died on October 14th at the Old Dominion Hospital.

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It gives me pleasure to state that my experience with Cactina Pillets has been most satisfactory in cases of rapid, irregular heart action. I find their use most successful in controlling and relieving the cardiac pains accompanying this condition.

JAMES H. CARR, M. D.

Buffalo, N. Y.

## PROGRESS WE HAVE MADE IN SURGERY ABOUT THE REGION OF THE APPENDIX.\*

By JOSEPH PRICE, M. D., Philadelphia, Pa.,

Honorary Fellow Medical Society of Virginia, etc.

The older ovariotomists had a wholesome dread of peritonitis, and all intra-pelvic and peritoneal inflammatory and suppuration forms of trouble. Baker Brown said: "It is peritonitis that beats us." Mr. Tate: "Now we beat peritonitis."

It is simply surprising that the good old abdominal surgeons should have wholly overlooked the fatal trouble about the head of the cecum. We now all consider appendicitis an exceedingly dangerous disease; we know that it kills a good number of people while we are making every effort, and do save large numbers.

The old nomenclature was misleading and ignorant. How surgeons and pathologists could make post-mortems on large numbers of young and old, dying of what they called bowel troubles or peritonitis, and failed to recognize the precise nature of the trouble is incomprehensible. Appendicitis has always been a very common disease, the very anatomy of the organ—a useless anatomical cesspool—favors inflammatory and perforative accidents. Many of the present good operators have made very slow progress in dealing with the diseased appendix. And just here, I want to say that it is my impression that the appendix is never healthy—that it is a useless, dirty canal or sinus that would not be tolerated at any other point of the body by good surgical judgment.

The abscess forms of appendicitis—single or multiple in nature, extending high up and low down—are commonly incised and drained without an effort to see or remove the disorganized appendix or free the bowel adhesions or repair the lesions of the bowel. The conditions alluded to are commonly chronic, and should not occur. Good practitioners should promptly recognize appendicitis, and prompt surgical interference should always be given. If early diagnosis and early surgery were the inflexible practice, deaths would be very rare. In the early stages of appendicitis, the operations are easy and simple, and quite ideal, and that is not all—the results are pleasing—no deaths.

In the acute fulminating (McGuire) or explosive forms the operation could be done safely

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\* Read before the Medical Society of Virginia during its thirty-second annual session, held at Lynchburg, Va., November 5-7, 1902.

by every good practitioner capable of making an early diagnosis. The delays for consultations and purgation—the delays practiced for walling off the inflammatory wall—that unfortunate condition that the general surgeon waits, prays and longs for, commonly results disastrously in *early deaths*, in a school of complications that should not be permitted. The delay indicates surgical timidity, and a dread of infection—a condition that exists from its very incipency, and the early arrest of which is of primary importance. Stop the infection by removing the gangrenous appendix and the trouble ends.

The public are becoming more and more enlightened on this subject, and are going to demand of you a more precise knowledge than you have heretofore exhibited; and you have a right to demand more careful instructions from the teachers in schools. Some of the prominent professors of surgery have strongly favored deaths by their instructions and by their discussions in our National Society meetings. Single out a group of cases, if you please, when you get home and operate for "the first day colic"—the first hour—say in six or ten case, in the next group, use calomel, salts, hot and cold applications, sweet oil, starvation, and wait for recurrence well or interval operation. In the *first* group, the work will be easy and simple, and no deaths; in the *second*, it will be difficult, dangerous or impossible, complicated, and with some deaths.

I come to make the strongest possible plea for the earliest possible surgical intervention in appendicitis. To cover the title of my paper, will take but few words. The early operation, the Willard-Parker incision—simply amounting to lancing a boil or an abscess pointing in the groin; later toilets. Imperfect methods of removing the appendix, or I should have said, a portion of it, leaving a large pedicle or stump; cauterizing it with something, etc., are imperfect procedures. Now, the clean removals as commonly practiced give us about ideal results; no one should ever die from appendicitis. The diagnosis is easy, and should be made early. If the physician has any doubt, he should stand by. The relief commonly following the use of calomel and Rochelle salts is misleading, and results in delays; it is not curative—in short, nothing arrests appendicitis. Perforations are early and are commonly fatal, if not dealt with promptly. It is the general infection that you should prevent. Some of you have not witnessed operations for dirty perforated forms of appendicitis. I would strongly advise you to go

and see them. You will be better physicians, and may save your children or members of your own family. The disease has always been very common in the families of physicians. I have known a great number of good physicians to die of appendicitis; and large numbers of my professional friends, important and useful practitioners, have had the little assassin removed.

241 N. 18th street.

#### DISCUSSION.

Dr. J. N. Usher, *Richmond, Va.*: I would like to say just a word on this subject from the standpoint of the medical practitioner. There is no subject that is more interesting to me than the subject of appendicitis. I have either had a very remarkable exemption in my practice, or I have made many errors in diagnosis. I think I have had a very remarkable exemption in this. I want to say here as a practitioner, however—a plain family physician in this matter, and I want to emphasize it—that I have no stronger conviction than that the practitioner who fails to call in the surgeon as soon as he recognizes the condition of appendicitis is recreant to his duty. I have been very fortunate in the cases that I have had, and which were operated on for me. (I have never operated for appendicitis myself.) I have had two cases to die: One case died because of the procrastination of the surgeon, though I begged the surgeon time and again to operate. It was three weeks before he would consent to operate, and then the patient was beyond saving. I had a case last summer, which I turned over to Dr. Hugh Taylor, who was assisted by Dr. Edward McGuire, and they operated on it. This case presented the most horrible appearance I have ever seen inside of a belly. The patient was feeling indisposed on Friday; and on Saturday and Sunday his condition did not improve. On Monday his condition was worse, and I saw him late Tuesday. While I suspected appendicitis, it was so poorly marked that I could not make a diagnosis. I saw him on the next morning early, about 8 o'clock, and I was convinced that it was appendicitis, though there was no swelling, no tenderness and no vomiting. At 12 o'clock the abdomen was distended, there was vomiting and every appearance of an abscess. We operated that afternoon, and found conditions in the abdomen such as to make the case absolutely hopeless. Everything was gangrenous, and the patient died within thirty-six hours.

I have a case of a young man in Richmond,



and I would like for Dr. Price to tell me what is the matter with him. He is taken about once every four months with a violent pain in the region of the appendix; violent at first, and then becoming more excruciating after about an hour's time. There is, however, no tenderness and no vomiting. He is relieved by a hypodermic of morphia. He wakes up the next morning feeling perfectly comfortable, and has no further trouble after a dose of salts has acted. I can't say whether that man has a case of recurrent appendicitis or not; for he is so promptly relieved, and never loses more than a day from his work. I should certainly like to be able to decide this point; for, if it is appendicitis, I should most certainly advise him to be operated upon. He is a spare man, thin, with blue eyes, flaxen hair, a blonde, and is a book-keeper, and leads a rather sedentary life. The spasms are always somewhere in the region of the ileo-cecal valve. I hope Dr. Price will express his views in regard to this case.

HONORARY FELLOW DR. H. T. NELSON, *Charlottesville, Va.*, spoke on the subject, but the stenographer failed to get satisfactory notes.

HONORARY FELLOW GEORGE TUCKER HARRISON, *New York city*: I cannot let a subject of such importance pass without saying something in answer to Dr. Price's argument. Dr. Price belongs to a school which is composed of some of the best surgeons in this country. In regard to appendicitis, they hold the same view as the Irishman: "Whenever you see a head, hit it!" Now, I am in accord with Dr. Price in one proposition; and that is, if you are going to operate, operate at once. The difficulty is the question of diagnosis. There are a very few men who have the powers of diagnosis, and the splendid operative skill, as has Dr. Price. I have seen not infrequently men die from an operation for appendicitis in the intermediate state, when they were well and to all appearances would have lived for a long time if they had been let alone. There is another point upon which surgeons agree—and in the rare instance when surgeons agree we may feel safe in following them—and that is when it is a case of recurrent appendicitis, operate in the free interval. There is a point where I disagree with Dr. Price in operating when you see a case of appendicitis. Wait until the patient gets well, and then operate in the free interval, and then you will get statistics like Dr. Price's.

It has gotten, then, to this: The cases that come under operative surgery are the recurrent type, when you should operate in the free interval; cases where you are certain of the diagnosis, then operate at once or as soon as possible. And you are not going to save every case. No big surgeon who has operated in any big number of cases has saved every case, no matter what he tells you. The ordinary catarrhal form I don't think ought to be operated on, because they will all get well of themselves. The same statement applies to cases of the fibrinous type. But the fulminating type ought to be operated on, and operated on at once.

DR. EDWARD MCGUIRE, *Richmond, Va.*, entered into the discussion, but the stenographer failed to get satisfactory notes.

DR. SOUTHGATE LEIGH, *Norfolk, Va.*: There is one very important point in the technique of the operation, which is small, and yet it saves great trouble in the future to the patient, and that is the abdominal wall. We are all certain to come across some of these cases; we all meet with not a few cases of hernia of the abdominal wall. I believe that in doing all operations we should always guard against this bad result. I thought, therefore, that I would mention the use of kangaroo tendon in suturing the deep fascia of the abdominal wall. I have used it in quite a number of cases, and have seen so far no weakening of the abdominal wall following the operations in which it was used. I close the peritoneum with catgut, the deep fascia with kangaroo tendon, and the skin with silk or worm gut sutures.

DR. J. H. NEFF, *Harrisonburg, Va.*: I shall make but very few remarks on this subject. I don't profess to be a surgeon, but I only want to say that I cannot believe that every case of appendicitis ought to be operated on. Before operations for this condition came into common use, I may have seen some cases. Since that time I have seen two cases, one of which died. In this case there was no autopsy held. The other case was certainly one of my best friends, one whom I feel that if I had been a competent diagnostician and operator, I might have saved. It was a case of the fulminating and perforating variety. I believe that, owing to peritoneal adhesions from a bullet wound received previously, the case was unique. The pain was referred to the scrotum and the penis. These are the only two cases in my practice of thirty-two years, and

I know that I and the other physicians with whom I have been called into consultation keep a close lookout for it. When an operation is necessary, I believe in operative interference, and I reverence the man who will undertake the operation.

DR. J. W. HENSON, *Richmond, Va.*: Of course, it would not be necessary to operate in every case, if we knew that every case was catarrhal appendicitis. But I repeat the question asked by Dr. McGuire: How are we to know that a given case is catarrhal, or that it is not fulminating? When we see a case of catarrhal appendicitis and operate, nearly all get well. Then we do no harm. If, on the other hand, we wait to decide whether the case is a purulent or a septic case, we will probably wait until it is too late; either the patient will die before we can operate, or we will kill him when we do operate. So which is better: to operate when you see a case of appendicitis, even though some of the cases are catarrhal and would get well of themselves, or to wait until we can decide the variety, and probably have some cases beyond help when we do operate?

DR. PRICE, *in conclusion*, made remarks sustaining his chief points.

### Removal of Gunpowder Stains.

Dr. E. G. Corbett, Hampton, Fla., says (*Med. World*, Feb., 1902) that on Christmas day a boy of twelve filled a vaseline bottle with powder and exploded the same. About three hours after the accident he found the cornea and sclerotic of both eyes and face literally blown full of powder. He removed a dozen or more flakes of powder from each cornea with a foreign-body spud; also removed the powder from the sclerotics under a four per cent. solution of cocaine. After the operation he used a fifteen per cent. solution of hydrozone in the eyes. After removing the particles of glass from the face, he kept a cloth over it saturated with a fifty per cent. solution of hydrozone. At the end of two weeks he used a saturated solution of boric acid in the eyes, and painted the face twice daily with equal parts of hydrozone and glycerine. The eyes are well and powder stains have disappeared from the face.

### A SUGGESTION IN THE TREATMENT OF FRACTURE OF THE FEMUR.\*

By J. W. HENSON, M. D., Richmond, Va.,  
Professor Anatomy and Demonstrator of Orthopedics at the University College of Medicine, and Surgeon to the Virginia Hospital, Richmond, Va.

Every plan of treatment devised for fracture of the neck or shaft of the femur has proven unsatisfactory, some shortening of the limb almost invariably resulting.

Suggestions regarding the management of these cases will be forthcoming until success is attained, and until the latter event, any improvement should receive recognition. The suggestion to be offered here bases its claim to consideration and trial chiefly upon the fact that it is rational.

Not only is the final result unsatisfactory, with the present methods, but any of the several plans of treatment now used is of immeasurable annoyance to the patient, often, and to the surgeon, always—to the patient because he is uncomfortable, to the surgeon because, unless he becomes almost a personal nurse, the result is apt to be such as to injure his reputation, and possibly render him liable to suit for malpractice. This unpleasant state of affairs is many times intensified in the case of children. In any fracture of the femur, except at the condyles, or an inch or two above them, extension with counter-extension, undoubtedly places the bone fragments in better relative position than any other method. In fact, if the proper amount of extension with counter-extension is maintained uninterruptedly, in conjunction with immobility of the fragments, the desired end will be attained. This is not done. Every bad result can be charged to failure in some particular in the observance of these points.

Try the following plan, and value it at what it is worth: Apply Buck's extension arrangement as usual. Raise the patient from the bed, and fix him in a horizontal position by means of the rests, presently to be described. While one assistant holds the arms, let another make firm traction on the foot of the injured side, thus reducing the bone fragments and fixing the limb in a line with the body. Apply plaster of Paris bandages, so as to encase the injured limb and the trunk from the calf of the leg to the axilla. Let the plaster come well down over the pubes and buttocks, so the case will not

\* Read by title before the State Medical Association of the Carolinas and Virginia, February, 1902.

break where the thigh joins the body. Besides applying a gauze or flannel bandage to the parts before the plaster bandage, the perineum and sacrum should be well padded with cotton. I do not think it well to pad the limb with cotton, for this will cause the plaster to become loose, and thus compromise its efficiency as a splint. There is very little danger of the dressing becoming too tight without the cotton, and if this should occur, it would be quickly ascertained and easily relieved. Four strong pieces of cotton bandage should be firmly incorporated by one end (ten or twelve inches of one end of each piece) in the plaster case, so as to project from its upper edge, one in front and one behind each shoulder, the free ends being two feet or more in length. The patient should remain on the supports until the plaster has thoroughly hardened. The traction on the foot should be uninterruptedly continued until the patient is lowered to the bed, the weight attached to the Buck's apparatus, and the four cotton bandages tied to the head of the bed, each one taut.

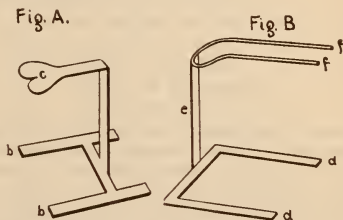
Plaster of Paris applied from the foot, to and including the pelvis, is, of course, often used in the treatment of fractures of the femur. The idea of extending the plaster to the axilla suggested itself to me, not so much for the sake of further limiting movements, as on account of the provision it makes for thorough and comfortable counter-extension, the pressure being widely distributed over perineum, buttocks and thorax. In fact, I have demonstrated that the plaster can be cut away from the perineum without causing the case to slip or lessening in any way the efficiency of the counter-extension.

Though this dressing controls movements on the part of the patient, notice how easily an attendant can move him to provide for defecation. By unfastening, on the sound side, the bandages tied to the head of the bed, one can turn the patient full on to the injured side, place a bed-pan and turn the patient upon it without interfering with the extension and counter-extension, and without disturbing the bone fragments. Under supervision of the nurse or surgeon, this position on the injured side can be safely assumed two or three times a day for the sake of rest.

The location of the anterior superior spinous processes will be indicated on the surface of the plaster, so that comparative measurements can from time to time be taken. If there be any doubt about this exact position, a very small

opening can be made in the plaster over each process.

An anæsthetic should always be given when applying the dressing in case of fracture of the neck of the femur, otherwise extension, in the line of the neck, cannot well be attained. In the accompanying cuts are shown the rests used when applying the dressing.



When the patient is elevated lay a broad board under him, place the appliance A between his thighs, so that the feet, bb, will rest on the board, while the flat projection, c, by its rounded points, supports the buttocks, the coccyx falling in the notch between these points. Place the appliance B so that the arms, dd, will rest on the board, the stem, e, will stand upright under the base of the patient's neck, and the arms, ff, will extend down the back on each side of the spine, thus supporting the greater part of the weight of the trunk. Cotton should be placed liberally where the body rests on the supports. The head may be held by a small box and pillow. The rest A is a modification of the Lorenz hip rest. The rest B is my own device. They are of iron, and can be made by any blacksmith. The parts supporting the patient's body are very thin, and are easily slipped out when he is to be lowered to the bed.

Ammonol has taken a definite position as an analgesic, antipyretic and stimulant. Just now, when "the grip" is making such ravages, and pneumonia is widespread, the use of ammonol commends itself, in reducing temperature, and in relieving pain without subsequent depression. Although to some extent a sedative, it acts beneficially on the stomach, and does not in any way produce a morbid habit. It may be combined with codein and camphor, or with quinine or salicylate of soda, as the case may require.

## MEDICAL INSPECTION OF SCHOOL CHILDREN.\*

By M. D. HOGE, JR., M. D., Richmond, Va.,

Member of Board of Health, Physician to Infants' Home, etc.

In view of the fact that some time ago the members of the Board of Health were requested to make an inspection of the school buildings, outhouses, and drinking water, and we having performed that duty and reported the results, I thought it might prove of interest and instruction to state in detail what has been done by other cities in inspecting the school children.

While schools and scholars form two distinct subjects for investigation, and must be considered from two different viewpoints, still to have sanitary buildings frequented by diseased scholars is one thing, but sanitary buildings attended by healthy scholars is quite a different matter, and the one to be desired and provided for.

The first efforts in this country looking towards the hygienic inspection of school children were made by Joseph Willard, Esq., of Boston, Mass., who read the draft of a proposed law upon the medical inspection of schools before the American Social Science Association in 1875, at its meeting in Detroit, Mich.

The matter was agitated for years in various public bodies without much practical result till in 1894, during a severe epidemic of diphtheria, the School Board of Boston gave its consent to the inauguration of the system.

The plan adopted there was to appoint a discreet, well-qualified physician at a salary of \$—— per annum. He was given four school houses, embracing a school population of about 1,400 children. He made daily visits to the schools soon after opening; the principal received from each teacher a report of the symptoms of illness of any of the children; the doctor, on arriving, at once privately examined the reported children, and kept a record of all facts in the case. If the child was too sick to remain at school, it was sent home by the teacher with that statement, leaving it optional with the parents to call the family doctor. If the disease was of a contagious nature, the fact was promptly reported to the School Board. The medical inspector never undertook to prescribe for the sick children, his only object being to give the parents timely warning in cases of simple sick-

ness, and to protect the well children from contagious diseases.

After this brief outline of the plan, now see what the result of one year's inspection proved. During the session 1894-'95, out of 14,666 pupils, 9,188 were found to be diseased at one time or another; 1,745 were sick enough to be sent home; of these, 437 had some infectious disease, as follows: Diphtheria, 70; scarlet fever, 26; measles, 110; whooping cough, 28; chicken-pox, 34; mumps, 43; lice, 66; itch, 42; congenital syphilis, 8. These children had been in their seats or playing with the rest, spreading disease broadcast.

Without giving the figures, among the other diseases discovered by the inspector were abscess, anæmia, bronchitis, catarrh, St. Vitus dance, debility, diseases of the eyes, nose and ear, epilepsy, malaria, hip-joint disease, ring-worm, tonsillitis, ulcers, wounds, etc., etc. Who can estimate the number of sick ones saved from disease, loss of time and possible death? The beneficial results of one year's inspection, to be plainly observed, were that the teachers became more interested in the children and more expert in detecting diseases. As to the public, parents felt that there was decidedly less danger in sending the children to school, so that at once confidence was increased along with a feeling of security and contentment.

From year to year, these inspections have been carried on. The inspectors meet monthly, or oftener if the occasion requires it, to make out condensed reports, discuss the various phases of the work, and thus arrive at uniform methods of action.

In the city of New York, in the annual report for 1899, we find that the total average number of attendance was 413,256; school days, 192; schools visited, 594; children examined, 128,787. Of these 9,367 were excluded; among them were found measles, 278; diphtheria, 119; scarlet fever, 42; croup, 20; whooping cough, 227; mumps, 675; contagious eye diseases, 1,894; head lice, 4,498; body lice, 86; chicken-pox, 474; skin diseases, 988. This work was done by one chief inspector and 150 assistant inspectors.

From Cleveland, Ohio, Dr. L. B. Tuckerman reports the following: A teacher in one of the public schools had sore throat, but she continued at work; within two weeks five children out of her room died, and there were over 40 cases of diphtheria in the same school, which were traceable to her as the source of infection.

\* Read before the Richmond Academy of Medicine and Surgery, March 11, 1902.

In Philadelphia last year 350 schools were inspected; there were found contagious skin diseases, 62; diphtheria, 77; whooping cough, 18; chicken-pox, 13; lice, 66; scarlet fever, 6; ring-worm, 60, etc., etc. And so I might go on giving you statistics from a number of cities, all showing practically the same results.

For the above facts and figures I am indebted to Dr. D. S. Lamb, of Washington, D. C., who has studied the subject very exhaustively, and has placed his collected material at my disposal.

Is it enough for the School Board to build houses, clect teachers, and formulate certain rules for their guidance, then throw open the doors and invite in as many children as possible? Are you aware that 66 2-3 per cent. of the infectious diseases of children are found among those who attend public schools? If I have shown anything, it is the fact that our public schools are so many foci for the dissemination of sickness and death, which, by proper means of medical inspection, may be reduced to a minimum.

Without wishing at present to formulate any rules and regulations, but simply to throw out some suggestions of a practical nature—for that, after all, is the object of the paper—I would say:

1st. There should be a closer touch in the future between the School Board and the Board of Health. Calling on the latter from time to time for advice or opinion on matters relating to public hygiene and health.

2d. There should be one chief medical inspector elected (as are teachers), at a salary of \$—— per annum, who should be a clear, level-headed physician of discretion and education, who also should be a bacteriologist capable of making a rapid and skilful diagnosis of diphtheria, tuberculosis, etc., and who should be responsible for the faithful work of the assistant inspectors, and aid them in every way possible.

3d. There should be four assistant medical inspectors elected (as are the teachers), at a salary of \$—— per annum, whose duty it should be to divide the schools as evenly as possible between them; visit each one every school day between the hours of 8:50 and 9:30 A. M.: examine all sick children reported by the principal through the teachers; keep full records of each case; have those requiring it sent home by the teacher; take cultures from all suspected diphtheritic throats, and bring such promptly to the chief medical inspector for bacteriological diagnosis; verify all vaccinations; have general

sanitary supervision of the buildings and surroundings; from time to time address the teachers on sanitary and health measures; have monthly, or oftener, meetings for conference and report, and, in fine, such duties as the School Board should see fit to impose upon them.

308 *Grace street, east.*

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## Book Notices.

**Practical Medicine Series of Year Books.** Under the General Charge of GUSTAVUS P. HEAD, M. D. *Vol. IV. Gynecology.* Edited by EMLIUS C. DUDLEY, A. M., M. D., Professor Gynecology, Northwestern University, etc. With the Collaboration of WILLIAM HEALY, A. B., M. D. *March, 1902.* Chicago: The Year Book Publishers. Cloth. 12mo. Pp. 212. Indexed. \$1.25.

This is one of a series of ten volumes, issued at monthly intervals, covering the entire field of medicine and surgery. Price of the series, \$7.50, each volume, delivered on publication; but if the purchaser wishes simply a single volume, it costs from \$1 to \$2, according to size, etc. The series is published primarily for the general practitioners, and each volume comprises practically the progress in its special field during the previous year. The present volume on Gynecology is excellent, and is well up to date.

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**Enteric Fever in South Africa.**—According to the official statement, during the month of December last the admissions for enteric fever among the British forces in South Africa were 1,507, and the deaths were 224. The figures for January are not yet complete.

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In Tongaline and Quinine Tablets the laxative and cathartic effects of Tongaline, combined with the anti-malarial and anti-periodic action of quinine, give a most reliable and effective prescription for diseases that have periodicity as a prominent feature, accompanied by rheumatic or neuralgic conditions.

## Editorial.

### Salaries of Virginia (Insane) Hospital Superintendents.

There is nowhere a more faithful set of humane workers than the medical officers in charge of State hospitals for mental diseases. They occupy positions that but relatively few of the worthy doctors care to fill—exposed to dangers of various kinds, and limiting their special studies to diseases that would scarcely pay them in private practice. The longer their service in their hospitals, if faithfully rendered, the more valuable are these doctors to the public, and the better experts do they become in a class of cases that the general practitioner neither seeks nor cares to deal with. The longer their services are faithfully rendered to the special class of cases committed to their charge, the less prepared are they to return to private general practice. Hence, when chosen, their salaries should have an ascending scale of increase—just as the officer in the army or navy—after so many years of faithful service in his special rank, until the age of compulsory retirement comes on. But, instead of that, some of the acts of the recent Virginia Legislature would seem to suppose that the superintendents and other medical officers of the State hospitals are already too well paid, and therefore the legislators seemed disposed rather to “cut” the salaries already allowed than to render reward for meritorious services by increasing their pay. There are relatively few city practitioners of even State reputation that would be willing to give up their professional incomes for the annual salary of \$2,500 to \$3,000—about the largest salary allowed any of the medical superintendents of the four State hospitals for the insane of Virginia—and the assistant physicians receive much less, although there are about 2,500 insane in the four hospitals each year.

### Humanity in the Care of Prisoners.

Jails and penitentiaries and “police lock-ups” have a reformatory as well as a punitive purpose. So far as the punitive side is concerned, the fact that a man is justly sentenced to imprisonment carries with it the punishment of disgrace, so that the released or escaped penitentiary convict feels the sting of punishment as long as he lives; and he has practically to go to other States or countries, where his crime

is not known, in order to establish himself in the confidence of the people and in business for the support of his family. There are some crimes so heinous in their nature, it is true, that popular sentiment has given countenance to “lynch law”—especially where it is apprehended that some one of the twelve of a jury may be a sympathizer with the culprit. But when, for ordinary statutory offences—committed, it may be, under some wrong influence of mind or associates—a person is sentenced to the penitentiary, his commitment, while intended as punishment, is also intended as a school of reformation.

We are not among those who believe that properly submissive convicts who recognize their crime and the justice of their punishment under the law should be treated inhumanly—that they should be crowded into quarters, like packed sardines, with the class of “roughs and toughs” far deeper dyed in crime than themselves; so that when their terms are served, they return to the walks of life worse men than when they went to prison. Nor is it humane for legislatures to so crowd the cells and workshops with human beings as to force the healthy to contract the diseases of the tuberculosis and other infectious subjects. When humane prison officials and health officers recognize overcrowding of cells or workshops, or insufficient provision for the sick, in such prisons, or defective drainage, or improper ventilation, etc., for humanity's sake, do not let the people send or return to the city councils or county boards of supervisors or to legislatures persons so heartless as to be unwilling to make proper provision for the health and comfort of those whose commitments are intended chiefly for reformatory purposes. Temper justice with mercy.

### Appropriations for Hospitals.

It would seem from rumors that have reached our ears that in some way the report is started that this journal opposes State, city or county appropriations for hospitals that do charitable work. We wish most emphatically to correct any idea of the kind that may have been suggested to any one. On the contrary, the *Semi-Monthly* favors, and always has favored, as liberal appropriations to such institutions as the revenues of the State, city or county will permit; and for personal or corporation hospitals we have favored their exemption from taxation because we do not know of a single one in this

or any other State that does not have in it enough of free or charity patients during a year to fully compensate the State, city and county for the amount of taxes assessed. This journal goes so far as even to favor repeal of the special license tax upon practitioners of medicine because of the enormous amount of charity work that the nature of their calling compels them to do, unless it is a purely nominal tax of State or city to cover the expense of annual registration of their licenses to practice.

### Medical Society of the Missouri Valley.

This Association held its semi-annual meeting at Lincoln, Neb., on March 20th, with a large and representative attendance. Dr. Richard C. Moore, of Omaha, president, in the chair. Chicago was represented by Drs. Moyer, Findley and Coulter. Three sessions were held, and sixteen interesting papers read. The *Medical Herald* was again made official journal of the society. After the evening session, the members were invited to the banquet hall of the Lindell Hotel, where a sumptuous repast awaited them. The next annual meeting will be held in Sionx City, Iowa, September 18, 1902. Dr. Charles Wood Fassett, St. Joseph, Mo., remains secretary.

### The Association of Medical Officers of the Army and Navy of the Confederacy

Will meet in Dallas, Texas, Tuesday, April 22, 1902, at 12 M. Dr. D. D. Saunders, Memphis, Tenn., is president, and Dr. Deering J. Roberts, Nashville, Tenn., secretary. The railroads have made a rate of one cent per mile, and hotel or boarding house prices will be made moderate for this occasion.

On the evacuation of Richmond the buildings containing the records of the Medical Department of the Confederacy were completely destroyed by the great conflagration of April, 1865—thus leaving blank most enviable and important pages in the history of that terrible struggle of the Confederate war. With the hardships of the 600,000 Confederate soldiers contending against 2,865,028 of their fellow-men with the resources of the world at their beck and call, the Confederacy provided medical and surgical aid for over 270,000 prisoners of war, and did so humanely and well, as attested by the fact that 4,000 less of these died in the hands of the Confederate surgeons than met a

like fate of 220,000 Confederate soldiers and sailors who were prisoners of war in the hands of the United States.

The object of the Association is to cultivate friendly feelings among the member of the profession who served in the Medical Department of the Confederacy; and also to collect any material or information pertaining to the medical service of that army and navy. "All members of the medical profession who served as surgeon, assistant surgeon, contract physician, or acting assistant surgeon, or hospital steward or chaplain shall be eligible as members." Also all Confederate veterans who are now regular doctors of medicine are eligible as "associate members;" and all sons of Confederate veterans who are regular doctors of medicine shall be eligible to membership as junior members."

"Let us gather from the ashes of the Confederacy those obtainable fragments of a history that will be of interest to our children, their children, and those who may come after them."

If additional information is desired, communicate with the secretary, Dr. Deering J. Roberts, Nashville, Tenn., prior to April 18th; after that date address him at St. George Hotel, Dallas, Texas, or write to Mr. John F. Worley, chairman of the Information Committee, 374 Commerce street, Dallas Texas.

The reunion of the United Confederate Veterans will be in session in Dallas, Texas, April 22-25, 1902.

### The Medical Society of the State of West Virginia

Will hold its thirty-fifth annual session at Parkersburg, W. Va., May 21st, 22d, and 23d, 1902. Members are requested to send titles of their papers to the *Secretary*, Dr. William W. Golden, Elkins, W. Va., not later than April 25th, so that the programme can be arranged and mailed at least two weeks before the date of meeting. The Geography of the State prevents West Virginia from having as large a membership as might be expected of a State with its numerical population. And yet much might be done if each member of the Society will endeavor to secure at least one or two worthy new members for the coming meeting. Interest the younger members of the profession. Take them by the hand and help them; introduce them to other doctors, and urge them to bring out their experience in meetings. Many valuable points can be learned from the younger mem-

bers who are earnest students of their profession.

### Richmond Academy of Medicine and Surgery and Contract Practice.

At the first meeting in March, 1902, the Richmond Academy of Medicine and Surgery, we are afraid, did an unwise thing in adopting a resolution not sufficiently guarded. It opened the doors to a very easy way to do unprofessional things, and yet leave the violators of the Code of the American Medical Association to escape censure of punishment. It, in short, adopted a resolution permitting the acceptance of contract practice at prices that *nominally* are in accord with the local tariff rates of practice. If there is no underbidding, and if the parties accepting such positions from corporations will hold themselves aloof from "underground work" to secure the patronage that belongs to worthy doctors, there may be no wrong done. But the temptation will often be great to secure the practice of parties who are in the same families as their injured patients (for which the corporation is paying), but which families are the patients of another doctor, and unseemly scuffles will occur to disrupt good feeling, and impair the high tone of gentlemanly propriety, which should exist between doctors. Let us urge upon the young medical men of the city to be ever on their guard in upholding the high moral principle: "Do unto others as you would that others should do unto you." We do not know how far the act of the Richmond Academy of Medicine and Surgery may go in breaking up its allegiance to the Code of Ethics of the National Association. It may not stand the test of trial.

### The American Association of Urologists

Was organized on February 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the Association are specialists in genito-urinary diseases, membership is not limited to those engaged exclusively in this specialty. Thus gynecologists, who embrace renal and vesical surgery in their work, are among the founders, as are also several gentlemen who devote themselves to the microscopy and chemistry of the urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint. The Association consists

of active, corresponding, and honorary members, and is in great measure modelled upon the plan of the Societe Francaise d' Urologie, modified to suit American circumstances and conditions. Whenever possible, the branch associations throughout the United States, British possessions, and Spanish America, will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the Association is principally clinical, for the demonstration of new methods in the technique of examination and treatment. The annual meeting of the American Association of Urologists will be held on the last day, and the day following the annual meeting of the American Medical Association. The officers of the Association are: Drs. Ramon Guiteras, *President*; William K. Otis, *Vice-President*; John Vanderpoel, *Treasurer*; Ferd. C. Valentine, New York city, *Secretary*; A. D. Mabie, M. D., *Assistant Secretary*.

### The Standard Medical Directory of North America, 1902.

Published by G. P. Engelhard & Co., Chicago, Ill., includes a "Directory of Practicing Physicians in the United States of America, Canada, Cuba, Mexico and Central America," including, of course, the Philippine Islands, Porto Rico, etc. It also has "directories, respectively, of medical officers of the United States Army and Navy, Medical Societies and Colleges, Medical Laws and Boards, medical publications (books and periodicals), hospitals and sanitariums, mineral springs, drugs and medicines, medical and surgical products, manufacturers, life insurance companies, etc." It is an admirable, useful book—especially when one remembers that it is the first edition. The volume is handsomely bound in cloth, 8x12 inches in size, and contains over a thousand pages. Price to physicians, \$10.

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**Yellow Fever in the British Garrison at Jamaica.**—The American Consul at Kingston, Jamaica, has informed the State Department that yellow fever has broken out there, three British soldiers having been attacked with the disease. The remainder of the garrison has been removed to the mountains.



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## Original Communications.

### THE IMPORTANCE OF EARLY DIAGNOSIS AND THE TREATMENT OF POTT'S DIS- EASE.\*

By A. R. SHANDS, M. D., Washington, D. C.

The subject of Pott's disease, considered as a whole, including all of its numerous complications, is such an extensive one that the writer has decided to present only what he considers its most important features—viz., the early diagnosis and the mechanical treatment as a means of preventing or reducing to a minimum the dreadful deformity—"humpback"—so characteristic of this dreadful malady. It is absolutely essential to recognize this disease before any deformity is established to prevent the same or reduce it to a minimum. Pott's disease, as you all very well know, was recognized by the ancients. I have nothing new to present that is not known to you, but I do claim to have a reasonable familiarity with the disease, and trust that I may be able to tell you how a fair amount of success may be obtained in the treatment if the disease is recognized in its incipency. I shall feel fully repaid for my labors if I can arouse sufficient interest to cause you to think of Pott's disease when you next see a child presenting the symptoms that will be described as indicating this disease before the deformity is established, for when the diagnosis is thus made and efficient treatment is begun and faithfully carried out, the unfortunate victim will be saved the mortification of being the possessor of a most disfiguring deformity.

About the only thing new regarding Pott's disease, even in the light of modern research, is that of late years it has been discovered beyond all doubt to be due to tuberculosis; the principle involved in the mechanical treatment at present is exactly the same that was used by Ambrose

Pare in 1579; from that time to this about the only thing new is an improvement in the material used.

Kyphosis is not a necessary condition in diagnosing Pott's disease; one should diagnose this malady long before there is any deformity present. It should be borne in mind that it is possible to have a very extensive spondylitis run its usual course, extending over years, and finally get well and never have any deformity of the spinal column. This is explained by the fact that the disease is confined to the anterior surface of the vertebrae, not involving the bodies sufficiently to cause them to crush. The process may be confined to the centre of the body; in such a case, little or no deformity will result. The subject of Pott's disease without deformity is barely alluded to in many of the text-books, hence I desire to call especial attention to it, for I believe it is much more common than is generally supposed, and many cases are never recognized, and many not until it is too late to help the unfortunate victims. This diseased process is, as a rule, limited to the bodies of the vertebrae; the transverse articular and spinous processes are only affected secondarily; so far as known, never primarily. Any part of the body may be affected; there may be two or more foci in one body, or the whole body may be affected. The abscess in the bone may extend, involving everything in front of it until several adjacent bodies are involved, which accounts for the extensive deformity seen in many cases.

*Diagnosis.*—In a typical case of Pott's disease, the diagnosis is easy, so characteristic are its symptoms. My remarks concerning the diagnosis will be confined to the symptoms when the disease is in its incipency, long before there is any deformity of the spine. The most striking feature is the very guarded movement in walking, in stooping, or in lying down; the spine is most carefully guarded against motion and all sudden jar; patient will walk on the balls of his feet with knees and hips somewhat

\* Read before the Medical and Surgical Society of the District of Columbia, February 6, 1902.

flexed, which produces a springing gait. Constitutional disturbances are likely to be present when the disease is of a few months' duration.

The early diagnostic symptoms can be included under three heads—(1) peculiarity of gait; (2) muscular stiffness, and (3) referred pain; all of these are present before the development of any deformity. The importance of these early symptoms cannot be overestimated, for in their recognition rests all of one's hope to bring about a speedy cure.

The peculiarity of gait may be due either to reflex muscular spasm or to an unconscious effort on the part of the patient to relieve jar or any increase of pressure upon the affected vertebral bodies. There is a disinclination on the part of the patient to carry his weight on his back, he will always lean on something; when he stoops he will always let himself down on his knees to ease himself. If the disease is in the cervical region, patient will invariably support his head with his hand.

When the disease is in the lower cervical or upper dorsal region, the chin is held somewhat raised to balance the weight on the articular facets. The spinal column, just below the seat of the disease, will be abnormally straight or bent forward just a little, while lower down in the spine will be found a backward projection of the spinous processes due to a compensating curve, which is so prominent at times that it almost suggests a second seat of the disease. When the disease is in the lumbar region the patient, in the early stages, will frequently lean backward like a pregnant woman or a man with a large abdomen. The patient is likely to walk a little one-sided, due to a contraction of the psoas and iliacus muscles. This feature is so marked at times that it almost suggests hip disease. This muscular stiffness is often more marked after a rest, especially after sleep the stiffness diminishes after patient moves about much. The peculiarity of attitude and gait will vary according to the severity of the disease. The amount of muscular stiffness, rigidity and difficulty in maintaining the spine erect is to a certain extent an index to the activity of the disease. In the early stages sometimes the erector spinae muscles will stand out in bold relief on bending the back, acting like physiological splints to the diseased column.

The locality of pain, when present, is most important. The pain is rarely ever in the incipient stage of the disease referred to the back, but to the peripheral ends of the affected nerves,

it will be located in the abdomen, chest or limbs according to the part of the spinal column diseased. A persistently localized pain in a child should always arouse a suspicion and demand the closest attention.

The pain is usually sub-acute, but at times is so severe that the weight of the bed clothes cannot be borne. From the fact that the pain is sub-acute, and that there is muscular rigidity, often gives rise to the mistaken diagnosis of rheumatism, sciatica, etc. It is impossible to go very deeply into diagnosis in a paper of this sort. I have endeavored to point out a few of the cardinal features.

*Prognosis.*—Pott's disease is a most formidable disease; its long course, the severity of its symptoms, its terrible complications (abscess, paralysis, etc.), occasionally death coming on after years of suffering or terminating in dreadful deformity. That is the dark side of the picture. There are few affections that the orthopedic surgeon has to deal with that offer better results for his labors than does Pott's disease, if he gets his patient in the incipency of the disease, and will use the best means of treatment, and see that this treatment is properly carried out. Facts show that the disease tends to a spontaneous cure. What better evidence can we have that tubercular spondylitis is a curable disease? A natural cure may take place in two days—(1) by absorption or calcification of the tubercular mass at an early or late stage of the disease; or (2) by the purulent degeneration of such tissue and its evacuation by an external opening. Suppuration seems to be nature's effort to eliminate the diseased material.

The prognosis of the case that develops abscesses will depend upon the situation of the abscess, completeness of evacuation, and amount of drainage possible. The prognosis is much more favorable in children than in adults; the latter are much more liable to complications.

Prognosis as to time of recovery is very uncertain. Roughly speaking, three years is about the average time for the continuation of treatment. Until one has seen a number of relapses it is hard to appreciate the importance of long continued treatment. Perseverance and long continued treatment are absolutely necessary to obtain good results.

*Treatment.*—In considering the treatment of Pott's disease it is important to realize that you have to deal with a trouble that is not going to be cured in a short while; on the contrary, you are

dealing with a malady that is going to demand the closest scrutiny, patience and perseverance and attention to detail for several years, if you expect to get anything like a fair result. Not only is it an undertaking that is going to be very exacting of the surgeon, but will require the most hearty co-operation and the closest watching of some one who has the best interest of your little patient at heart. By far the most important factor in the treatment of a child with Pott's disease is discipline, and by this I mean absolute discipline, not only in the management of the child, but its parents and nurse—in fact, every one who has any authority over the child. These children, as a rule, are dreadfully spoiled, and for this reason one always gets the best results in his hospital cases. It is very important to obtain the confidence of the parents, and then you will have little trouble in securing their hearty co-operation, if they have the best interests of their child at heart. My rule is always to explain to them exactly the principle involved in the treatment, and what is aimed at, and then they will help you execute it, for it is absolutely necessary to have some one in constant watch over the child. When the parents are willing to share the responsibility with you, you will have plain sailing. I will not undertake to treat a case under any other conditions.

The results obtained from the proper management of these cases are most gratifying, and well worth all of the trouble and worry you may be put to. I have seen cases with the most aggravated symptoms, and the distressing complications not only cured of the caries, but recover with little deformity. I conscientiously believe that the large majority of cases that are able to resist the ravages of the disease sufficiently to recover can do so with little deformity, and often with none, if taken in the incipency, and are thoroughly treated by one who fully understands the nature of the disease, and will spare no trouble and perseverance in keeping up the treatment sufficiently long, directed by common sense and good judgment.

*Rest and fixation* are the indications in the treatment, and this in a way that will not confine the patient to the house or bed. The principle involved is to furnish an antero-posterior support to the diseased spine. It matters not what kind of support you use, so it is one that will produce *rest* and *fixation* by antero-posterior support to the best possible degree. The diseased vertebra should be protected from jar

and pressure until the disease is cured. The jars that come upon the spinal column are chiefly those that are received in bending the column forward, hence importance of antero-posterior support; pressure upon the diseased vertebra comes from the super-incumbent weight of the head and trunk.

A diseased spine should be regarded as a broken spine; then, as in other bones of the body, the fracture should be reduced and fixed in the best possible position by mechanical means, and then treat the patient on general principles, doing all that is possible to improve the general condition until nature has brought about a repair of the broken spine.

The special kind of treatment will be of little avail unless it is directed by one who appreciates fully the gravity of the case, the complications that may arise, and above all, the length of time required to pass through all of the stages.

In selecting the kind of mechanical appliance to be used, one must use his own judgment and select the one he best knows how to use, for that is the one that will give him the best results.

I am not an advocate for the use of steel braces, for it has not always been my good fortune to command the assistance of a good instrument maker. Unless one is so favored, he had better be his own instrument maker. As a rule, the ordinary braces of the shops are about as useless for all cases as are the numerous quack medicines suited for all of the diseases that they are advertised to cure. If you leave the fitting of a brace to an instrument maker, nine times out of ten he will not get the support just where it is most needed. In this way the responsibility is divided between the surgeon and instrument maker; the unfortunate patient is the sufferer for the combination. My experience has been most unsatisfactory with steel braces on account of the difficulty of getting such a fit that efficient support is obtained to the important parts. The most important feature is, after all, that the spine should have constant rest and fixation, and this is impossible to furnish with a removable brace. Patients will interfere with the straps and buckles on the most trivial excuse, and in relaxing the rigid support great damage can be done in a short time to tissues that nature is trying to repair, and will succeed in so doing if left undisturbed. The only way to overcome all of the objections that I have mentioned is to select an apparatus that cannot

be interfered with by any one after you have applied it.

From what I have said, you have doubtless inferred that my preference is the plaster of Paris jacket, and such is the case. Thanks to the genius of the late Dr. Lewis A. Sayre, we have in the plaster of Paris jacket an apparatus that fulfills every indication in the mechanical treatment. It makes the surgeon entirely independent of the instrument maker. It puts the poorest patient within reach of the very best treatment, for the cost of the material in a plaster jacket is not over fifty cents. It cannot be removed at the whim of the patient; you always find it just where you put it.

It is quite an art to apply a comfortable jacket, and if it is not comfortable, it is because it is not properly applied.

My rule is to use the solid non-removable jacket in the very acute and painful cases, but just as soon as the acute stage subsides, I use the removable plaster corset, which is continued just as long as I think there is any danger of a relapse. The average length of time may be estimated at about three years.

When the disease is in the upper dorsal and cervical spine, the head must be supported with the jury mast or chin support. The latter is my choice, as the former is unsightly and does not afford as efficient support to the head. When a head support has to be used, it matters not, in my estimation, as to whether you use the plaster jacket or a steel brace, for they only furnish a support for the chin rest. In the very acute cases of cervical Pott's, accompanied, as they usually are, with great pain and spasm, it being impossible to handle these little patients without causing violent paroxysm of pain, I always extend the plaster of Paris jacket around the head, only leaving the face exposed. The patient is kept in this until the very acute stage subsides, when a brace or plaster jacket, with chin support, is applied.

The treatment of Pott's disease by recumbency as a routine method, I cannot sanction, for reasons already referred to in this paper. It necessitates the patient being confined to the bed for a length of time that seriously interferes with the improvement of the patient's general health, and in this way defeats the object in view.

1319 New York Ave.

Tongaline and Lithia Tablets are almost a specific for lumbago and sciatica.

## REMARKS ON INFLUENZA.\*

By PRESLEY C. HUNT, M. D., Washington, D. C.

The confusion of the laity, and the indifference of the profession, to the differentiation between cold and "grippe" has grown to such an extent that a word of warning is not out of place. It is important, because one has no results, and the other is sometimes followed by complications or grave sequelæ from even a very slight attack.

There is a difference between them in their causes, symptoms, courses and results. Cold is an inflammatory condition, due to sudden lowering of the vital resistance of parts of the body from exposure. Grippe is a specific, acute, infectious (possibly contagious) disease, air borne infection; but it differs from most infectious diseases in that one attack confers no immunity as to a subsequent attack. Though some individuals seem immune to it, others are extraordinarily susceptible to repeated attacks.

In the absence of microscopical knowledge, a correct *diagnosis* is made by the following means: *First*, the prevalence of an epidemic of the disease; *second*, the time of year—in this city the disease manifesting itself in the autumn and winter; *third*, the sudden onset of the symptoms, which is most characteristic, commencing with sensations of coldness or a chill, general depression and prostration, pain more or less severe in the head, back, and limbs, and fever in addition to the symptoms of an ordinary cold.

Grippe has changed in character since the severe world-travelling outbreaks of 1889, and has remained with us since—changing in its most prominent manifestations from year to year, from the marked inflammatory condition of the bronchial mucous membrane noticed in the earlier epidemics. There has been a gradual diminution of such inflammations with a corresponding increase in the nervous and intestinal forms. At present it is rarely fatal in itself, but adds greatly to the mortality through its complications.

It may be divided into three forms, from the prominence of the presenting symptoms—to wit, pulmonary, nervous, and intestinal. The *pulmonary* form is that condition in which the inflammatory symptoms are most marked in the respiratory passages; the *nervous* form is that in which the force of the poison seems to be expended principally on the nervous system, caus-

\* Read before the Medical and Surgical Society of the District of Columbia February 2, 1902.

ing at times severe depression, and the *intestinal* form is that in which the chief symptoms are, besides the sudden onset of pain in the head, back and limbs, pain in the epigastrium, with tenderness over the abdomen, nausea, occasional vomiting and a general catarrhal condition of the gastro-intestinal mucous membrane. This is perhaps the rarest form, but during the present winter it seems unusually prevalent. During the past two months I have seen about twenty cases in children between five and ten years of age living in poor, hygienic conditions. May not this form be produced in part by the hygienic surroundings, poor and badly cooked food, etc.?

Influenza is especially apt to make active a latent tuberculosis process, or to invite the deposit of tubercle in the lowered vitality of the bronchial membrane. Other complications and sequelæ are pneumonia, sub-acute or chronic bronchitis, acute otitis, with possibility of mastoid involvement or deafness, purulent conditions of the nasal sinuses, acute inflammation of the kidneys, dilatation of the heart, due either to the action of a toxin on the nervous system of the heart or mechanical interference with the outflow of the blood.

The mucous symptoms may be separated into two groups, and are due to the ptomaine poisoning.

*In the first group* are classed those symptoms that develop during or shortly after the febrile stage. The severe pains about the chest and other parts of the body are partly due to a neuritis or peri-neuritis. The poison may also act on certain centres, as, for instance, causing partial paralysis of the thermogenic centres, which may partly explain the slight elevation of temperature especially noted in pneumonia. Other symptoms noted in this group are great irritability or depression, insomnia and delirium.

*In the second group* are disorders occurring after the attack has subsided. By far the most important and common sequel is neurasthenia in one of its various types—the cerebro-spinal form being characterized by great depression, amounting even to melancholia, with suicidal tendencies. In a case of this description, occurring in my practice, the patient, after two months, slowly recovered, and is at present in fair health.

A marked immunity from influenza has been noted in those recently vaccinated; and this

may possibly help to explain the apparent immunity of young children.

As the dangers subsequent to attacks of grippe are so apparent in one's every-day work, we must impress upon the public the fact that they should not trifle with what they have come to regard through long familiarity as a trifling disease that is more inconvenient than dangerous.

*The prophylaxis* of influenza is of the greatest importance, and measures should be adopted to prevent the spread of the disease, if possible.

The atmospheric dissemination of influenza proves that the vitality of the germ may be preserved outside the body for a protracted period, and therefore isolation cannot be relied on as in other infectious diseases. But while a rigid isolation may not be practiced, the patient should be confined to the room, only attendants should be permitted to enter. With reference to ventilation, the atmosphere of the room should not be allowed to be disseminated through the house more than possible. During the prevalence of an epidemic quinine in doses of five grains daily has been noted as a preventive of influenza.

*The treatment* of this disease, whose mortality in simple, uncomplicated cases is practically nil, is quieting of the patient in the first stages by warmth and absolute rest in bed, the reduction of fever by gentle means, as small doses of phenacetine, quinine and Dover's powder. Constipation, if present, is best relieved by from one to three grains of calomel at night, followed, if necessary, by a saline laxative in the morning. Other drugs that may be indicated are salicylate of soda, salol, aconite, etc.

Throughout the disease the patient should be made comfortable by the alleviation of the troublesome symptoms, the chief part to be borne in mind being the possibility of the inter-currence of dangerous complications, inflammatory or otherwise, and the nurse should be instructed how to head off in their incipency such as have been foreseen.

The most fatal complication is pneumonia, and it generally occurs on the third or fourth day; therefore we should husband our patient's strength by rest in bed till the danger period of this grave complication has passed.

*The convalescence* from this disease calls for strychnine in some form, and it may prove advisable to resort to a change of climate.

1815 M Street, N. W.

## HISTORY OF THE MEDICAL SOCIETY OF TENNESSEE.\*

By DEERING J. ROBERTS, M. D., Nashville, Tenn.,  
President of the Society, etc.

It is with feelings of deepest gratitude and most sincere appreciation that I occupy a position to-night, at one time in their lives held by some of the most eminent, capable, reputable and representative members of the medical profession in this great State—a position most enviable, a rank far beyond my humble merits, and which I shall ever regard as the highest honor that could be conferred on me.

We begin with Dr. James Roane, son of one of the earlier Governors of our State, who was elected and presided at the organization in our capital city May 5, 1830, only "to fall a victim to his professional zeal on the 27th of February, 1833," having been engaged day and night for an entire week in his most heroic efforts in battling with an epidemic of cholera then existing. His name is appended to the "Minutes" of our time-honored organization for the years 1830, 1831 and 1832, the vacancy being filled in 1833 by the election of Dr. Ferdinand Stith, of Franklin, who was succeeded in 1834 by the first male white child born where Nashville now stands, Dr. Felix Robertson, a son of Gen. James Robertson, and the first man I met when I arrived in the same city six years later.

He, serving as president for six consecutive years, was succeeded by Dr. Samuel Hogg, who served during the years 1840 and 1841; and in 1842, being too ill to attend the meeting, the vice-president called the Society to order, and on stating the unwelcome fact, appropriate action was taken by the Society in the form of resolutions of sympathy. Dr. Hogg represented his people in both houses of the State General Assembly, and at one time was a member of Congress. He was born in Caswell county, N. C., April 18, 1773, and died May 28, 1842. He was one of the most noted medical men of this State. His father was a major in the Revolution, and it was his mother who made the famous reply to the Tory, Col. Tarlton, on his expressing a great desire to see General Washington, by saying: "You might have done so had you looked back at the battle of Cowpens!"

Dr. Hogg, having obtained his medical education, came with the tide of emigration that

followed General Robertson and his band, first settling on the banks of the Cumberland, and subsequently moving to Lebanon; in 1812, he accepted the position of surgeon of a regiment, and, descending the Cumberland, Ohio, and Mississippi rivers, participated in Jackson's great battle at New Orleans. In 1843, Dr. Lunsford P. Yandell, one of the organic members of the Society, but who had moved to Louisville, came by appointment and delivered a memorial address on his life and character before the society, which, with appropriate resolutions adopted, was by order of the society published.

He was succeeded in the presidential office by the vice-president, my revered teacher and friend in later years, Dr. A. H. Buchanan, one of the most profound pathologists, correct clinicians and able surgeons of his day. He was one of the most devoted and earnest members in the primary organization and early development of this society, and its interest and welfare were ever close to his heart until the day of his death, on June 20, 1863, at the age of fifty-five years, while an exile from home at Stone Mountain, Ga. Originally coming from Winchester, Va., he first taught school in a log cabin in East Tennessee; subsequently coming to Columbia, he commenced the study of medicine while still engaged in teaching; and at the end of the first course of lectures he attended in the University of Pennsylvania, asked the faculty to grant him the most rigid examination, on account of his financial inability to attend a second course, that being one of the essential requirements. Impressed with his earnestness and sincerity, and recognizing his merit, it was finally granted him upon the condition that he would not reveal the fact until after the death of all who should sign his diploma. As a teacher, he had few equals if ever a superior; with a gifted flow of language and lucidity of thought, his eloquence was at times sublime; and in his earlier years he was most highly commended by his great political prototype, Henry Clay, of Kentucky. He held the office eight years, from 1842 until his successor, Dr. John W. Richardson, of Rutherford county, was elected in 1850.

Dr. Richardson was the eminent sire of the present able leader of the Democratic party in the National House of Representatives. He received his degree in medicine under the tutelage of Dr. Benjamin W. Dudley, from "Old Transylvania," in its palmiest days, from whose portals passed out into their active life-work in medicine and surgery some of the most devoted,

\*Address of the President. Read at the sixty-ninth Annual Meeting of the Medical Society of the State of Tennessee, at Memphis, Tenn., Tuesday, April 8, 1902.

sincere and competent practitioners of this great interior valley, made illustrious by the pen of Daniel Drake, if by nothing else. Dr. Richardson served his State in both houses of the General Assembly, but declined a proposition that would have most certainly placed him in the National Legislature, in which his son has been so important and striking a figure in later years. He practiced in the same community until the day of his death, November 17, 1872. On one occasion, when quite ill, he resisted the importunities of his faithful wife, when sent for to see a patient, by saying: "*I must go, for I know he is poor!*"

Although Dr. Ferdinand Stith, of Franklin, only occupied the chair one year, he was an active and earnest member for a number of years. In 1842, as dean of the Board of Censors for Middle Tennessee, he reported having licensed an applicant, a Mr. Osborne, who, as Dr. Thos. C. Osborne, made an enviable name as a physician in his native State, in Alabama, and in Texas. He subsequently obtained the degree of M. D. in this city at the Memphis Medical College, and is yet living at Cleburne, Tex., at a ripe old age, universally loved and esteemed by all who now, or have ever known him. Dr. Stith lived to an advanced age, and I remember to have met him and his good wife, when a twelve-year-old boy, and on a visit to an uncle, then practicing medicine in Williamson county. Dr. Stith was also universally loved and esteemed by a host of men, women and children as "our doctor."

This completes the roster of presidents for the first twenty years of the Society's existence, in which time we find, from looking over the original minutes, much interesting and progressive work was done. At the organic meeting in 1830, Dr. Charles Caldwell, of Transylvania University, was present by invitation, and was elected an honorary member, which he accepted in a most courteous manner in a letter to the secretary, which we find incorporated in the minutes.

In 1831 Dr. Henry Frost, of Charleston, S. C., was elected an honorary member, as was Dr. Daniel Drake and Dr. Benjamin W. Dudley, the two first acknowledging in most grateful terms their high appreciation of the honor conferred; of the latter's acceptance we have no record.

Dr. Lunsford P. Yandell, the elder, while a resident of Murfreesboro at the time of its organization, subsequently, while residing in

Louisville, was also made an honorary member, and in addition to the occasion already mentioned, when he made a special visit to the Society to deliver his memorial address on the life and work of Dr. Samuel Hogg, also by special invitation delivered an address at the Reformed Baptist church on the afternoon of May 4, 1841—the Society adjourning from the City Hall, in which its meeting was being held, to the church, the citizens being invited, and a large number availing themselves of the opportunity. In 1850 he was again invited to address the Society by resolution offered by the courteous, gentlemanly and in every sense of the word true physician, Dr. B. W. Avent, who gave up his life in this city nearly a third of a century later in his heroic efforts in behalf of his fellow-man.

The first action of the Society was to secure a charter of incorporation, which was granted by the General Assembly of our State by an act passed January 9, 1830, and is signed by Ephraim H. Foster, speaker of the House, and Joel Walker, speaker of the Senate. This charter was to extend for thirty years, and expired by limitation in 1860, its further extension being prevented by the terrible storm cloud of civil war looming up on our northern horizon. The preamble to this act of incorporation will bear reproduction here, and I am gratified to state that proper steps will be suggested by an able associate and predecessor in this chair to secure another charter, which has now become indispensably necessary, and his suggestions I most sincerely hope will meet with your most careful consideration.

The preamble is as follows:

"As health is universally acknowledged to be essentially necessary to the happiness and prosperity of society, and its recovery and preservation are essentially connected with an intimate acquaintance with the animal economy and the properties and effects of medicines, and as institutions formed on liberal principles and patronized by law are eminently calculated to encourage the propagation and dissemination of such knowledge; therefore, be it enacted," etc.

This act enabled and empowered the Society to license individuals to practice medicine, through a Board of Censors, seven elected from each grand division of the State, and provided the method of examination and fee for the same. It also empowered the Society to levy a tax on the members for the necessary expenses of the Society, and to punish by fines, not exceeding

\$50, any of the members for dereliction of duty; other features of a general character for its government being included. The reading of the original signatures to this charter I know would be of more than passing interest to some of you, but I will limit myself to mentioning those residing at that time in the then somewhat sparsely settled portion of the State known as the Western District, with the names of the counties then composing it:

Carroll county—Robert Nicholson, James Henderson and Scott W. Bell.

Gibson county—John H. Crisp and William W. Lea.

Dyer county—John Degraffenreid and Edward Burchett.

Obion county—William Wilkerson.

Henry county—T. K. Porter, Francis Price and Edward R. Anderson.

Weakley county—Pulaski P. Bell and Thos. Edwards.

Madison county—James Young, Robert Fenner and Dr. Loring.

Henderson county—John H. Wilson and Dr. McKissack.

Haywood county—Allen I. Barbee.

McNairy county—Dr. Young.

Hardeman county—Daniel M. Gwinn and David Brown.

Fayette county—Drs. Williams and Higga-son.

Shelby county—Drs. Russell and Christian.

Tipton county—J. A. Greene and Charles G. Fesbee.

Lawrence, Wayne, Hardin, Humphreys and Perry are included in the list of counties of the Western District, possibly to add to its numerical strength—Dr. Daniel S. Saunders, then residing in Perry county.

In the Eastern and Middle Divisions we find a larger number of names; those sections being more populous, but all through the list I find names of men who occupied a high rank indeed in the communities in which they resided as physicians, as gentlemen and citizens of high standing.

In Davidson county the list is Samuel Hogg, James Roane, Felix Robertson, R. A. Higginbotham, Boyd McNairy, James M. Walton, Charles Pugsley, John Waters, John Maxey and James Overton.

In Maury county, George M. Campbell, Thos. Brown, D. N. Sanson, H. E. Turner, John B. Hayes, John M. C. Gimpsey and S. R. Gordon.

Rutherford county—James Maney, W. R.

Rucker, Lunsford P. Yandell, F. E. Becton and Samuel Walker.

Williamson county—W. G. Dickerson, Ed. Breathitt, F. Stith and William S. Webb.

In Sumner county I find, with others, Elmore Douglass, James A. Blackmore and David M. Porter.

Robertson county—Archibald Thomas, Christian Allen and T. I. Watson.

Montgomery county—J. H. Marable and others.

Lincoln county—Allen C. Gillespie, William Bonner and others.

Dickson county—Henry Marable.

In fact, so many of these names are connected with the best interests of the State in their day, emphatically "historic" names, that I can with reluctance desist from taxing you with a full recital, and would suggest the propriety of placing the entire list in the hands of the publication committee to be reproduced on the printed page of our *Transactions*.

I would that I had the time to go into a full detailed review of these records of the first twenty years, which are now in my possession, and which are well worthy of publication in full. However, I shall ask your permission, gentlemen of the Society, to place this historic volume in the State Library at Nashville, in the capitol, with the understanding, which I have secured from the present librarian, that a proper case shall be procured for the preservation of so valuable a historic relic.

The following members constituted a committee to report a Code of By-Laws, which include a "Code of Ethics," and which were adopted at this organic meeting: Drs. Alex. McKinney, of East Tennessee; Boyd McNairy, Wallace Estill, F. Stith, Tennessee, and John B. Hayes, of Middle, and James Young, of West Tennessee.

From the By-Laws I quote the following:

"Resolved, That it is the deliberate opinion of this Society that Ardent Spirits are rarely useful as a medicine, and that the habitual use is productive of the most lamentable consequences to the human frame, such as derangements of the vital organs, causing a short and miserable existence, and still more miserable death, and, therefore, be it resolved, that this Society urgently recommend to their fellow-citizens a total abstinence from ardent spirits, except in cases prescribed by physicians."

The second article of the Code of Ethics is also along the same lines, and reads: "The



strict observance of temperance cannot be too strongly inculcated in the minds of practitioners of medicine and surgery, a clear and vigorous intellect and steady hand being absolutely necessary to the successful practice of these branches of medical science."

In looking through these minutes, written by the hands of men long since still, some of whom I distinctly remember to have seen in the flesh in my boyhood days, I find that fines were assessed on various members in sums varying from 1 to 2, 5 and even \$20 for failing to deliver addresses, or submit essays on subjects assigned, or to make reports on special matters, the Society being empowered to collect said fines "by law" under the charter of incorporation. The uniform assessment of one dollar each session for the ordinary expenses seems to have prevailed throughout a number of years, which was later raised to two dollars per annum. While the minutes of the meetings were published in pamphlet form, as I find from bills audited, except on special occasions the papers, essays and clinical reports were left to the disposal of the writers to publish in some medical periodical; in certain instances of more than ordinary note, a special publication is mentioned with the request of the Society as indicated by a vote of the members. These papers will be found in the periodical medical literature of that day and time. This course having been followed, according to my recollection, until the early part of the 70's; and the *Nashville Journal of Medicine and Surgery* is rich in the contributions from this source during the entire time from its first number so long as its fortunes and destiny were controlled by the "Sage of Swallow Barn," he being a most active and devoted member of the Society from the day he came from our sister Commonwealth and became a citizen of this State, until he entered peacefully into that rest so well earned by a true and faithful follower of his grand exemplars, St. Luke and St. Paul. Like the "Beloved Physician," he was not only most faithful to his trust as a physician, but also zealous as a rigidly correct, conscientious and critical reporter.

At the meeting in 1831, the Society accepted an invitation from Governor Carroll to visit the State penitentiary, then our most prominent public building, and quite new, which has entertained quite a number of visitors from all parts of the State in subsequent years, the Society meeting at the court-house at 3 P. M., and proceeding there in procession.

At this meeting also the sum of \$50 was offered for the best essay to be delivered at the succeeding meeting. At this meeting a committee was appointed to design a medal; and while their labors were not effectual in a strict sense, we have resulting therefrom the seal of the Society adopted in 1841, ten years later, and which I had the good fortune and pleasure of rescuing from a mass of refuse in an old printing office—aye, from the "hell box," in the venacular of the "printer's devil," the year I became a member of the Society, 1875; and it has adorned the title page of our Transactions every year since.

In 1832, a committee was appointed to draft a memorial asking the Legislature to repeal the existing statutes "in regard to exhumation." This met with the fate of similar action of subsequent days by reason of a want of *thorough* organization of the profession throughout the State. Need I ask you to bear this in mind?

At this meeting Girard Troost was appointed orator for the succeeding year, and Dr. David McIntosh, of Knoxville, Dr. F. Stith, of Franklin, and Dr. Alex. Jackson, of Paris, to read essays on the Medical Topography and Diseases of their respective districts.

Deeply interesting to and revered as are these "minutes" by me, I feel that I must not take up too much of your time in reference thereto; and will briefly mention a few striking facts among the occurrences of these two decades. Aye, time admonishes me that I must pass on with but a cursory glance at this "Holy Ground!" An orator for each meeting, and essays on diseases and medical topography of districts, counties and localities were an important feature of these earlier days, Dr. James Overton receiving a special vote of thanks for his oration on "Spontaneous Combustion" in 1835.

Our present system of having members at any meeting registering in person and in their own handwriting having been established at the first meeting was faithfully carried out through all these twenty years. The essay of Dr. Stith on Cholera, at the session of 1838, is thus mentioned after the statement that it was ordered published with the proceedings: "The very peculiar notions expressed by the author in the above essay gave rise to some animated discussion among the members." Yes, doctors differed in that day as well as in ours!

In 1839 I find the following adopted as a schedule of "fines": For failure to deliver oration, \$25; for failure to read topographical re-

port, \$10; failing to report a case when appointed, \$2; and for failing to attend meeting, \$5.

Although vaccination was introduced into America by Waterhouse in 1800, and was extended throughout the Southern States by the aid of President Jefferson, we find that in 1838, Dr. Sylvanus Fansher, of Saulsbury, Conn., sending some vaccine virus from the Vaccine Institution at that place, gave rise to the following resolution, offered by Dr. Stith: "Resolved, That the president distribute the vaccine matter to some individual in Nashville, Franklin, Clarksville, Columbia and Murfreesboro, from these points to be again distributed by the receiver." A vote of thanks was tendered Dr. Fansher at the meeting held the following year.

A prize for the best essay on some medical subject was again offered in 1839, and four essays were submitted in 1841, the prize being awarded to Dr. Lunsford P. Yandell, of Louisville, Ky.

In 1843, Dr. Esselman reported a case of tracheotomy with recovery, and a successful extirpation of the uterus for chronic inversion. How well I remember the unpleasant notoriety that stuck to this earnest student and able surgeon of his day "as one who cut open women! Yes, and took their insides out!" Little did I think in my earlier days that our language and the very dictionaries thereof would have to submit to "expansion" at the hand of the numerous abdominal surgeons of to-day.

In 1843 an assessment of \$2 was made on the members to "establish a Museum of Pathological Anatomy in Nashville," the members being invited to present specimens. It is almost needless to say that this resolution was offered by Dr. A. H. Buehanan, the president.

The Legislature was also memorialized in the interest of the study of anatomy, to repeal or modify the laws making the "taking of a dead body a felony." In 1844 about one dozen pathological specimens were presented to the museum by various members, and the assessment was rescinded, the surplus in the treasury being presented at succeeding meetings. A committee of twelve were appointed to attend the experiment in animal magnetism, by Dr. Stith, and make report. The oration this year was delivered at the First Presbyterian church, by Dr. Robards, of Columbia, to which the public were invited, his subject being, "The Importance of the Government Authorities Bestowing More Protection and Encouragement to Medical Science."

At the meeting in 1845, Dr. J. E. Manlove, of Davidson county, reported a "Case of Gastrostrony," which was resorted to for the relief of obstruction in the bowels, terminating in artificial anus, which eventually healed without a surgical operation, the patient being present for examination by the members of the Society; Dr. Richardson offering a resolution, which was adopted, "That the report be presented to the editor of the *Boston Medical and Surgical Journal* for publication."

At this meeting Dr. Josiah Stout reported that the committee appointed last year had not had sufficient opportunities to witness the experiments in mesmerism, and would be unable to make a satisfactory report, and asked for further time, which was granted.

At a called meeting, held April 4, 1846, the following committee were appointed delegates to a National Convention, to be held in New York on the first Tuesday in May following, which convention was the organic meeting of the American Medical Association. The committee was Drs. Robert Martin, W. A. Cheatham, B. W. Avent, J. B. Hayes and G. A. J. Mayfield, of Middle; Wyatt Christian, H. R. Robards and Jackson, of West; and Pride, Ramsey, Cooke and Deaderick, of East Tennessee. Also it was resolved and adopted, "That any member who might be present at the convention should be authorized to represent the Society."

At the regular meeting, held one month later, the prize essay committee awarded the prize to Dr. W. L. Sutton, of Georgetown, Ky., and it was requested that it be published in the *Louisville Medical Journal*.

At a called meeting held March 25, 1847, Drs. A. H. Buehanan, Josiah W. Stout, B. W. Avent, P. Martin, John B. Hayes, and A. W. Nelson were appointed as delegates to the American Medical Association.

At the meeting in 1850, Dr. J. W. Richardson, the president, made a report showing the value of nitrate of silver injections in epidemic dysentery. Thursday evening, April 4th, he delivered his annual address in the Methodist church at Murfreesboro, the annual session being held in that town that year, and the public were invited to attend.

Although these old records, written by the hands of the various secretaries, are most interesting to me, I feel that I must not tax your patience longer in dwelling on them. By reference to incomplete files of the *Nashville Journal of Medicine and Surgery* up to the

time of our civil war, I find also much important historical data that have a bearing upon the duties of the hour, and I will trespass farther upon your indulgence by brief allusion thereto, with a somewhat lengthy quotation from the annual address of Dr. Felix Robertson, who was again president in 1854 and 1855. In this annual address he gives some very important details of the "Pioneer Physicians." From it I quote: "It appears that the pioneers of the Cumberland Valley did not think it necessary, or failed to be able to enroll in their little band any members of the learned professions of divinity, law, or physic. About the first of April, seventy-five years ago," said this "Father in Israel," "the families from the Holston landed at the Bluff, now Nashville. On the 11th of January following they had evidence that the aid of surgery might be useful to them. On that day he who now addresses you was born, and David Hood, in passing from the lower to the upper fort, was fired on by the Indians in ambush at the Sulphur Spring, in the northern part of the settlement. He was pierced by three balls, and fell on his face, apparently dead. The Indians rushed upon him and scalped him, and stamped him on the back of the neck to dislocate it, and left him, believing he was dead. He lay perfectly still for a long time, as it seemed to him, and, when he believed they had gone, he cautiously peeped about, and could not see them. He then got up, and slowly wended his way toward the upper fort, a most pitiable looking object, as you may imagine; but what must have been his horror when, getting near the top of the bank, he saw the whole company on the hill but a few steps from him. He said he saw their white teeth as they laughed outright at his strange figure. He turned and tottled back as fast as his little strength enabled him, some four or five firing at him as he turned back, two balls wounding him slightly. They did not attempt to pursue him, and after passing down the ravine a little way, his strength entirely failed him, and he crept into the brushwood, and lay there until men went out from the forts and found him, and conveyed him in. My father reached home late that night, from a trip into Kentucky, and early next morning went in to see Hood, expecting to find him, if not dead, a very forlorn case. On inquiring of David how he was, he replied, 'Not dead yet, and I believe I would get well if I had half a chance'; my father told him he should have a whole chance; and David did get well, and lived to a good old

age. My father had seen many persons who were scalped in East Tennessee, and had there learned from a travelling French surgeon how to treat them. This was to perforate the outer plate of the skull with a shoemaker's awl over the whole naked surface, making the perforations pretty close together. Through these perforations, granulations sprang up, and, gradually spreading, finally all uniting and forming a covering to the denuded skull before it should die and exfoliate, and thus expose the brain. I am sorry that I cannot recollect the name of the French surgeon who introduced the practice, for he deserves to have his name immortalized for the great boon he conferred on the frontier settlers of that day." "This operation," said this venerable patriarch, "became, in time, so common that there were persons in every fort who performed it. They appeared to generally understand the proper management of gunshot wounds, for I expect no wounded ever recovered better than those in this country. As to disease, there was very little of that among the settlers for some years, and that was generally of the intermittent types of fever. This they soon relieved by purging pretty freely with white walnut pills, and then taking freely of a decoction of dogwood bark." He farther goes on to narrate incidents in the lives of the earliest medical men who came out and joined the settlement; the first one being a Dr. James White, a graduate in divinity, law, and medicine from St. Omars, then in the zenith of its fame, who came out in 1784. Dr. White purchased 6,000 acres of land north of the city now known as White's Bend. He afterwards moved to Attakapas Parish, La., and his son, Edmund D. White, was Governor of Louisiana, and United States Senator. Other incidents and biographical sketches make up the annual address of this president of the Society, all of which are as interesting in their reading as the most attractive romance. The venerable president was by resolution not only requested to furnish a copy of his address for publication, which fortunately was done, and it is to be found in the *Nashville Journal of Medicine and Surgery* for June, 1855, but was also requested to write out the medical history of the times immediately within his own observation. It is greatly to be regretted that his advanced age prevented his doing this, although we find that he lived until July, 1865, ten years later.

No more interesting pages of the early history of our State are extant than this address of

this grand type of the physician—how well do I remember him, as he walked about the streets of our capital city in the years immediately preceding the great war between the States. Tall, of commanding presence, somewhat muscular frame, well proportioned, but a little bowed with age, with his long silvery locks beneath a wide-brimmed hat, swallow-tailed blue coat with bright brass buttons, his gold-headed cane, his mildly beaming eyes, his face bronzed with the winds blowing through those primeval forests in his early youth, he was my highest ideal of a true physician and a gentleman of the "Old School."

Drs. Bowling, Maddin, Porter, Foster and Lindsley were appointed delegates to the A. M. A. at this meeting in 1855.

Dr. E. B. Haskins, of Clarksville, succeeded Dr. Robertson. He was a Virginian by birth, and received his medical tutelage at Transylvania, and was granted an honorary degree by his alma mater on account of a very graphic description of an invasion of Clarksville by Asiatic cholera. He was the first professor of practice and principles of medicine in Shelby Medical College, a most excellent and well-appointed school established in Nashville a few years before the civil war, and which succumbed to its destructive influences. This school was named after and in honor of Dr. John Shelby, another pioneer and faithful worker in the earlier years of our Society, and for a number of years its secretary. As an army surgeon in the Creek war, under Jackson, he lost an eye. With a good classical education, and his degree from the University of Pennsylvania, he held a high rank in the estimation of his people. He died in Nashville, May 15, 1859, Dr. Haskins preceding him a little more than a year, dying April 14, 1858. Both were men of sterling integrity, talented, and discriminating judgment.

In 1857, Dr. Charles K. Winstun, in 1858, Dr. John P. Ford, and in 1859 and 1860, Dr. Winston again, occupied the chair as President. Both of these gentlemen were among the ablest, most respected and esteemed practitioners and teachers of their day in Nashville, and I know are remembered by some of those now present, who I am confident would most heartily endorse the most eloquent and touching eulogism that could be uttered by a far abler tongue than mine.

In 1861, the Society met in Murfreesboro, and Dr. B. W. Avent was elected President, of whom it is needless for me to say anything in this city, which he in after years graced and hon-

ored with his presence, yielding up his life, a most noble sacrifice, on the altar of humanity in the last terrible epidemic of yellow fever that scourged this city. In 1866, the Society held its next meeting, pursuant to a call of its President, Dr. Avent; other meetings having been prevented by the civil war.

In 1860, Dr. Foster suggested that the Society might be improved by adopting the recommendations of the National Association that State Societies should become representative bodies, which should be to the county Societies what the Association was to the country at large. On the day following, April 4th, after some discussion and a report from a committee appointed to suggest amendments to the by-laws, the following, offered by Dr. W. K. Bowling, was adopted:

"Art. 10. The Society shall be composed of delegates from county Societies, life members, and members by invitation."

Also, a resolution offered by Dr. Foster, constituting the officers of the Society a committee to report as far as possible through a circular, the present change in the organization of the Society, and advise through the same means the propriety and necessity of speedy organization of county societies upon the plan proposed by the American Medical Association.

I shall not take up your time farther with a citation of the eminent members of the Society who have presided over its destinies in the *post-bellum* days, limiting myself to the statement that it is a high honor indeed; and one that I greatly lack the words to express my full appreciation of your kindness in choosing me to succeed such able, highly-esteemed and profoundly respected members as Drs. J. D. Winston, J. E. Manlove, the two Eves, Thomas Lipscomb, the venerable, amiable, and most lovable Thomas L. Maddin, the handsome Mayor of Clarksville, whose ancestors were among its founders over seventy years ago, to say nothing of Dr. Avent, who was again called to the chair the year I became a member, when your father, Dr. Murfree, was President.\* I well remember, as though it were but yesterday, when his bosom, seeming to heave and swell with emotion, he said: "And to-day, I feel proud to stand before you as the chief officer of the Tennessee Medical Society." These able colleagues and successors whom you in this city know so well, Drs. G. B. Thornton

\*Dr. J. B. Murfree, Jr., the first Vice-President, being in the chair.

and D. D. Saunders, and their kindly, genial and able colleague, the lamented F. L. Sim, including in the list from this section of the State who yet survive such efficient and able members as Drs. T. K. Powell, G. C. Savage, and T. J. Happel, have made the position I now hold one of highest honor.

This Society, older than the American Medical Association by more than a decade and a half, has ever had a prominent voice in the councils of that truly representative organization from the day of its birth, when we were most ably represented. Three of our members have been elected President of the National organization, and three of our citizens have been President of this great Republic. Right well has this Society kept pace with all that was best in our grand and glorious State. Quite a number of our members have been Vice-Presidents of the National Association, and but few, of any, years have passed when it did not have one or more representatives either as chairman or secretary of important sections, on the Judicial Council, or on its more important committees; and the volumes of Transactions and the *Association Journal* have received rich contributions from our associates and predecessors; the most important position of President of the Board of Trustees is now held by a former President of this Society, who previously, serving as Vice-President of the Association, was assigned to this important duty.

Yes, gentlemen, you have indeed a rich heritage of which you may well be proud, and it is incumbent on you to maintain and cherish it, and to uphold it in that high degree of estimation accorded it in the past by the medical profession of this great nation. Membership in this Society is something to be prized most highly. In my personal knowledge of the medical men of this State, going back for more than a full half century, forty-two years an active member of the medical profession, I can well recall the fact, which cannot be controverted, that the most prominent medical men in the State, those most highly esteemed at home and abroad, have all been active and earnest members of this Society. It is highly incumbent on you, then, who regard the profession of your choice as worthy of your best efforts, your most untiring devotion, those of you who would rise to eminence and ability in doing good to your fellow-man, to look well to the perpetuation of

the existence and the upholding of the standard of this organization, which has attained so lofty and enviable a record by the labors of the best men of their day, and by your most profound thought and sincerity of action to strive most earnestly, zealously, with harmony, and most careful consideration for its best interests.

It is needless that I attempt any argument in behalf of organization; suffice it to say, that the better and stronger it is made, the better it will be for all—not only yourselves as practitioners of medicine, surgery, or any of the specialties, but better—aye, far better—for those who put their trust in you, and confide to your care the health and the lives of themselves and of those they hold most dear. Need I cite the old familiar example of the case with which a single twig is broken, in comparison with the strength of a well organized bundle? A single strand of Manila hemp, while possessing a certain degree of strength, is as nothing to the inherent tensile power of a well arranged cable!

When we come to consider organization, the necessity for its greatest perfection is unquestioned. Yet the manner and method are of the highest importance. Take that representative body, our national organization; I believe that as a body it has in the past, and now does represent the combined knowledge of the ablest in our profession. It has made certain suggestions. These have been carefully considered by members of your own Judicial Council, members of this Society, who have been selected in the past by your associates, your predecessors, or yourselves to preside over the welfare of this Society; men who from the position they have occupied on the floor and in the chair have evidenced their loving devotion to, and earnest and sincere interest in, its welfare, who will submit their recommendations, which I most sincerely hope will meet with your most careful consideration and calmest thought. Judicious criticism they can and will honestly and sincerely invite, and you will find them each and every one only most ready to accept any suggestion that is demonstrable of any beneficial results whatever; yet I must implore you, *each and every one*, not to resort to objection for objection's sake. We are none of us infallible in our judgment, and this is neither the time nor place for caviling or straining at imaginary possibilities. It is for you to emulate on this occasion the precept of a fraternal and benevolent order, which tradition and history claim to have originated in the days of King Solomon, and earnestly endeavor and

strive as to who can "best work and best agree" in the discharge of the important duties of this meeting. Its importance, its successful results depend to a great extent upon one idea—aye, one single word—harmony. Permit me to use, as an exhortation, a quotation once used by the Rt. Rev. Bishop Pierce, of Georgia: "May you in your action on this occasion emulate those in the day to come," when the one song of "Peace on earth and glory in the highest" shall employ all nations; and

"The dwellers in the vales and on the rocks  
Shout to each other, and the mountain tops  
From distant mountains catch the flying joy."

Individualism in scientific work is good in its way, and as exciting emulation and stimulating worthy ambition is most excellent; but organized labor in any field, and unity of action will yield more beneficent, material and efficient results. See the ever rolling stream of history as it has rushed onward, ever increasing in volume and momentum, showing how combination after combination has been formed to secure the highest development. Gradually the individual has withered and dwindled, and the world has become more and more as the family, the tribe, the city, the nation, the Empire, each forming in turn the successive terms of the series and becoming more powerful, more effective, in the process of the world's development.

I am not a pessimist. I do not believe that everything has been retrogressive, and that other days were better days. I have seen three generations of doctors in this State. One has passed entirely away; of another, there are a few standing here and there, and they, too, will soon be gone. A new generation—young men—are the controlling spirits to-day, and I believe they are superior to those I first knew. They have had better advantages, better opportunities; the work done by their predecessors has enabled them to accomplish more in the same time. The statistics of the last census show that the lives of the American people have been lengthened, and that the proportion of deaths to population have decreased nearly 10 per cent.; the average longevity of an American citizen was 38.2 years for the decade ending 1900, as compared with 31.1 in 1890; seven years added to the span of human life in the last ten years—as long as Jacob worked and toiled for the masterpiece of the Divine Builder and Designer, man's best counterpart, that which ennobles and expands his nature, and in which he sees himself and is multiplied—a wife and companion. Only

think of the mortality in this city for the year 1850, when it had a population of only 8,761—the 2,392 colored people cared for with the highest degree of skill and assiduous care, well fed, well clothed, and yet the mortality of the whole was 1 in 25, or 40 per 1,000 per annum, or 4 per cent. With a population of 102,320 in 1900, over one-third colored, with their vices, their reckless disregard of all hygienic rules, it was but 20.40 per 1,000 for that year, and only 17.50 per 1,000 for the last year. Compare 2 per cent. with 4 per cent. Is there not a better organization of the profession now than half a century ago? In any of our courts of justice the evidence of two credible witnesses establishes a fact unless controverted by predominance of testimony to the contrary. I rest this part of my argument here.

The modern community of the higher races carries within itself the prophylactic against decay. It is the unselfish ideal of the future, of times and ends beyond the present. Man has not only an interest in the past and present, but a far greater one in the future. It will prove most ruinous not only to the individual, but to the community as well to sit down in the selfish enjoyment of the present so largely due to the developments and acquirements of the past. Having received so much from the past, we owe a debt to the future. Shall we calmly content ourselves like a corn-filled mule in a cane-brake, with the sordid, selfish enjoyment of the home without pride of ancestry or hope of posterity? Can one ask: "Why shall I do anything for posterity? What has posterity done for me?" Again and again such selfishness has seemed to prevail, but in the moment of prevailing it has perished. To say, "Let us eat and drink, for to-morrow we die," is indeed to die on the morrow, for moral suicide is followed by physical death. As Aristotle said of the Spartans, "They prospered while they fought for victory, they perished when they had achieved it." As Lord Rosebery has recently put it: "The nation which is content is lost." Thank God that our present Code of Ethics inculcates ideas and principles most free and utterly devoid of sordid selfishness, as does that *older* code adopted by this Society more than three-score years and ten ago!

And now a few words as to the method of organization. Shall I quote from my distinguished friend, who has spent the best years of his life in this city, who stood so heroically at his post in its darkest of all dark hours when it seemed a very charnel house! Aye, the words

of ex-President Dr. G. B. Thornton, who has seen no less than 42 of his heroic co-laborers lay down their lives on the sacrificial altar of duty and love for humanity in a single epidemic season in this city. The list will be found entire in our *Transactions* for 1879, and is headed by that noblest Roman of them all, Dr. B. W. Avent. His words are most timely as uttered in his annual address in this city in 1882: "As each recurring year adds to the membership of this Society, it is but fair to assume that its influence will be increased in corresponding ratio. . . . A State Society should include within its membership the whole profession in the State, and that membership should be a guarantee of proper professional recognition anywhere in the world."

From the presidential address of his grand and gifted co-laborer, Dr. D. D. Saunders, one who stood by his side faithfully laboring in sad and gloomy hours in the great cause of humanity, delivered in our capital city three years later, I quote: "There is a great want of thorough organization and hearty co-operation in our State profession, which renders it powerless to help itself or exercise any effective influence on State legislation pertaining to medical matters. Everything in this line has to be done by individuals, and not as a profession, and hence the task is Herculean, and the entire burthen falls upon a few willing hands and brave hearts. But without concert of action and thorough organization little can be accomplished; in military parlance, 'the route step breaks no bridge.' This should not be so, and can be remedied only by the organization of live county medical societies in every county in the State. I would suggest that a committee be appointed, consisting of an active, good member from each of the 96 counties in the State, whose business it should be to see that a county society is organized in his county."

These words of these two eminent predecessors are most worthy of your consideration. Notwithstanding since that day much has been accomplished by such organization as we have had, how much more would have been attained if their wise suggestions had been faithfully carried out.

In 1875 a new constitution and by-laws were adopted, and although not a member of the Society when they were formulated, I had the honor of rendering some service in this to my old teacher and friend, Dr. J. Berrien Lindsley, to whom was entrusted the duty of prepara-

tion. The most important features are to be found in Articles III and V, having relation to membership and county societies. It is greatly to be regretted, in my humble opinion, that at subsequent meetings these features were, to a great extent, emasculated, by changes and alterations in Article III; the provisions as to Article V yet stand, and with but little modification, can readily be adapted to the needs of this day and the suggestions of the American Medical Association. It was with possibly a wholesome fear that the numerical strength of the State Society would be impaired if the provisions of Article III had been rigidly enforced, and hence they were modified and altered from time to time, and have at last been almost entirely eliminated. In my judgment, then and now, there would have been a temporary loss of numerical strength in the State Society for a few years; but I candidly and honestly believe that it would eventually have been far stronger numerically and in every way.

In the *Transactions* for last year you will find 14 county and local societies as in affiliation with the State Society. By sending out a letter to a regular member of the profession in each county in the State in February last, enclosing a self-addressed postal card for reply, most all of which were returned, I find that we have organized and in active working order 21 county societies, nearly all of which are in affiliation with the State Society. From these postals, which give the name as requested, of the president and secretary, I learn that they have an aggregate membership of about, if not quite, 600 members. Our State Society has about 400 members. I do not think I am far wrong when I estimate that one-third of the members of the county societies are also members of the State Society, leaving about 400 members of the former that should be added to the aggregate of our State Society membership at this meeting, or immediately subsequent thereto. But this is not enough. We need and should have, by the time our next annual meeting is held, not less than 2,500 regular practitioners out of the entire number in the State in full fellowship and hearty accord with this Society. This can be accomplished with earnest, harmonious, and active work, which must necessarily devolve upon the younger members. I know that I can promise on the part of those who now, like myself, are approaching the "sere and yellow leaf," a most hearty co-operation.

Outside of the individual benefit that will ac-

crue to everyone, there is far more that can be accomplished for ourselves as a class, and for the great body of our people, who trust and confide in us. There are certain ends most devoutly to be desired that we cannot attain by individual effort. Our State Board of Health and our State Board of Medical Examiners are the work of successful movements of this Society. They yet need your fostering care, your combined counsels, advice, and support. In addition, legislation is needed looking to the protection of our people from adulterated food products, impure and defective drugs and medicines, the social evil, matters pertaining to heredity and environment, as relating to the individual as well as the State, and many other important features that will result in a betterment, an improvement, and the greatest happiness of our whole people. That legislation will be secured by united and organized investigation, discussion and consideration.

It is not necessary that 2,500 men in this State, with the influence, local and general, possessed by them, united in their views, any more than 125,000 in this great Republic should beg for legislation when they can demand it. If we will only thoroughly organize and unite, we can demand anything from any State Legislature or from Congress. Thackeray has said that "any woman not actually humpbacked could marry any man she pleases," man's safety being, that woman, like other patient and long-suffering animals, does not know her own strength. This is no less true of the medical profession. We do not know our own strength!

In completing my term of service, and the enjoyment of the high honor conferred on me one year ago, permit me to say that my devotion to this Society for more than a quarter of a century, to the hour of my last expiring breath, has been and ever will be, combined with a desire most dear to my heart and soul to see its prestige and power attain the highest possible eminence; and while during my incumbency as your presiding officer it has not been as successful in this respect as the most ardent zeal might desire, yet I can honestly say that much has been accomplished, and its high position in the esteem of the people of our State and professional colleagues at home and abroad has been maintained; and through your wise counsels, harmonious action, and earnest effort may be greatly increased in the near future. In conclusion, permit me to tender you, one and all, the warmest wishes of my heart for your prosperity in life,

and happiness at its evening's close; in the language of "Tiny Tim," "God bless you everyone"; and in the words of one the greatest American writers, as interpreted by the grandest delineator thereof, "May you live long and prosper!"

## APPENDICITIS FROM THE STANDPOINT OF A GENERAL PRACTITIONER.\*

By B. L. HILLSMAN, M. D., Richmond, Va.

This subject has been selected, not so much to call attention to its importance, or that I have discovered a method of differential diagnosis between its several forms, but in the hope that its discussion may lead to a concerted plan of treatment, and, in so doing, decrease the present mortality.

I will not go into the symptoms, diagnosis and prognosis in full, but just so far as to allow me to deal with its treatment in an intelligent and practical manner.

Appendicitis is an inflammation primarily involving the vermiform appendix, frequently complicated by ulceration, perforation, gangrene and pus formation. We divide it into catarrhal, suppurative, gangrenous, etc.; and as a cause for each form, we claim microbial infection, which takes place after irritation or devitalization, produced by hardened fecal masses, foreign bodies, traumatism, or interference with the blood supply.

The cardinal symptoms are pain, tenderness and rigidity. Deaver says these three symptoms present a picture in 90 per cent. of cases that cannot be mistaken. We have in typhoid fever, extrauterine pregnancy, cholecystitis, and acute mechanical obstruction the same set of symptoms; but with proper care and a correct history, the diagnosis can be made. The pain in appendicitis is sudden in onset, may be localized to either iliac fossa, or may radiate to the umbilicus, testicles, or epigastrium. Tenderness is usually localized in the right iliac fossa. Pressure made on other parts of the abdomen elicits tenderness, not over the point where pressure is made, but at McBurney's point. Rigidity of the right rectus muscle is

\* Read before the Richmond Academy of Medicine and Surgery, April 8, 1902.



always present, though at times it can only be demonstrated by a delicate touch.

Nausea and vomiting are usually present, but do not give any information as to the severity of the attack. The pulse is usually accelerated, with a slight rise of temperature, but this is not always the case. Both may range high. There may be diarrhœa or constipation, but constipation is the rule.

The diagnosis of appendicitis can be made from the symptoms enumerated; but what we want is a method of differential diagnosis between the mild and the severe types, the operative and the non-operative. Have we any? I say, No. The clinical thermometer, our standard in other diseases, tells us nothing. Morris (*Medical Record*) says the temperature is a matter of no consequence as giving a clue to the condition of the appendix. The pulse is uncertain. Palpation, percussion, auscultation are worthless. Of course, in twenty-four to seventy-two hours, we can make the distinction, but very often in that time the patient has passed from your hands to the undertaker, and we comfort the friends by saying that everything was done for their relative that medical skill could do; that it was a bad case from the first, and surgery could not have done any good. This, my fellow-practitioners, eases your conscience a little, and retains the family to you as patrons; but if the truth were known, you in your own conscience know that had a surgeon been called as soon as you made your diagnosis that your patient could have been saved. You inwardly censure yourself, but I claim, gentlemen, that you should be censured by the public and your profession for robbing your patient of the best means known to science of saving life in this treacherous malady.

*Treatment.*—With our present methods or knowledge of the differential diagnosis between the mild and severe cases, there is absolutely no medicinal treatment for appendicitis. In my experience of about five years in the practice of medicine, it has been my fortune to attend about forty cases of appendicitis, either in my own practice or in consultation with my father; and I always will regret that I gave any of those cases a single dose of medicine. It is true that about thirty recovered with medical treatment. Ten were operated on, with five deaths; but I firmly believe that, considering the splendid condition of the forty cases when first seen, immediate operation would have given a mortality of

less than one per cent. Give me a method of diagnosing the mild from the severe form, and I will change my opinion; but until you do, I say operate on every case as soon as you make your diagnosis. You see one case with a pulse of 110, temperature of 103°, and treat medically, and recovery follows; another with a pulse of 90, temperature 99°, and treat in the same way, and he dies; another type, where you find a small tender spot as the only symptom, and you operate and find a pint of pus. Such a case is reported.

Let me give you a few opinions as regards differentiating the several forms:

White (*British Med. Journal*): "At present, the symptoms of a mild catarrhal appendicitis cannot, with certainty, be distinguished from those marking the onset of the gravest type."

Syms (*N. Y. Medical Journal*): "No fixed rule can be laid down for deciding in the early stages between the mild and the severe cases."

Shrady (*N. Y. Medical Journal*): "Danger may exist without being shown by pulse or temperature."

Richardson (*Amer. Jour. Sciences*): "Recovery may follow a temperature of 105°, and death occur with nearly a normal temperature."

Now, with the above facts, we are in the dark as regards our prognosis when we are called to a case, and with the very small mortality (practically less than 1 per cent., if operation is performed inside of the first twelve hours), I say operate at once in all cases, and you will save not only the cases that would have gotten well with medical treatment, but those that would have died with it. I know I will be opposed by some for the position I have taken, but I believe that all authorities will very soon come to the same conclusion, unless we find a method of differentiating the several forms. To those who will report a series of ten or fifteen cases treated medically without a death, I will say that mother nature has been very kind to them. Here are some of the conclusions of eminent men:

Carstens (*N. Y. Med. Journal*): "The conservative treatment of appendicitis consists in prompt operation. The starvation method of procrastination is vicious and has cost many lives." Davie (*Dom. Med. Monthly*): "Early operation in abscess cases means small abscess, easily and safely dealt with. Early operation in non-perforating cases, means avoiding all sorts of catastrophes to the patient, as perforation, gangrene, &c., and recurrence at inopport-

tune times. Early operation means, in short, successful operations; delay means uncertainty, and brings surgery into disrepute. The ideal time to operate, to obtain ideal results, is in the stage of appendicular colic." Deaver: "The sooner the appendix is out, the better for the subsequent welfare of the patient." Murphy (*Amer. Medico-Surg. Bull.*, 1896): "I am satisfied there are some cases which can be cured by medicine, but the question is, can they be differentiated? By medical treatment, with a mortality of 10 per cent., and 3 per cent. with the knife, should we not save the other 7 per cent. by early operation?" Price (*Jour. Amer. Med. Asso.*): "If we made it a practice to operate when the trouble is first recognized, without delay of a day or more for consultations and therapeutical treatment, the deaths would be very few. The so-called very "conservative" man gives us the ugly abscess class of cases and the virulent perforative cases." Crutcher: "A rapid pulse and high temperature favor the destructive process; their absence is no assurance of recovery."

Morris reports a series of one hundred cases operated on, with a mortality of two per cent., and in this series there were thirty abscess cases, gangrene, perforation, &c., and claims that twenty-eight per cent. would have died if they had been treated medically, and at this, allows a recovery of twenty-three of the abscess cases.

In conclusion, I will say—first, that it is better to operate prematurely than to wait until the patient is practically moribund. Second, we cannot anticipate the severe forms, and so cull them out and operate only on them alone; we have no method of telling the catarrhal cases from the pus and gangrenous cases, and until we can, it is safer in every case to operate at once before the last-named conditions have time to assert themselves. Third, I acknowledge a recovery of from forty to sixty per cent. of all cases without operative intervention, but we are unable to say which case is going to help make this percentage, and with a mortality of less than one per cent., if immediate operation is resorted to, against an acknowledged twenty-eight per cent. without it, it certainly seems sensible to operate at once on every case.

Teacher: Who is whisting in school?

New Scholar: Me. Didn't you know I could whistle?

## DRAINAGE AFTER ABDOMINAL SECTION.\*

By L. E. BURCH, M. D., Nashville, Tenn.,

Professor Gynecology, Vanderbilt Medical College.

In writing this paper, I make no claim to originality of any kind, but my purpose has been to go over the best literature on the subject up to the present time, and bring it before you in a short and concise manner. This is probably the most discussed of all subjects among abdominal surgeons, and I have endeavored to lean neither to one side or the other.

The principal object of drainage after abdominal section is to carry off fluid which we think the peritoneum is unable to handle. The peritoneum is a membrane of wonderful absorptive power, and it has been demonstrated by Wegner that it can absorb fluid equal to the whole body weight in twenty-four hours; as to whether this absorption takes place by means of permanent stomata, or by a retraction of the cell protoplasm of the endothelium of the diaphragmatic peritoneum, and thence in the open spaces, is as yet undecided. On the one side, we have the well-known names of Reeklinghausen, Klein, Dogiel, and Notkius; on the other, Muscatello, Kolossow, Frey, Auerbach.

However, we do know the chief place where absorption occurs is the central tendon of the diaphragm, and that the pelvic peritoneum is, perhaps, the slowest point of absorption. We also know that absorption is very much increased by the normal upward current of fluids in the peritoneal cavity towards the diaphragm, due to the pump-like motion of the central tendon in respiration. If septic matter is introduced in the peritoneum, it is almost immediately spread over the cavity by this natural current and carried to the diaphragm; at the same time, there is a great outpouring of leucocytes at the central tendon and at the points of local irritation, for the purpose of taking up the micro-organisms. The rate of this intraperitoneal current towards the diaphragm depends on the position of the body, being much more rapid when the thorax is on a lower level than the abdomen. After these micro-organisms reach the diaphragm and are deposited in the diaphragmatic lymph spaces, they are then carried through the mediastinal lymph spaces to the right heart through the vena cava.

It has been shown definitely by Muscatello,

\* Read before the Medical Society of the State of Tennessee, April, 1902.

Clark, and others that they are then distributed to the lungs, liver, kidneys, spleen, intestinal tract, and the bone marrow, through the medium of the blood. It is thought that they are first carried as free bodies, and that later they are contained in the leucocytes. Silfvast has shown that the lungs of animals are especially resistant to streptococci, and that they are capable of destroying large numbers, especially when carried in the blood. As to whether micro-organisms are destroyed by liver and kidneys as yet remains a mooted question; it has, however, been shown that they produce but slight structural lesion when introduced through the medium of the blood.

When a tube or ganze drain is introduced into the peritoneal cavity, and inflammation is brought on which walls it off from the general cavity—this walling off taking from one to five hours—so that even in drained cases we depend on the normal peritoneal drainage via the diaphragm, then out through the lungs, liver and kidneys; for it has already been shown that in the course of a few minutes septic particles reach the diaphragm, and that large quantities are spread over the peritoneum and thence into the circulation before this walling off can take place. However, if we have a focus of suppuration that cannot be removed, a suture that cannot be depended on, or an oozing that cannot be stopped, drainage is indicated, and the fundamental principle should be to take advantage of gravity, either through the vagina or lumbar region, if possible.

The great objection to drainage, as shown by Welch, is the entrance of micro-organisms along the course of the tube, which in a closed wound would be an impossibility, and that this invasion takes place, not at the time of operation, but afterwards. We also run the risk in drained cases of having as a result a fistula, either faecal or mucous, intestinal obstruction, a ventral hernia or a slow and tedious recovery from the prolonged suppuration.

There are *two postural methods of drainage*—both based on physiological principles. One is known as Clark's; the other as Fowler's method; each, however, is applicable to opposite conditions. *Fowler's method* is known as the elevated trunk posture, and the underlying principle of it is to carry the fluid contained in the cavity to the lowest point by force of gravity, and from thence, it is removed by the drain. *Clark's method* is just the opposite. He ele-

vates the foot of the bed and leaves a litre of salt solution in the peritoneal cavity, with the object of disseminating the poison, causing a rapid absorption and elimination of the same. He has now, however, stopped the elevation of the bed, and simply uses the saline alone, not that he obtained any bad results from the posture, but that absorption is nearly as rapid without the elevation, and in the level or normal position the omentum and intestines are floated into their normal position, and the churning of the same hastens the absorption of foreign particles. The saline, however, is contraindicated wherever peritoneal absorption is impeded, such as ascites accompanying some abdominal growth; it is also contraindicated in general purulent peritonitis, for in this condition we wish to delay absorption, and thus keep away from the general circulation the invaders and their toxins, which threaten to overwhelm the life of our patient.

In going over the literature on the subject, I have been struck with the remarkable change of opinion that has come over the abdominal surgeons. Formerly, nearly all cases were drained; at the present time, very few. This, of course, is due to a better understanding of the functions of the peritoneum. Howard Kelly, in his first 100 abdominal sections, drained 73 of them; in his last 100, no drain was used. In my opinion, very few cases require drainage, but when indicated should be very free, using vaginal and lumbar incisions, according to the demands of the individual case.

Now, in a general way, I will attempt to give the *classes of cases to be drained, the manner of drainage, and the posture of the patient*. In purulent peritonitis, free drainage is indicated, as suggested by Kelly, through the vagina, the abdominal incision, and the lumbar stab; the elevated trunk posture, as suggested by Fowler, should also be utilized so that the fluid may be forced to the lowest level, and to the point where absorption is least rapid—namely, the pelvic peritoneum. In cases where there is a focus of suppuration which cannot be removed, drainage is indicated, for the purpose not only of drawing off the fluid, but also of localizing the infection by the formation of adhesions. In surgery round the gall-bladder and ducts, we are, perhaps, more often compelled to drain than in any other class of cases, for in this region we find the pouch of peritoneum mentioned by Robson, which, in the recumbent posture, will hold a pint of fluid, and if we use the method

of Van der Veer through the lumbar region, valuable time is gained in the operation, and the prognosis distinctly improved. In some few cases drainage is indicated to control hemorrhage, and to guard over a suture which we fear may not hold.

When in the course of an operation there has been a leakage of pus, particularly from an old pyosalpinx, the toilet of the peritoneum can be made so carefully that further infection is not likely, and drainage is not indicated. These conditions, however, are exceptional, and if not present, then the abdomen should be closed without a drain, trusting to nature to remove all foreign material through the normal route. Dr. Clark has demonstrated by his results that the saline left in the abdomen is the best drain that can be used, and one that I thoroughly endorse in every particular.

150 N. Spruce street.

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## THE APPLICATIONS OF SOME OF THE SECRECTIONS OF THE LIVER TO THE TREATMENT OF DISEASES OF THAT ORGAN.\*

BY E. L. WHITNEY, M. D., Baltimore, Md.

The subject of animal secretions has been so well investigated in recent years that it seems strange that the secretions of an organ of so much importance as the liver should have been so little investigated. It is an organ from which we have both an external and an internal secretion; *the bile*, with its number of ingredients, as an external secretion; and internally the formation of *urea and uric acid*. It is not, of course, the only organ in which urea is formed, but is probably the chief one. Then it has a great deal to do with the elaboration of dextrose, and acts as a storehouse for the excess of carbohydrates taken at any time. Then it has other functions, as the storing away of certain poisons, shown by its action upon alkaloids, in the administration of strychnia, for instance. It acts probably by storing away the alkaloids and giving them out slowly, so that the toxic effect is less sudden, and there is also probably to a certain extent an oxidation of some of them into harmless compounds. This is true of some

of the oxidizing ferments recently isolated by Jacobi. It is believed now that these ferments have something to do with the question of immunity.

Taking up the matter from a therapeutic standpoint, the external secretion—the bile—is probably of most interest. If there is an insufficiency of bile, there are certain alterations in the intestinal digestion of great importance: There is poor digestion of fats; and where there is an impairment in the digestion of fats, there will be at the same time impairment of the absorption of the proteids, as the fats form a mechanical envelope to the proteid substances and prevent their ready absorption.

The use of the *bile salts*, the active principle of the bile, or the desiccated bile itself, has often been recommended, and I believe the negative results referred to by some have been due to lack of care in the selection of cases, to taking cases without proper regard for the condition present. The bile salts, too, have a great deal to do with the matter of biliary calculi. While I do not wish to minimize the importance of bacteria in forming the nucleus of these calculi, I think it very probable that there will be no cholesterine formation into stone if it is held in solution by the bile salts. They do not form unless there is some chemical action to precipitate the contents of the bile. By dissolving up a certain amount of the bile salts in water, by no means as strong as the bile itself, cholesterine stones are dissolved, or softened so that they are very friable. Then, too, the action of the bile upon the liver cells is a decided one.

A number of observers have found that bile salts are probably the only therapeutic agents that really produce an increase in the secretion of bile; that it is probably the only true chologogue that we possess; that podophylin and the other so-called chologogues have probably no action in producing an increase in bile secretion. In cases of jaundice, due to a viscid condition of the bile, we find the administration of bile salts followed by increased elimination of bile and clearing up of the jaundice. These salts are reabsorbed over and over again, passing through a regular circle.

Their influence upon the glycogenic function of the liver, too, is interesting. We find where the bile salts are decreased—where this circle is interrupted—the amount of glycogen is much decreased. The bile salts have an important action in stimulating the liver cells and

\* Read before the Baltimore, [Md.] Medical and Surgical Association, February 24, 1902.

increasing the amount of glycogen stored away. I have seen some few cases of diabetes and ordinary glycosuria much benefited, and a few cleared up entirely, under the treatment with bile salts. In some of these cases there was no attempt at dietetic treatment. I remember one case, that of a travelling man, where, of course, it is impossible to follow out any systematic dietetic treatment, that was cleared up under this treatment. Sugar disappeared from the urine three years ago, and there has been no recurrence up to the present time.

The question of the use of some of the other ferments of the liver is one that has never been worked up from a clinical standpoint. You can readily see the possibilities of the use of the oxidizing ferment isolated by Jacobi. These oxidizing agents are closely related to the oxidizing agents of the vegetable kingdom. The proteolytic ferment of the liver is a very strong one—not, perhaps, as strong as that of the liver and pancreas, but one that goes on to definite peptone formation, and a very rapidly acting one. It is possible, too, that the liver itself may have something to do with the elaboration of some of these ferments that we consider as being secreted by the stomach and pancreas, and that they may be carried to these organs by the liver. One of the reasons why experiments along these lines have not been done is, perhaps, the difficulty in determining definitely a lesion of the liver. It is all very well to diagnose an abscess of the liver, or a carcinoma; but the smaller lesions—the ones for which we have no names because of our ignorance of them—are the ones that present the difficulty. It is to be hoped that soon we will have better methods of diagnosing them, and that they may be treated by the secretions of the liver itself.

### BENZOATE OF GUAIACOL.\*

By MARK W. PEYSER, M. D., Richmond, Va.

Assistant Physician to the Home for the Aged and Infirm; Secretary of the Richmond Academy of Medicine and Surgery, etc.

Four years ago, I read before the Academy a paper giving a brief account of the properties of the benzoate of gnaiaicol (sometimes called benzoyl-guaiaicol and benzosol), with reports of

cases of bronchitis, pneumonia, and tuberculosis satisfactorily treated by its means. Since that time I have employed the remedy in a variety of conditions, the results, though not uniformly successful, being all that one could hope for in such an uncertain practice as medicine.

In a number of respiratory diseases, the salt is one that appears ideal, containing as it does both gnaiaicol and benzoic acid. In cystic affections, the acid content is of excellent avail. In both of these classes, we have the remote local action of the agent, an action which is too often neglected. The benzoate when swallowed is decomposed in the intestines, chiefly the small, into benzoic acid and gnaiaicol, and, according to Butler, exerts a favorable influence in intestinal fermentation, auto-intoxication, diarrhoea, etc. My experience in this direction has been limited, but agrees, so far, with the statement. I have had no experience with it in the treatment of diabetes, in which disease it is said to have been administered with good results.

There are certain advantages possessed by the benzoate over gnaiaicol and its carbonate, and creosote: It is almost tasteless and odorless, and while, after the first few days of its administration, there may be some objection, the patient soon becomes accustomed to it, and no longer rebels—not so with the other preparations. It contains when pure no cresols, which are present even in the purest gnaiaicol, and, therefore, it does not irritate the stomach, nor cause burning and itching of the skin. The dose for an adult is from five to ten grains, gradually increased, the maximum per day being forty grains; but the length of time required to produce the maximum effect is shorter than those of the other preparations. The remedy may be administered in capsules, powder, or in suspension, either alone or in combination. Below is a further report of cases in which it was given:

Mrs. J. M. D., *Cystitis*. There had been several acute attacks at longer or shorter intervals, and various remedies had been used with more or less success, none, however, overcoming the inflammatory state entirely. Eight five-grain capsules of the benzoate finally succeeded in doing so, since which time, so far as I know, there has been no other seizure.

C. H. E. Microscopic examination made by Dr. Greer Baughman, shows that this patient has *myo-sarcoma of the bladder*. When the urine becomes scalding and its passage agoniz-

\*Read before the Richmond Academy of Medicine and Surgery, February 25, 1902.

ing, the administration of a few five-grain doses of the benzoate results in speedy relief.

F. W. *Prostatitis*. The pain and cystitis incident, readily succumb to a combination of five grains of benzolol and a fourth grain of codeine given at three-hour intervals.

Mrs. C. L. P. *Acute nephritis*, first seen in the fourth day of illness. Owing to the intense pain in the back and lower abdomen, and whenever urine was voided, the remedy was prescribed in the combination just described. The following day she reported much relief from pain, and easy urination. Examination of the urine, three quarts of which she passed in the preceding twenty-four hours, showed 2 per cent. of albumin, a few casts, and a large number of kidney cells. The medicine was continued, flannel underwear ordered, and a strictly milk diet enjoined. The next day the quantity of urine was two and a half quarts, albumin a little less than 1 per cent., kidney cells were much diminished, and casts absent. On the fourth day of treatment the quantity of urine was normal, and there was but a trace of albumin and very few cells. On the fifth day, albumin had disappeared entirely. Pain was not a factor in the case after the third day, when the codeine was discontinued. The patient is now taking the ammonio-acetate of iron.

R. D. and A. R. M., each aged two years. *Acute bronchitis*, with temperatures, respectively, 101° and 103°. Benzoate of guaiacol suspended in syrup of amorphous quinine, was given every three hours. In twenty-four hours all fever, cough, and pain had disappeared. This is a fairly common result; indeed, in some cases of acute laryngitis I have seen the cough cease almost entirely in twelve hours.

Mrs. J. H. *Acute bronchitis*. A hot mustard foot bath and a mustard plaster to the chest were ordered, and the combination of the benzolol and codeine were prescribed. The next day, pain having ceased, codeine was stopped, but the benzolol was continued for two days longer, when symptoms disappeared.

S. J., Jr. *Acute lobar pneumonia*. The benzoate was given suspended in syrup of quinine. In five days after the beginning of the disease and three days after I had first seen him, the crisis ensued. The attack was short but sharp, and strychnine and atropine were employed coincidentally. In one or two other cases, I have seen the crisis appear on the fifth day under the use of the benzoate.

Mrs. T. E. W. An attack of *pneumonia and typhoid fever* in March, 1899, left this patient frail and weak. The benzoate was given during the course of her illness, with excellent effect, and was continued for some time afterward. I saw no more of the patient professionally till the 9th of January, this year, when she had a pulmonary hemorrhage. Suprarenal capsule checked this successfully. She was then given the benzoate of guaiacol, the use of which she has continued ever since. A day or two ago she informed me that she weighed more now than ever before in her life, with the exception of the time she spent in the mountains after her first sickness. This patient is the only one in my experience who has complained of eructations produced by the remedy.

With this account I shall conclude, desiring to say, however, that there were some cases in which the benzoate of guaiacol was of no avail; but the majority in this report was chosen at random, and from it my hearers may judge of the value of the agent. If they incline to use it, I trust their results will be as satisfactory as mine.

No. 303 Twelfth street, north.

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## Book Notices.

*Practical Manual of Insanity. For the Student and General Practitioner.* By DANIEL R. BROWER, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and HENRY M. BANNISTER, A. M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages. With a large number of full-page inserts. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$3.00, net.

"No graduate in medicine is thoroughly equipped to practice his profession unless he be acquainted with at least the rudiments of the science of psychiatry. Broad though its domain and difficult of mastery, yet every one may readily acquire knowledge of those principles upon which depend a successful treatment of those cases of mental disorder that form a part of every physician's practice. This work, intended for the student and general practitioner,

is an intelligible, up-to-date exposition of the leading facts of psychiatry, and will be found of invaluable service, especially to the busy practitioner unable to yield the time for a more exhaustive study. The work has been rendered more practical by omitting elaborate case records and pathologic details, as well as discussions of speculative and controversial questions. Certain special features of the work, also broadening its field of usefulness, are the mention of the forms of insanity not usually met with in hospitals, and the including of a comparative table of classification and a chapter on some of the ethical questions relating to insanity as they may arise in the practice of medicine. Indeed, we know of no work of its scope that covers the field so completely, yet concisely and clearly."

After a review of this *practical* "Manual," and knowing Dr. Brower's right to authorship as we do, we very cordially adopt the notice above as if prepared for this journal. Soon after the Confederate war, Dr. Brower was placed in charge of the hospital for colored insane near Richmond, Va., and ever since then has grown in experience and ability as a teacher concerning the diseases of the mind.

**Surgical Treatment of Disfigurements and Deformities of the Face.** By JOHN B. ROBERTS, A. M., M. D., Professor of Surgery in Philadelphia Polyclinic, etc. *Second Edition, with a Chapter on the RECONSTRUCTION OF SYPHILITIC NOSES. Illustrated with 62 Figures.* Philadelphia: The Philadelphia Medical Publishing Company, 1901. Cloth. 8vo. Pp. 72.

This little book is practically the revision of the "Mutter Lectures of the College of Physicians of Philadelphia for 1900," delivered by Dr. Roberts. The chapter on "Reconstruction of Syphilitic Noses" is an article prepared for the American Medical Association, and adds to the instructive interest of this second edition.

**International Medical Annual. A Year-Book of Treatment and Practitioner's Index. 1902. Twentieth Year.** New York: E. B. Treat & Co. 8vo. Pp. 688. Cloth, \$3.00.

*Part I*, the Dictionary of Materia Medica and Therapeutics—prepared by Dr. William Murrell, of London, includes a review of therapeutic progress for 1901. *Part II* (pages 81-651, inclusive) is devoted to the Dictionary of Medicine and Surgery. *Part III* includes the *Miscellaneous*, in which a number of important

matters are considered, as the "prevention of tuberculosis," etc. The doctor who annually takes several such books as this, and reads them, will not be materially behind the times.

**Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences.** Edited by HOBART EMORY HARE, M. D., assisted by H. R. M. LANDIS, M. D., both of Philadelphia. Vol. I. March, 1902. Lea Brothers & Co., Philadelphia and New York. 1902. Large 8vo. Pp. 462. \$2.50.

This quarterly volume points out advances, etc., in surgery of the head, neck, and chest; infectious diseases, including acute rheumatism, croupous pneumonia, and influenza; diseases of children, pathology, laryngology and rhinology, otology. The four volumes a year include some 1,800 pages, well indexed, at \$10, or \$2.50 a quarter. The next quarterly volume will take up other subjects, etc. A number of contributors are the helpers of the editors.

**Ophthalmic Myology. A Systematic Treatise on the Ocular Muscles.** By G. C. SAVAGE, M. D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, etc. *Sixty-one Illustrative Cuts, and Six Plates.* Published by the Author. Printed by the Gospel Advocate Printing Co., Nashville, Tenn., 1902. Cloth. 8vo. Pp. viii+589. Price, \$—.

This is the kind of book that teaches. "Art cannot succeed when principles are unknown or ignored." The art of readjusting the ocular muscles when there is maladjustment or imbalance, should be based on the scientific principles underlying ocular rotations. Chapter I of this volume discusses these principles—as simple as they are enduring—with sufficient clearness to enable the reader to entertain them. Without a clear understanding of these principles, it is impossible to grasp the teachings of subsequent chapters. This Chapter I teaches the *fundamental principles of ocular motions*, which makes the remainder of the book easily intelligible. We wish there were more books like this in each department of medicine; for they would greatly assist the study and teaching of special branches. We regret that our space does not allow something of a running synopsis of the "phorias" and tropias, etc. The book is as good for the specialist as for the beginner in his study.

## Editorial.

### Medical History of States.

We are greatly indebted to Dr. Deering J. Roberts for the privilege he grants us for the publication of his recently-delivered address as President of the Medical Society of Tennessee. While he deals mostly with the record of individuals, famous in their day, no one can go over the record of their lives without reading between the lines the history of medical advancement. We appreciate the contribution of this address the more as the author is himself the editor of a medical journal that has been the guiding light for the profession of his State. The paper will be read with interest.

### The American Congress of Tuberculosis

Will be held at the Majestic Hotel, in New York city, May 14th, 15th, and 16th, 1902. Dr. Henry D. Holston, Secretary of the Vermont State Board of Health, Brattleboro, Vt., is President of the Congress. Clark Bell, Esq., of the city of New York, 39 Broadway, is Secretary and Treasurer. Those who propose to take part in either of the four symposiums should promptly notify the Secretary, and indicate under which number they wish to be classified. The symposiums will be held, one at a session, to be announced on programme, and are as follows:

1. Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis. (What aid should be expected from the State in the cure and prevention of Tuberculosis, and how shall this be secured?)
2. Tuberculosis in its Pathological and Bacteriological Aspects.
3. The Medical and Surgical Aspects of Tuberculosis (Embracing Sanitoria and Climatic Conditions, Light and Electricity).
4. The Veterinary Aspects of Tuberculosis.

Titles of papers, outside the four symposiums should be sent as early as possible to the officers. All papers offered will be submitted to a committee of censors, who will pass upon their acceptability, and they should be in the Secretary's hands before the session. The Congress is open to all schools of medicine, all members of the bar, statesmen, publicists, and all students of the subject; and the co-operation of all citizens is desired who feel an interest in the prevention of the spread of tuberculosis by all lawful means.

The object of this Congress is practically "a campaign of education," and it is hoped that something may be developed that will lead to the prevention and cure of this monster of diseases. The plan proposed by the officials of the Congress is most excellent. The Governor of each State of the United States of America, of Canada, Mexico, etc., is made an honorary vice-president, and he is requested to name a number of leading physicians or others especially interested in the study of this disease in his jurisdiction as delegates to this Congress. Arizona, Idaho, Montana, North Carolina, New Mexico, Texas, Vermont, West Virginia, Utah, Iowa, Michigan, New Hampshire, Kentucky, the Republic of Mexico, the Northwest Territories of the Dominion of Canada, etc., have each appointed leading physicians, veterinarians, scientists, etc., of their respective States, Territories, Republics, or Dominions in the two American continents as delegates to this Congress. But in the list we do not see what the Governors of Virginia, of Maryland, South Carolina, Georgia, Mississippi, Louisiana, Texas, Tennessee, etc., have done.

The Secretary-Treasurer of this Congress is Clark Bell, Esq., LL. D., President of the Medico-Legal Society of New York city. He is a lawyer of eminence, but during his entire lifetime he has shown such a degree of interest in all matters pertaining to the interests of the medical profession that he must be looked upon as the doctor's friend in all laudable undertakings.

### The Charleston (S. C.) Exposition

Will close the last of May, 1902. On Virginia days—April 16th, 17th, 18th—the Governor of Virginia and his staff, the entire corps of the Virginia Military Institute, a detail of two companies of the Seventieth Virginia Regiment, the Virginia Press Association, etc., were the guests of the city of Charleston, and there were thousands of Virginians there that week. Such unbounded hospitality we have rarely seen equalled. It was a week of ovations to Virginians. Trips around Fort Sumter, Fort Moultrie, etc., to Sullivan's Island, to Palm Beach, etc., were superintended by leading representatives of Charleston citizens. *Incoq.*, as to our being a doctor, we found ample arrangements for emergency cases. The Medical College of the State of South Carolina is doing excellent work and great good.



# THE Virginia Medical Semi-Monthly.

(FORMERLY VIRGINIA MEDICAL MONTHLY.)

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## Original Communications.

### CANCER CASES.\*

REPORTED TO ILLUSTRATE METHOD OF DIAGNOSIS  
AND TECHNIQUE OF SURGICAL TREATMENT.

By STUART MCGUIRE, M. D., Richmond, Va.,

Professor of Principles of Surgery and Clinical Surgery, University College of Medicine; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital, etc.

A short time ago the writer read a paper before the Medical Society of Virginia, entitled "The Past, Present, and Future of Cancer." In this paper he endeavored to review the history of cancer, to call attention to the recent views of the etiology of the disease, to state the present accepted principles of its treatment, and to suggest the possible developments of the future.

This paper is intended as a sequel to the first, and consists in the report of operations recently done for cancer, the cases being selected to illustrate the symptoms upon which the diagnosis was based and the method of removal that was practiced.

As might be expected the cases chosen were successful ones, at least as far as recovery from the operation was concerned. No claim is made for cure, as sufficient time has not elapsed to render recurrence of the disease improbable.

The writer is keeping a careful record of all operations for cancer, and hopes in a few years to be able to present a third paper giving the history of the cases. He is firmly convinced that in the past the permanent results of operations for cancer have been better than is generally supposed; and this statement would have been demonstrated if surgeons had followed up all their cases, instead of letting a certain portion of their cases follow them up. He is also convinced that in the future the results of

operations for cancer will be better than is generally expected; and this prediction is based on the belief that the general practitioner will learn to diagnose the condition earlier, and the surgeon will adopt more radical methods for the removal of the disease.

*CASE I. Cancer of the Skin.*—Mr. R., aged 63, gave the following history: Two years before his admission to the hospital he bruised a wart on the back of his right hand and a small sore resulted. It gave little trouble, but refused to heal. It soon became covered with a crust or scab, and bled whenever it was removed. It slowly but steadily increased in size. At first it was dry, but of late it had suppurated freely. On examination an ulcer  $2\frac{1}{2}$  inches in diameter was found. Its edges were indurated, but there was no enlargement of adjacent glands. A diagnosis of epithelioma was made, based on the age and history of the patient and the appearance of the growth. Syphilis was excluded by absence of other lesions, and tuberculosis by progressive extension of the ulceration without any attempt at repair.

The hand was carefully cleaned with soap and water and treated for several days with moist antiseptic dressings. A circular incision was made around the diseased tissue through the entire thickness of the skin, and the area dissected out, exposing the extensor tendons beneath it. Bleeding was stopped by torsion and pressure, and a moist dressing applied consisting of cotton soaked in a 1 to 250 solution of chloral hydrate. This dressing was changed daily, and at the end of a week all suppuration had ceased and the wound was filled with healthy granulations to the level of the skin. By a second operation the bare surface was covered with skin grafts. Thin sheets of cuticle were cut with a razor from the deltoid region of the left arm and accurately placed in position. They were retained and protected from overlying dressings by narrow strip of rubber dam.

\* Paper read at meeting of the Tri State Medical Association of the Carolinas and Virginia, held in Asheville, N. C., February 25-27, 1902.

In three days the grafts assumed the pinkish color of the surrounding skin, and in ten days the wound was well and the patient discharged.

In this class of cases the advantages of excision over caustics or the cautery are obvious. With the scalpel the diseased tissue can be accurately and entirely removed. The pain is less and a clean wound is left instead of a sloughing eschar. New and healthy skin can be planted upon the surface, lessening convalescence by weeks or months, and leaving smooth skin in place of an unsightly scar. Lastly the disease is far less likely to return either in the graft or clean cut margin than in the scar, the result of a slow cicatrizing and often infected burn.

CASE II. *Cancer of the Lower Lip.*—Mr. C. R., aged 38, stated that ten months ago he had noticed a little ulcer on his lip, which he at first thought was a "fever blister" from indigestion, and later attributed to irritation from smoking. It refused to yield to treatment, however, and had gone through the characteristic stages of induration, scab formation and ulceration. On examination an angry sore was found the size of a half dollar, with elevated edges and accompanied by induration, which extended almost to the point of the chin. The sub-mental and sub-lingual glands were enlarged and hardened. A diagnosis of carcinoma was made, but as the patient gave a history of syphilitic infection, a small section of the growth was removed and submitted to microscopic examination. The result being confirmatory, an operation was advised and agreed to. After a day or two of preparatory treatment, during which, in addition to the usual measures, the frequent use of an antiseptic mouth wash was prescribed, the patient was placed in a semi-recumbent position on the table. Owing to the size and location of the induration an excision of the usual V-shaped piece was not considered adequate, hence two vertical cuts were made from near each corner of the mouth to the level of the chin, and their lower ends united by a transverse incision. The rectangular section of tissue thus outlined was dissected free from the underlying attachments and removed. Hemorrhage during this stage of the operation was controlled by an assistant, who, with thumbs inserted in the mouth, grasped and compressed the coronary arteries. All bleeding points being tied, the sub-mental and sub-maxillary spaces were cleared of their contents. The deformity which resulted was corrected by Langenbeck's method, drainage being

introduced at the most dependent part of the constant vomiting and diarrhœa, but though the wound, and approximation being effected with silk worm gut and horse hair sutures. The surface was coated with collodion and a loose absorbent dressing applied. The patient was fed on liquids through a tube for several days. The disfigurement from the operation was much less than anticipated.

CASE III. *Cancer of the Tongue.*—Mrs. B., aged 32, stated that a year or more ago a small ulcer developed on the side of her tongue, which persisted and refused to heal. It gradually grew larger and ulcerated. When she entered the hospital the tongue was so infiltrated that speech was imperfect. There was constant radiating pain in the throat and face, some dribbling of saliva, and a foul, offensive odor from the mouth. A section of the growth was examined by a microscopist and pronounced epithelioma.

After carefully considering the case, it was decided to do Whitehead's operation, and, if possible, to leave one-half of the tongue.

The patient was anesthetized and placed in a semi-recumbent position. A preliminary tracheotomy or ligation of the lingual artery was not deemed necessary. The jaws were separated with a gag, and the cheek pulled back with a retractor. The tongue was caught at its tip with volsella forceps and pulled forcibly forward. It was split from behind forward in the median line with a bistoury, care being taken to carry the incision well back of the growth. The diseased half of the tongue was then freed with scissors from its attachment to the mouth at the frenum and anterior pillar of the fauces. The sub-lingual muscles were then divided with the same instrument. Strong traction was then made, and the half of the tongue to be amputated drawn so far forward that the remainder of the operation was practically extra oral. A transverse incision was made with a knife well behind the growth, at first dividing only the mucous membrane. A curved hemostatic forceps was then clamped in the groove, thus securing the main artery, and the amputation completed. The artery was then tied and torsion practiced at several points, which were still bleeding, and the wound temporarily packed with gauze. In a few moments the tampon was removed, and the cavity swabbed out with a solution of iodoform in ether and turpentine. The after treatment of the case consisted in a liquid diet and

the use of an antiseptic mouth wash. The patient was soon able to swallow without difficulty and to speak intelligibly. Since the operation she has gained over thirty pounds in weight.

CASE IV. *Cancer of the Stomach.*—Mr. W., aged 44, gave the following history: Eighteen months before his admission to the hospital he began to suffer from indigestion and slowly to lose flesh and strength. Three months ago he discovered a small, hard, freely movable lump in the upper part of his abdomen, which had been variously diagnosed by different doctors as an aortic aneurism, a movable kidney, and a "growth in the bowels." His tongue was coated, his breath foul, and his bowels distended with gas. Food taken into the stomach would remain undigested for hours, and then be vomited. His weight had been reduced from 160 to 112 pounds. There had never been pain, hematemesis or cachexia. An examination of the stomach contents showed an entire absence of hydrochloric acid, the presence of lactic acid, and Oppler-Boaz bacilli. His urine contained large quantities of indican.

A diagnosis of carcinoma of the pylorus was made. The patient was fully acquainted with the nature of his trouble, and an operation advised as a desperate but only chance for relief. To this he consented.

Preparatory treatment was instituted for a few days, and consisted in the restriction of the diet to predigested nitrogenous food, the regular and systematic lavage of the stomach, and the administration of small and repeated doses of calomel to empty the bowels and produce relative intestinal antiseptis.

A five-inch median incision was made, and the pyloric end of the stomach and the duodenum delivered through the wound. Adhesions were slight, and the mesenteric and post-peritoneal glands not enlarged. The malignant growth could be accurately outlined, and was found to begin in the pyloric valve and extend some three and a half to four inches in the walls of the stomach. An elastic constrictor, in the shape of a catheter, was tied around the duodenum two inches below the mass, and another around the stomach about its middle to control hemorrhage, and the omental attachments between these two provisional ligatures tied in sections and divided. The diseased portion of the stomach was then excised, care being taken to cut through apparently healthy tissue at least one inch from the neoplasm. The divided end

of the stomach was united from above downward with three rows of silk sutures, until only an opening was left at the inferior angle equal in size to the lumen of the cut end of the duodenum. An anastomosis was then effected between the two by means of a Murphy button. The elastic constrictors were removed, and as no bleeding followed, the toilet of the peritoneum was made and the abdominal incision closed without drainage. The patient reacted well and made an uninterrupted convalescence. For the first three days he was fed with nutritive enemata, and his thirst relieved by high rectal injections of saline solution. On the fourth day he was given buttermilk by mouth. His bowels were kept open from the first by mercurials and salines. The button was passed on the eleventh day, and solid food was permitted shortly afterwards. His tongue cleaned, his appetite became good, and he gained nineteen pounds in weight in the five weeks he remained in the hospital.

CASE V. *Cancer of the Liver.*—Mrs. C., aged 60, had been a victim to indigestion and flatulency for years. She had also suffered with vague epigastric pain, which had recently become more violent and paroxysmal. It began in the region of the gall-bladder and radiated to the back and right shoulder. Three months before her admission to the hospital she developed jaundice, which had slowly deepened and persisted without intermission.

When examined she was found greatly emaciated and decidedly septic. There was discharges were greenish in color, chemical tests proved they contained no bile. The abdominal muscles over the liver were so rigid that little accurate information could be ascertained by palpation. That a tumor of some sort was present was demonstrated by the force of aortic impulse transmitted to the surface of the body. The patient's symptoms were evidently due to obstruction of the common duct, but a differential diagnosis between gall stones and cancer could not be made. Despite the discouraging outlook it was determined to open the abdomen and attempt to remove the obstruction of the duct if it was due to the impaction by a stone, or to provide another avenue for the escape of bile if it was due to a malignant growth.

A vertical incision was made parallel to the external border of the right rectus muscle, beginning at the costal cartilage and extending downwards three and a half or four inches.

Hemorrhage was profuse, as is always the case in jaundice. When the peritoneal cavity was entered a tangled mass of adhesions was found. These were broken up sufficiently to expose the under surface of the liver. No calculi could be felt in the gall-bladder or bile ducts. The viscus was opened and efforts made to pass a probe through the ducts, but failed. It was decided that the obstruction was due to cancer, and was irremedial.

As the natural channel for the bile could not be restored, it was determined to establish a new route by forming an artificial opening between the gall-bladder and duodenum, and this was accomplished by making an anastomosis with a small Murphy button. Gauze drainage was inserted, and the abdominal wound closed. The patient reacted well; bile appeared in the stools on the third day, and the button was passed on the fifteenth day. During the period the button was in position the diet was limited to liquids, but purgatives were given when indicated without hesitation. Convalescence was rapid, the jaundice disappeared, the patient gained strength and flesh, and was discharged from the hospital at the end of the fifth week.

CASE VI. *Cancer of the Rectum.*—Mrs. S., aged 32, had suffered with rectal trouble for over two years. She complained of sensation of weight and heaviness in the pelvis, constant desire to go to stool, but inability to empty the bowel, great pain in the rectum and frequent discharges of pus, blood and mucous from the anus. Enemata caused agony, and the bowels could only be moved by large doses of drastic purgatives.

A rectal examination showed the existence of a dense stricture three inches from the anus, and bimanual palpation disclosed a large boggy mass immediately above it. Under cocaine anesthesia a small piece of tissue was cut from the lumen of the stricture, and a microscopic examination confirmed the fear that the disease was malignant.

The trouble had advanced too far to be dealt with by Whitehead's method, and the patient was too weak to be subjected to Kraske's operation; hence it was determined to do a left inguinal colostomy for temporary relief. A two and a half inch incision was made on the left side of the abdomen similar in direction and location to that usually employed on the right side for appendicitis. The cut edges of the parietal peritoneum were caught with artery forceps, pulled

up and stitched to the cutaneous incision with a continuous silk suture. A loop of the sigmoid flexure of the colon was brought through the wound and its upper end gently pulled on until no more could be withdrawn, the lower end of the bowel being returned to the cavity as fast as the upper was exposed. This procedure located a point in the colon where an artificial opening could be established without danger of subsequent prolapse.

In order to fix the knuckle of gut securely in the wound a glass rod, the size and length of an ordinary pencil, was passed beneath it through its mesentery and allowed to rest on the skin at right angles to the line of the incision. This not only suspended the colon, but made a sharp bend in its lumen, which turned the current of fecal matter to the artificial anus and prevented it from entering the lower segment of the bowel.

The surface of the abdominal incision, which, by the suturing previously described, had been covered by peritoneum, was now brought in close apposition with the bowel by one or two through and through silk worm gut sutures at both angles. The exposed bowel was protected by strips of rubber dam and the usual dressings applied. Three days later the bowel was opened by cutting away its anterior wall with scissors. No anesthetic was used, pain was slight, and bleeding easily controlled. There was the immediate escape of flatus and fluid feces, and the discharge continued profusely for several days, showing the amount of retention that existed. The patient at once commenced to improve, and in two weeks was up in a rolling chair. At first she was greatly annoyed by her inability to control the feces, but her bowels soon became regular, and she learned to know the hour when to expect their discharge. She has gained fifteen pounds in weight, and is now able to go to market and attend to her household duties.

CASE VII. *Cancer of the Breast.*—Mrs. T., aged 48, mother of several children, came to the hospital on account of a small but slowly growing tumor, which she had accidentally discovered in the upper and outer quadrant of the breast. It had never given pain, and for that reason was not believed to be malignant. An examination showed the affected breast slightly smaller and less pendulant than the opposite one. The nipple was not retracted, but the skin was dimpled at several points over the growth. The mass was the size of a small hen egg, not tender to pressure, firm in consistency, apparently not ad-

herent to underlying structures, and freely movable in all directions even when the pectoral muscle was rendered rigid by extreme abduction of the arm. Careful palpation of the axillary space failed to demonstrate enlargement of the lymphatic glands of that region. Despite the absence of many of the symptoms generally supposed to be necessary for the diagnosis of cancer, immediate operation was urged. It was deemed that the presence of a growing tumor in the breast of a woman over forty was sufficient to justify the removal of the organ. Delay until the diagnosis was clear would probably mean procrastination until the case was hopeless. The operation being agreed to, the axilla was carefully shaved and the patient prepared in the usual way. The woman was anesthetized, placed on the operating table, the arm abducted and held at the wrist by an assistant, who manipulated it during the operation in a way to facilitate the work.

An elliptical incision, with the nipple as the centre, was made through the skin—one end being at the sternum and the other at the juncture of the anterior axillary fold with the chest wall. The lower segment was made first in order that it might not be obscured by blood, which would have been the case had the order been reversed. A straight incision, some three inches long, was then made from the outer angle along the lower border of the pectoralis major muscle to expose the axillary space. The skin was then dissected back and the incision deepened until the fascia of the underlying muscle was exposed. The fascia was then cut through, the line of incision being parallel but external to that of the skin. This made the elliptical incision through the fascia much larger than the elliptical incision through the skin.

The mass thus outlined was grasped with volsella forceps at the sternal end and rapidly freed from its attachment to the anterior chest wall, the fascia being removed with the breast. Bleeding was controlled with hemostats. When the axillary end was reached it was found that the glands of the axilla were enlarged and evidently infected. Rapid blunt dissection was made to expose the axillary vessels, and these being located, the space was cleared of fat and glands, the procedure being facilitated by traction on the detached breast, with which they were still connected. The artery forceps were removed one by one, and such points as bled were caught again and tied with fine silk.

A small rubber drain was inserted at the axillary end of the wound, the edges of the incision brought together by interrupted silk worm gut sutures placed about two inches apart, and neat apposition of the skin secured by a continuous buttonhole suture of silk. A voluminous aseptic, absorbent dressing was applied, and the arm of the affected side confined with bandages to the chest wall. The drain was removed in forty-eight hours, the stitches taken out on the ninth day, and the patient was able to leave the bed at the end of two weeks.

*CASE VIII. Cancer of the Cervix.*—Mrs. P., aged 48, mother of two children, had ceased to menstruate over a year ago. For the past six months she had been troubled with leucorrhœa, and occasionally the discharge had been tinged with blood. The odor at times was offensive. Three months ago she had lost considerable blood, but had attributed it to re-establishment of menstrual function. She suffered no pain, but the bleeding continuing at irregular intervals, she consulted her physician, who advised her to go to a surgeon. On admission to the hospital she was examined. The cervix was found lacerated and the lips everted. On the exposed posterior wall of the canal and extending backwards to the vaginal junction was seen an erosion. It was friable, vascular, and bled when sponged with a bit of cotton. It had elevated indurated margins, and the whole cervix felt hard and inelastic. There was no pelvic deposit or rigidity of the broad ligaments, and the uterus was freely movable. A small fragment of tissue was removed from the growth, and on microscopic examination was found to be carcinomatous. An operation of vaginal hysterectomy was advised and accepted.

The pubes and vulva were shaved, the vagina frequently irrigated with antiseptic solutions, and other preparatory measures instituted. The patient was placed on the table in the lithotomy position. The vagina was widely opened with a Sims' speculum and lateral retractors. The cervix was caught with tenaculum forceps, drawn down, and its interior thoroughly cauterized with a Paquelin cautery. The cavity of the uterus was lightly packed with a gauze strip, and the cervical opening closed by sewing the anterior and posterior lips together with three heavy silk sutures, the ends being left long to act as tractors. After resterilizing the vagina the cervix was pulled forward and a transverse incision made with scissors in the posterior

vaginal fornix and Douglas' cul-de-sac opened. The cervix was then dragged backwards and a transverse incision made across the anterior fornix. The bladder was carefully separated from the anterior face of the cervix, and the utero-vesical fold of the peritoneum opened. The mucous membrane intervening between the ends of the anterior and posterior incision was then divided, care being taken not to injure the uterine artery. With a finger introduced into the peritoneal cavity through the posterior incision as a guide, the lower portion of the broad ligaments, including the uterine arteries on each side, were clamped with the forceps and divided. The uterus was pulled still lower down, the finger hooked over the top of one of the broad ligaments, and the upper part of the ligament with the ovarian artery clamped and divided. The fundus of the uterus was then delivered into the vagina and a fourth forceps applied to the other ovarian artery. The last attachment that held the uterus in the pelvis was then severed and the organ extracted. The opening left in the vault of the vagina was narrowed by several silk sutures and a small gauze drain introduced. The forceps were left in place for forty-eight hours. The drainage was removed at the end of the third day. The patient was shortly allowed to assume a semi-recumbent position in bed, and made an uneventful recovery.

CASE IX. *Cancer of the Uterus*.—Mrs. D., aged 45, gave a history of bleeding and purulent discharge from the womb for several months, with constantly increasing loss of flesh and weight. Vaginal examination showed a large swollen cervix, free from ulceration. Bimanual examination proved the uterus to be about the size of a child's head, and the seat of fibromyomatous growths. It was at first thought that the condition was due to simple degenerative change, but dilatation of the os and inspection of the endometrium disclosed a suspicious growth above the internal ring. A piece of tissue removed with a curette and examined under the microscope showed it to be carcinoma. As the uterus was too big to be removed by the vaginal route, it was decided to take it out through a supra-pubic incision. The organ was first curetted and its cavity irrigated with a 50 per cent. solution of peroxide of hydrogen, followed by a flushing with a 1-4000 solution of bichloride of mercury. The uterus was then packed with gauze and the cervix tightly sewed up. The abdomen was then opened. The

ovarian arteries were tied on both sides, the broad ligament divided down to the juncture of the body of the uterus with the cervix, and then the uterine arteries ligated. A transverse circular incision was made through the peritoneum at the point of its reflection from the uterus to the bladder in front and the rectum behind. The uterus was pulled up, and the peritoneal cuff pushed down, until the vagina was reached, which was determined by palpation and percussion. A small opening was made into it in front, and it was ligated in sections to prevent bleeding, and cut around the cervix, thus freeing the uterus. A gauze strip was inserted into the vagina from above and loosely packed in the bottom of the pelvis, and the abdominal incision closed. The drainage was removed at the end of the third day, the patient made an uneventful convalescence, and when last heard from was doing well.

CASE X. *Cancer of the Penis*.—Mr. S., aged 51, stated that a year or more ago a small ulcer developed on his foreskin, which was irritable, bled at slight provocation, became indurated and slowly spread, involving all adjacent structures. When examined the end of the penis was found about the size and shape of a door knob, having lost all natural outlines and having been transformed into a cauliflower-like mass.

The growth was red, with patches of gray slough over it, and with deep clefts between its warty protrusions. The inguinal glands were perceptibly enlarged. The opening of the meatus was discovered with difficulty. There was no pain, but there was a horribly offensive odor. The patient was in good general health, and gave no history of venereal disease. His wife was living and free from uterine trouble. The diagnosis of cancer was so plain that a microscopic examination of tissue was deemed unnecessary, and an immediate operation advised. After shaving the pubes, and other suitable preparatory treatment, the patient was anesthetized and placed on the table. The skin at the base of the penis was transfixed by two steel pins and an elastic constrictor wound tightly around the organ behind them. A broad rectangular cutaneous flap was cut from the dorsum of the organ, and a straight incision made through the skin on its under surface. The corpora cavernosa were then amputated close to the pubic bones. The corpus spongiosum, containing the urethra, was cut some half inch longer. The urethra was then dissected out of

it. After ligation of the main arteries of the part the constrictor was removed and bleeding at minor points arrested. The pins were then withdrawn. The cutaneous flap now hung over the end of the stump like an apron. An opening was made in its centre and the divided end of the urethra drawn through it. The canal was split to prevent subsequent contraction, and the two halves sutured. The edges of the flap were then fastened at two or three points, close approximation being avoided to give necessary drainage. After the completion of this part of the operation attention was next directed to the inguinal glands. Both groins were laid open by a free incision over Poupart's ligament; the skin turned up and down, and the fat and glands of each side removed in one connected piece. Urine was drawn with a catheter for several days. Union occurred by first intention, and the patient was discharged with perfect control over micturition.

### SOME ABDOMINAL CASES IN WOMEN LATELY OPERATED ON.\*

By R. S. MARTIN, M. D., Stuart, Va.,

President Medical Society of Virginia; Secretary Medical Examining Board of Virginia; Surgeon to Mothers' Home, etc.

I beg to report a few abdominal cases in women operated on during the last few years. Before beginning this report I wish to say that I am glad to be here. North Carolina is my native State. In 1885 I left her borders to try my fortune in Virginia, and while I love my adopted home and Virginia has been good to me, there springs within my bosom a feeling of joy when I hear the name of the Old North State mentioned. God bless her. She holds the ashes of my father and forefathers, and so long as life lasts, unless my reason is dethroned, I will love her, cherish her memory, and rejoice in her success.

**CASE I. Ovarian Cyst—Emptied—Septic Fever.**—Mrs. B., age 42, married, mother of five children, came to Mothers' Home June 5, 1901. About four years ago noticed enlargement in lower part of abdomen, which has gradually increased in size. Menses every two or

three weeks, rather profuse. Bowels regular. Appetite poor. Presents the characteristic emaciation of ovarian cyst. Had been told by her family physician that all her trouble was due to her liver, and was treated accordingly, until Dr. Slate, of Stokes county, N. C., made the proper diagnosis of ovarian cyst. He had her sent to me at once for operation, which was performed June 17, 1901.

Four and one-half gallons of fluid were removed from the sac. No adhesions. Operation very simple. Patient put to bed with no shock, and in good condition.

She did well considering her emaciated condition until June 28th, having very little fever—pulse not over 96 and temperature not over 100°. June 28th, fever 101°, pulse 108. In the afternoon removed stitches. Fever 102°. From June the 29th to July 24th she had more or less fever, sometimes running as high as 104-104½, but usually ranging from 100 to 102.

She had no special pain or symptoms which would aid in locating cause of fever. The following treatment was given: Sponge baths, for temperature; nutritious diet, strychnine hypodermically, one-thirtieth grain three times a day; Parke, Davis & Co.'s nuclein solution, one dram, three times daily, and when the temperature was highest; antistreptococic serum, two doses.

She recovered, and left the sanitarium August 9th.

The points of interest are: (1) Temperature, beginning twelfth day, duration from June 28th to July 24th; (2) cause of fever never located. Treated as septic. Typhoid thought of, but no bowel symptoms. No marked results from drug treatment, except strychnine, and probably nuclein. Supporting patient and sponge baths of alcohol and water did most good.

**CASE II. Fibro-Myoma of Uterus—Hysterectomy.**—Mrs. K; age 52; married; mother of five children. About three years ago noticed enlargement in lower part of abdomen. Menopause two years after. Since that time the growth has been more rapid, and for the last year it had been very rapid. Bowels constipated. Bladder gives a great deal of trouble from pressure. Operation performed June 12, 1900.

A large fibro-myoma, upper portion being cystic, was removed by abdominal hysterectomy, the uterus being amputated at the internal os and the stump covered in the usual way, with

\*Read before the Tri-State Medical Association of Virginia and the Carolinas during its session at Asheville, N. C., February 26, 1902.

peritoneum. The operation was difficult, owing to many adhesions, and the thickness of the abdominal walls from excessive fat. She was profoundly shocked when removed from the operating table, but soon reacted under appropriate treatment. She did well for about twelve days, when she had a chill and her temperature ran up to 103°, and pulse 120.

After a few days, with no improvement, she was put upon the table and the cause looked for. Examination made per vaginam of the stump. This was carefully dilated, and a small curette was inserted, making very gentle pressure. Suddenly I felt it give way, and on withdrawing the curette the pus followed. The sac was thoroughly washed out with sterile water and hydrogen dioxide and packed with gauze. This was done daily for awhile, and the lady was soon well enough to leave the sanitarium, and has since enjoyed good health.

The point of interest was the infection in this case, through the vagina, and the immediate relief when thorough drainage was introduced.

**CASE III. Fibroids of Uterus.**—Mrs. B; age, 30; married; no children, has menorrhagia and metrorrhagia. Diagnosis, fibroids of uterus. Operation performed March 25, 1898. Several sub-peritoneal fibroids removed by enucleation, several interstitial were left in. The patient's condition would not permit of total hysterectomy. Ovaries and tubes removed. She made good recovery. I examined her two years after the operation and could not find any tumors.

**CASE IV. Ovarian Cyst.**—Mrs. K; age, 52; married; no children. Five years ago noticed she was getting larger in abdominal cavity. Diagnosis, ovarian cyst. Has been aspirated twice, last time getting no fluid. Operation for removal of cyst performed February 1, 1898. Abdominal wall very thick from adipose tissue. On reaching cyst a large hollow trocar was introduced, when the sac broke into a number of small pieces, like it was a piece of glass or ice, emptying contents, which were thick and ropy, into the abdominal cavity. The pedicle was found, ligated and the remaining part of sac removed, and then began a hunt for the numerous pieces of the sac, and getting the abdominal cavity free from the contents of the cyst. This was tedious, and prolonged the operation. A gauze drain was left in, but removed in twenty-four hours. Case did not do well. Was difficult to get bowels to move, I think due to the bowels being exposed so long, and partly

paralyzed. On the morning of the sixth day the outlook was gloomy, pulse quick and feeble, respiration bad, and tympanitic bowels, but temperature good. All efforts to move the bowels had proven useless. At 4:30 P. M. on the sixth day the bowels, by high enema, moved, when all the alarming symptoms disappeared, and the patient made a very rapid recovery.

**CASE V. Ovarian Cyst.**—Mrs. B; age, 57; married; no children; came to Mothers' Home in August, 1901. Noticed enlargement in left side about two and a half years ago. In 1888 had an ovarian cyst removed from right side by the late Dr. Hunter McGuire. She had been aspirated four times in the last eighteen months. Diagnosis was made of ovarian cyst. Operation was postponed owing to her feeble condition until November 29, 1901. The incision was made a little to the right of the old scar. The fluid from the sac was removed by aspiration. Part of the sac was filled with papillomatous, cauliflower-shaped growths. Owing to very firm adhesions, as much as possible of the sac, including the papillomatous growths, was removed. The remaining part was stitched into the abdominal incision, irrigated and packed with iodoform gauze. The patient did well, temperature never going over 100. Gauze was changed about every third day, and cavity irrigated with cherry red solution of iodine and normal saline solution. She left the Home January 17, 1902, with the sac almost healed.

**CASE VI. Retroflexion of Uterus.**—Miss H.; single; age, 27; has retroflexion of uterus, with adhesions. Operation of ventro-fixation performed September 5, 1899. Temperature on the evening of the second day 105 1-5. This did not subside with the usual move of the bowels. The temperature continued, never running higher than 101½° until about the eighth day, when stitches were examined and part removed, having found a stitch hole abscess, which responded very rapidly to drainage and cleansing with hydrogen dioxide. She made a very rapid recovery, and has since remained perfectly well.

**CASE VII. Ovarian Cyst.**—Miss H.; age, 23; single; been complaining for three years. Menses regular, but very painful. Has leucorrhoea and is constipated. Noticed enlargement in abdomen for the last three years.

Diagnosis: *Ovarian Cyst.*  
Operation performed March 3, 1899. Adhesions so numerous that the cyst had to be enu-



cleated, and cavity packed with iodoform gauze to prevent hemorrhage. In forty-eight hours the gauze was removed and abdominal cavity closed. Patient did not do well. Temperature ranged from 100 to 102 and 104°. On the twelfth day an abscess was discovered pointing about midway of incision. This was carefully opened and irrigated with hydrogen dioxide and packed with gauze, and from that day on the case progressed nicely and made rapid recovery.

**CASE VIII. Retroflexion With Adhesions.**—Mrs. P.; age, 26; married; three children. Suffers from profuse menorrhagia. Has retroflexion with adhesion. Both ovaries enlarged, prolapsed and adherent. Patient a great sufferer from constant pain, bearing down sensation, etc. Operation performed January 31, 1902. Ventro-fixation of uterus. Right ovary and greater part of the left one removed, both cystic. Adhesions numerous. Patient was put to bed in fairly good condition. In about twenty hours I noticed the pulse was not good, gradually going up until it reached 150 and feeble. Facial expression bad. Temperature normal in the mouth, by rectum 101. I diagnosed internal hemorrhage. Gave large dose of strychnia and saline infusion. In the course of six or eight hours I noticed some improvement, and in twenty-four hours a decided change for the better. Patient did fairly well, but had daily some temperature—100 to 101°. Pulse 90 to 110 until the ninth day, when the temperature increased and pulse became more frequent. On vaginal examination I found a soft fluctuating mass in the cul-de-sac. This was opened and drained, a dark, bloody looking fluid escaping. The cavity was irrigated and packed with gauze. The cavity is still open, and daily irrigated with normal saline and dioxide hydrogen. I see no reason why she should not soon be well.

**CASE IX. Omental Hernia.**—During the summer a negro man, weighing 250, came to me for treatment for strangulated hernia. He stated he had always had hernia, and on the day previous to his visit, while lifting a heavy weight, he felt something slip, and on examination found his usual hernia. He failed, after repeated efforts, to return it. On examination, I found a mass half as large as your fist lying in the inguinal canal. He had no vomiting, but little pain, and bowels had moved. I made taxis without chloroform with no result. Giving him chloroform and failing to return the mass, I cut down up the mass and found omental her-

nia. The opening was enlarged and mass returned, and patient made a good recovery.

The points of interest in his case were the fact that the man had no symptoms. Came twenty miles on train, walked from depot to my place, one-fourth of a mile, had but little pain and bowels had moved well. The only indication for an operation was the non-reducible mass.

You will notice that I have reported only the abdominal cases that had complications during their convalescence. I am happy to say that most of my cases have had no complications.

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### CLINICAL OBSERVATIONS ON THE TREATMENT OF CHLOROSIS AND ANEMIA AND PSEUDOLEUKEMIA.

By L. A. EWALD, M. D., New York City.

Among the many new iron preparations which have appeared in the course of the last few years in which an attempt has been made to produce an organic combination of albumin with iron, ferro-somatose deserves especial notice. Somatose itself is too well known to require any description, having gained a foremost place as a proteid preparation in the treatment of gastrointestinal diseases as well as of all conditions of debility. On theoretical grounds the combination of iron with somatose promises to be a most desirable one, and the experiments of various observers, as well as my own experience, have completely confirmed the correctness of these favorable anticipations.

In reference to the composition of ferro-somatose: It may be briefly stated that it is the result of a chemical combination of the albumoses with iron, and presents itself as a light brownish powder. It dissolves readily in cold and warm water, and in milk and soups, and is odorless and tasteless. The preparation contains about 2 per cent. of iron, and the daily dose for adults ranges from three to four drachms, and for children one-half that quantity.

Through the exhaustive work of Geisse it has been demonstrated that the organic iron combinations have the advantage over the inorganic in being more readily absorbed. In regard to ferro-somatose Geisse has shown that it is the firmest of all iron proteid combinations which has hitherto been prepared.

That ferro-somatose is actually absorbed has been proved by the experiments of Nathan on mice. After several days' feeding with the preparation it was found at the post-mortem that large quantities of iron were present in the intestinal walls, liver and spleen.

My experience with ferro-somatose extends over two years, and the preparation has been prescribed by me in more than 90 cases. Among this considerable number I will mention a few here, of which I have accurate records:

**CASE I. Chlorosis.**—Miss F. O. had suffered for two months with vertigo, headache, a feeling of lassitude, and intense pains in the gastric region. The bowels were costive; the menses had ceased six weeks before; and owing to her great weakness she was unable even to do light work at the time of her first visit. An examination showed a patient of delicate build, with sparse muscular development, and a moderate amount of adipose tissue; the skin and mucous membranes were pale; there was an anemic murmur over the base of the heart; the stomach and intestine showed no perceptible disease; the temperature was normal; there was no swelling of the glands; her weight was 108 pounds; the percentage of hemoglobin, 50.

Diagnosis: Chlorosis.

The patient was put on a regulated diet, which, on account of the marked irritability of the stomach, had to be frequently changed. Before coming under my observation she had taken arsenic and iron, which, however, were ill borne. She now received one teaspoonful of ferro-somatose in milk. At the end of fourteen days it was possible to give her a more vigorous diet. Four weeks after the commencement of treatment the menses returned, and the vertigo, headache, as well as the pains in the stomach, had subsided. The weight was 115 pounds; percentage of hemoglobin over 90. The patient no longer complained of lassitude, and was able to do her work.

**CASE II. Anemia.**—Mrs. L. L., 24 years old, had seven months previously gone through a very severe confinement, labor having to be terminated by artificial means. Although the puerperal state was afebrile, the patient never fully recovered. She complained of lassitude and palpitation of the heart, as well as slight swelling of the feet after walking, sleeplessness and loss of appetite. Examination showed a pale and emaciated woman of medium height;

an anemic murmur was present over the heart; respiration normal; no appearances pointing to an affection of the stomach or intestinal tract could be discovered. An examination of the genitals showed, besides a slight laceration of the cervix and perineum, a moderate prolapse of the uterus and vagina; bodily weight 119 pounds; percentage of hemoglobin 55. Examination of the stomach contents, after a test breakfast, revealed subacidity. Besides a selected diet the patient received small quantities of hydrochloric acid and a teaspoonful of ferro-somatose three times a day, the latter being well tolerated. The patient improved very rapidly, and as early as after three weeks an increase of weight of seven pounds was noted, while the percentage of hemoglobin had increased somewhat over 80. She was now able to resume her housework, and in place of her previous indifference regained her desire to live.

**CASE III. Nervous Dyspepsia and Hysteria.**—Miss M. L., 48 years old, had suffered for a number of years with gastric disturbances. Occasionally she experienced intense pains after taking a meal. At times she had attacks of vomiting and cramps. These conditions, as well as the various plans of diet which had been suggested by different physicians, finally reduced the patient to such a state that almost any kind of food caused aversion. At the same time she complained of vertigo, attacks of syncope, and feelings of coldness in the hands and feet. It must also be mentioned that these disturbances were not constant, but that on certain days she felt quite well. After remaining absent for three months the menses returned and had again ceased seven weeks before. Examination showed a woman of medium height, slender build, with sparse development of muscle and adipose tissue; the skin and mucous membranes were pale; at the base of the heart an anemic murmur could be heard; weight, 98 pounds; percentage of hemoglobin, 70.

Diagnosis: Nervous dyspepsia and hysteria (menopause).

The diet, which was light at first, was gradually made more substantial. She also received three times daily one teaspoonful of ferro-somatose. Her condition improved perceptibly, and an examination six weeks later showed the following: Nausea, as well as pains in the stomach, absent; no vertigo nor headache; color of the skin improved; anemic murmur over the heart

no longer audible; weight, 105 pounds; percentage of hemoglobin, 85; the menses failed to return.

Dr. W. Greeff, who assisted me in the investigation of these cases, has extensively employed ferro-somatose in children at the hospital, and has communicated here in brief a few of his own observations:

#### CASE I. *Anemia Infantum Pseudoleukemia.*

—A child, 9 months old, had been nursed by the mother for five months, and then had a wet nurse, who was sucking two children. Notwithstanding that the child fed well, it was markedly anemic, suffered with diarrhœa, and failed to increase in weight. An examination of the various organs showed nothing abnormal, except that the spleen was quite enlarged. An examination of the blood showed red blood corpuscles 2,800,300; leucocytes, 17,030; percentage of hemoglobin, 25. A diagnosis of anemia infantum pseudoleukemia (Jaksch) was made. Ferro-somatose was now administered in doses of one-half teaspoonful three times daily. Twenty days after the commencement of treatment the condition of the blood was as follows: Red blood corpuscles, 3,900,400; leucocytes, 11,000; percentage of hemoglobin, 45. After four more weeks, red blood corpuscles, 4,230,000; leucocytes, 9,200; percentage of hemoglobin, 82.

#### CASE II. *Anemia Infantum Pseudoleukemia.*

—A child one year old had been weak since birth, the mother being in poor circumstances. The child was still nursing. It had suffered for some time with diarrhœa, and appeared anemic and emaciated; it was also affected with bronchitis and perspired strongly. No tubercle bacilli could be found in the sputa. The liver was slightly enlarged, the spleen considerably. Examination of the blood showed red blood corpuscles, 3,530,000; leucocytes, 27,000; hemoglobin, 55 per cent. The patient was given ferro-somatose one-half teaspoonful three times daily. The preparation was tolerated without any disturbances, there being no vomiting. Examination of the blood after 14 days showed red blood corpuscles, 4,600,200; leucocytes, 16,000; percentage of hemoglobin, 75. After another 14 days, red blood corpuscles, 4,850,400; leucocytes, 13,000; hemoglobin, 90 per cent. The general condition of the child was excellent.

#### CASE III. *Anemia Infantum Pseudoleukemia.*

—A child 15 months old, one of twins, the other having died at three months after

birth. The patient was weak even at birth, but stronger than the other twin. The mother, 19 years of age, had always enjoyed good health, but was of frail habit and poorly nourished. The skin of the child was pale; general appearance somewhat senile. There was a slight cough. The child had been nursed by the mother for nine months, and then had been fed on all sorts of artificial foods, without any improvement. On the contrary, it deteriorated from day to day. An examination showed marked enlargement of the abdomen; the spleen extends downward to the iliac fossa; over the neck in the inguinal region the glands are distinctly palpable; the lungs and other organs are normal. Examination of the blood showed red blood corpuscles, 3,650,000; leucocytes, 30,000; hemoglobin, 70. Ferro-somatose was administered in doses of one-half teaspoonful three times daily, besides phosphorus and cod liver oil in moderate doses. Great care was devoted to the nourishment (artificial). The condition after fourteen days was, red blood corpuscles, 4,380,000; leucocytes, 19,000; hemoglobin, 75 per cent.; after another 14 days, red blood corpuscles, 4,720,000; leucocytes, 15,000; hemoglobin, 90 per cent.; the spleen still two fingers' breadth beyond the margins of the ribs; a considerable increase in weight has taken place.

The above two cases are to be regarded as examples of anemia infantum pseudoleukemia (Jaksch).

#### CASE IV. *Cervical Gland Disease.*—A girl 11 years old had suffered since infancy with a scrofulous conjunctivitis, and had never enjoyed vigorous health. Since one year there had been present swelling of the neck and enlargements of the glands of the back of the neck, which, in spite of treatment with cod liver oil, etc., never receded. In other respects the condition of the patient also appeared to grow worse from day to day. Under the systematic administration of ferro-somatose and a strengthening diet the swelling of the glands subsided perceptibly, and the general condition of the patient improved in a very satisfactory manner.

These are only a few instances among the considerable number of cases in which ferro-somatose has been employed with the most satisfactory results. Of course the entire effect is not to be attributed to this preparation, since a carefully selected diet as well as the administration of an adequate amount of food were equally indispensable. The increase of the bodily weight

and of the percentage of hemoglobin, the favorable influence upon the general condition, the increase of the appetite, and the ease with which the preparation was tolerated, even when the stomach was affected and readily irritated, show that ferro-somatosé is a very eligible preparation, which renders good service even in desperate cases.

In accordance with the views of other observers who have employed this remedy, we did not find it necessary to resort to large doses in order to obtain good results. On the contrary, the small, medium-sized doses of three teaspoonfuls daily for adults and one-half of this quantity for children gave the best results. Besides, attention must be directed to the fact that the preparation is administered in the completely dissolved state.

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## THE PRACTICAL MANAGEMENT OF SMALL-POX.\*

By LLEWELLYN ELIOT, M. D., Washington, D. C.,  
Medical Inspector, etc.

Small-pox, for the past three years, has prevailed with more or less virulence in nearly every State in this country. Several of the large cities have suffered greatly in financial and commercial matters, as well as in the loss of many lives. It is, therefore, opportune that all matters relating to the practical management of the disease be brought forward, notwithstanding the vast amount of literature already extant.

Public opinion accords to every physician an exact knowledge of the disease, and holds culpable those who fail to recognize it on sight. This is one of the most egregious follies public opinion can commit; but with a perversity engendered by ignorance, it prevails.

Very few practitioners of medicine care to attend small-pox; fewer have an opportunity to see cases, so it must follow that all the information relating to it which they possess is acquired by listening to lectures by teachers equally as lacking in clinical and practical experience. Window-pane examination is a fallacy.

When a suspicious case presents itself, a case

showing an eruption, with other symptoms producing a doubt in diagnosis, counsel should be sought; if, after a consultation, an agreement clearing away this doubt cannot be reached, the health authorities should be notified. This is, in the District of Columbia, in accordance with the law.

**INSPECTION.**—A case suspected of being small-pox is reported to the Health Office. It is not necessary, nor is it expected, that the evidence presented by each case be conclusive to the physician or the citizen reporting it; it means certain signs have presented themselves which create a suspicion sufficient to shift responsibility and ask advice. As soon as the report is received an inspector is immediately dispatched to the house and a thorough examination of the suspect made. If the diagnosis made confirms the suspicion, the premises and inmates are quarantined without delay, the result of the inspection telephoned to the health officer, and officers stationed at the front and back entrances. Inspection visits are conducted quietly and orderly; noise and excitement are avoided as far as possible. On very many occasions neither the people of the house nor the patient is aware of the fact that the case was even a suspected small-pox, the physician reporting having made a request for caution. It is a very easy thing to formulate an excuse for the visit. Right here it is that physicians are able to establish a reputation for caution in eruptive diseases where knowledge is only that of the text-book.

**QUARANTINE.**—Upon the subject of quarantine, all authorities are agreed that those exposed to small-pox shall be subjected to quarantine. This quarantine is either very rigid or very broad, very effective or very lax.

Some of the cities of Pennsylvania require a period of eighteen days, others one of twenty-one days. The District of Columbia requires sixteen days. I believe the period should be extended to twenty-one days.

A domiciliary quarantine is always a source of anxiety, as well as of great expense, requiring as it does employment of additional guards and furnishing food and fuel to those unable to provide these necessities.

The city of Harrisburg, Pa., placards the premises, vaccinates and quarantines all exposed in the house from which the patient has been moved, provides the best dietary and everything the quarantined desire. Where it is not

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\* Read at a meeting of the Medical and Surgical Society of the District of Columbia November 7, 1901. But confinement at the Small-pox Hospital as physician in charge prevented prompt sending of the MS.

possible to assemble all at one house, by reason of refusal or want of room, the different houses are placarded and quarantine there established.

Boston does not placard the premises, nor does it quarantine. The patient is taken to hospital, the other inmates are vaccinated, allowed to go at large, but are kept under observation of a medical sanitary inspector.

Philadelphia removes the patient to hospital, vaccinates, quarantines at home, and placards the house.

New York city placards the premises, vaccinates and allows all hands to go at large, reporting, however, for examination every day.

In the District of Columbia those exposed are removed, where it is possible, to the station established by the health officer, then vaccinated, then their clothing is disinfected, they are furnished good, wholesome food, comfortable quarters, are visited every day by a medical inspector, their temperatures taken morning and evening. At the city station a house containing four rooms is set aside as a hospital. To this hospital is removed every inmate of the station, whose temperature registers above the normal, and he or she is kept there until examination determines the presence or absence of small-pox. The same oftentimes applies to those cases inspected at home, where a positive diagnosis cannot be at once made; the symptoms being suspicious, while the eruption is not characteristic; a few days will clear the matter, and transfer to hospital or discharge is made.

In those few cases treated at home, the inmates are required to remain in quarantine sixteen days after the recovery of the patient. Escape from quarantine is punishable by fine or imprisonment. Letters written and sent from the station are previously subjected to disinfection with formaldehyde. Nothing of this kind is allowed to be sent from the hospital.

**REMOVAL TO HOSPITAL.**—Without doubt, the proper place for treating small-pox patients is in a hospital, and, with this in mind, I have always endeavored to effect the removal. The law cannot reach members of one household, but it can step in where a case occurs in an apartment, a tenement, a boarding-house, or where the proper management of such case will become a charge upon the city. Some States force removal to hospital.

Occasionally it requires argument to convince people of the proper disposition of cases. It is argued that physicians will attend these cases as they would attend the ordinary cases of prac-

tice, but when put to the test, with a loss of practice, an unpleasant notoriety, and only a possible chance of the bill being paid staring them in the face, they find the flesh very weak, although the spirit is willing. Who can wonder that a family physician steels himself against such cases, in the absence of a general outbreak. While this is true, it cannot be denied that a few physicians are willing to treat these cases at home, and with more or less success.

The Health Department provides proper ambulances for removal to hospital; no other conveyance can be used. These ambulances are available at any moment; they are well ventilated and easy riding. Patients are instructed to take an extra suit of underwear with them and their outer clothing. Reaching the hospital, he is placed in bed, without being bathed, the clothing worn is taken, disinfected with formaldehyde, and stored until needed.

Immediately after the removal of the patient, his room and its entire contents are disinfected; then on the next day the rest of the house, floor after floor. Hand-rails, door-knobs, furniture, and anything subjected to infection are washed with a standard acid solution of mercuric bichloride before disinfection is begun. The plan of disinfecting the patient's room and his belongings first is a precaution against a possible spread of infection while taking them to the disinfecting station, where they are again disinfected and returned. The destruction of property in this city is very small, nearly everything removed from a house is returned, and only those things ordered in writing by the owner are burned.

**DISPOSITION OF GARBAGE, ETC.**—The health officer directs the removal of garbage and other accumulations from infected premises to the hospital reservation, where they are burned.

The bodies of those dead of small-pox should be burned. In the absence, however, of any law or provision for such disposal, the body is washed of discharges at the nose, mouth, arms, vagina, and urethra; these orifices are then closed with absorbent cotton; it is then put in a clean gown. When the coffin arrives a blanket is placed in it, a sheet dripping with a saturated solution of mercuric bichloride is wrapped about the entire body, chloride of lime is freely sprinkled in the coffin, the blanket sewed tight, and the lid nailed down. The coffin is not opened for any purpose, but is taken in the hospital wagon to the place of burial. The grave is dug deep, lime is thrown in, the coffin is lowered, lime is thrown on it,

then the earth filling. All of this work is performed by men connected with the hospital, no one outside being allowed to do any part of it. In some other cities undertakers are allowed to handle and remove the body, after it has been sewed in stout sheeting, under the supervision of the Health Department.

**VACCINATION.**—There is hardly any reason to mention vaccination in this connection; still, anti-vaccination societies exist, and cause much damage by their teachings. Were vaccination more thoroughly practiced, there would be fewer cases of small-pox. While the United States Army affords very few cases, the volunteer service suffers to quite an extent.

The mere scratching of an arm or a leg is not vaccination; drawing blood is not necessary; while those vaccinations followed by excessively sore arms are cases of infection grafted upon vaccination. Vaccine virus is subject to the same laws of organized life which govern others. Where it is alive with the special pathogenic organism success is the rule in primary vaccinations, and a good majority of takes occur in secondary ones; while on the other hand, where the virus has been collected and stored at inopportune seasons, when it has become deteriorated through age or the admixture of dead organisms, spurious vaccination, infected wounds, and absolute failures are the result.

The rule with the Health Department is to compel the vaccination of every one exposed to small-pox; it is immaterial who performs the operation; the result, however, must be satisfactory. In those few cases of refusal to comply, the law will take its course.

**DISINFECTIO**N in this city is done with formaldehyde, the gas being generated by the Lentz, the Kuy-Scherer, or the Kindun-Frances-Sprague apparatus. Sheets wrung out of formaldehyde may be hung in closed rooms, or the liquid placed in saucers and allowed to evaporate.

Disinfection by steam has been in operation in the District of Columbia for some years; the results are better for deep penetration than with formaldehyde. Formaldehyde is used only for surface disinfection.

1106 P Street, N. W.

in Antwerp and Brussels, and the report goes on to say that the disease was imported from London.

## A COMPARISON OF TYPHOID FEVER MORTALITY IN HOSPITAL AND PRIVATE PRACTICE.\*

By ARTHUR J. HALL, M. D., Washington, D. C.

Having observed in the annual report of our local hospitals that the mortality of typhoid fever reached a figure which impressed me as being high, I have examined reports of our local and other hospitals, and endeavored to compare hospital mortality with that of private practice. The results of this study have developed no new features, but as I found it very interesting, I thought I would lay the figures before the Therapeutic Society, with a view of drawing out information on mortality in private practice, which I found difficult to secure by personal inquiry and correspondence.

The following table shows the statistics as gathered from the reports of eight local institutions:

TABLE No. 1.

NAME OF HOSPITAL.	No. of Typhoid Fever Cases Treated.	Deaths.	Per Mortality Cent.
Providence Hospital, 1899 .....	71	6	8
Providence Hospital, 1900 .....	82	14	17
Washington Asylum Hospital, 1900..	5	1	20
Freedman's Hospital, 1899 .....	62	13	21
Freedman's Hospital, 1900 .....	64	16	25
Children's Hospital, 1901 .....	27	4	15
Garfield Memorial Hospital, 1899....	69	12	17
Garfield Memorial Hospital, 1900....	65	6	9
Sibley Hospital, 1901 .....	21	3	14
University (Columbian) Hosp., 1899.	3	0	0
University (Columbian) Hosp., 1900.	16	1	6
Georgetown University Hosp., 1899..	21	2	9.5
Georgetown University Hosp., 1900..	32	5	16
Total .....	538	83	15.4

This gives a total of 538 cases, with 83 deaths, giving a general average mortality of 15.4 per cent.

The following table is made up from reports

\* Read at the March meeting of the Therapeutic Society of Washington, D. C.

**Smallpox in Antwerp and Brussels.**—It is reported that smallpox has broken out severely

and other published information regarding public institutions not local:

TABLE No. 2.

INSTITUTION OR AUTHORITY QUOTED.	No. of Typhoid Fever Cases Treated.	Deaths.	Mortality—Per Cent.
Johns Hopkins Hospital, 1899.....	102	3	2.9
Johns Hopkins Hospital, 1901.....	103	6	5.8
Philadelphia Hospital, 1900.....	85	12	14
Massachusetts General Hosp., 1899..	183	15	8
Massachusetts General Hosp., 1900..	171	20	12
<i>Twentieth Century Practice</i> , Vol. XVI, 1899, gives the following:			
Cork St. Hosp., Dublin, 1891.....			8.6
U. S. Army reports, 1888 to 1897..	1303	141	10.8
Fort Myer Hospital, 1889.....	719	65	9
U. S. Army Hospital, Huntsville, Ala., 1889.....			8.1
U. S. Army 3 Hospital reports....	1415	126	8.9
Osler, in <i>Principles and Practice of   Medicine</i> , 1898, about.....			13
By Brand's method.....			6
General average of percentage col- umn.....			8.9
Total (8 full returns).....	4081	388	9.5

These twelve institutions and authorities give a hospital mortality of 8.9 per cent., which is little more than half that of our local hospitals.

While my effort at collection of statistics from private practice was not entirely successful, still, after enlisting the sympathy and assistance of a colleague, I found myself in possession of statements from five local practitioners, giving statistics regarding 90 consecutive cases of typhoid fever, from which the following table is prepared:

TABLE No. 3.

	No. of Typhoid Cases, Private Practice.	Deaths.	Mortality—Per Cent.
Report No. 1.....	51	2	3.9
Report No. 2.....	18	.....	.....
Report No. 3.....	8	1	12.5
Report No. 4.....	7	.....	.....
Report No. 5.....	6	.....	.....
Total.....	90	3	3.3

This mortality of 3.3 per cent. is 36 per cent. of that shown in Table No. II, and 21.4 per cent. of that shown in Table No. I. This series of 90 consecutive cases is not large enough to base

any positive statements upon; and with a view of learning still more of the mortality of typhoid fever in private practice, I consulted authors and published statistics, and compiled the following:

TABLE No. 4.

AUTHORS QUOTED.	Mortality in Ty- phoid Fev., Pri- vate.—Per Cent.
Wm. Osler, in <i>Principles and Practice of Med-   icine</i> , 1898, varies from 5 to 12 per cent.; average.....	8.5
<i>Twentieth Century Practice</i> , Vol. XVI.....	10
Tyson, <i>Practice of Medicine</i> , 1896:	
Family nursing.....	20
Skilled nursing.....	10
Brand's own mortality.....	1
Tyson's own mortality, no figures given, but says all who perished died from perfora- tion or hemorrhage.	

Omitting Brand's and Tyson's own records, this would give an average mortality for four estimates of 12.1 per cent., and including Brand's, an average of 9.9 per cent.

A general average of Tables Nos. 1 and 2 will give a hospital mortality of 12 per cent.; an average of Tables Nos 3 and 4 gives a private practice mortality of 7.7 per cent., which is 63.6 per cent. that of the hospital mortality. These figures seem to show that in private practice the mortality is from 22 per cent. to 63 per cent. of that of hospital mortality. This result is rather the reverse of what I expected to find, and shows that the typhoid patient, sick and treated at home, has a decided advantage in his chance of recovery over those sent to hospitals.

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## NEURALGIA.\*

By GEORGE W. DAY, JR., M. D., Richmond, Va.

Of all the symptomatic troubles on which the physician practices, there is scarcely another in which he at times has so much difficulty in relieving. In the outset, I wish to state that neuralgia is always a symptom, and should be treated as such.

*Definition.*—The best definition which I have  
\*Read before the Church Hill Medical Society of Richmond, Va, March 27, 1902.

been able to formulate is that neuralgia is a symptomatic nerve pain, due to some irritation, either direct or indirect, generally following the course of sensory nerves, and never associated with organic changes in the nerve.

*Etiology.*—Its causes are both predisposing and exciting.

Of the *predisposing causes*, the most prominent are: (1) *Age*, being more common in adults, scarcely ever occurring before puberty or in old age. (2) *Sex*. It occurs, as a whole, more often in women. Sciatica is more common in men, while trigeminal neuralgia is more frequent in women, especially those of a nervous disposition. (3) *Heredity* plays an important role, especially where the patient's ancestors have been epileptics or neurotics. Neuralgia is very frequent in the anemic, overworked, or badly-fed individual. (4) One's *occupation* also influences the trouble, and especially is this true of painters and metal workers. (5) *Malaria* also predisposes by producing an anemia.

The *exciting causes* are exposure to cold and dampness, and of all the causes, I doubt if there is one which plays a more important role. Any mechanical, chemical, or thermal irritation and pressure of any sort, such as neuromata or fibromata, are all causes of this trouble in no small number of cases. Traumatism over the course of a nerve is one of the possible causes. The infectious diseases, including rheumatism and gout, often have neuralgia associated with them as a symptom. Sometimes neuralgia is produced by an inflammation of the tissues surrounding the nerve in its course.

*Symptoms.*—This trouble is characterized by a spontaneous, intermittent pain of a paroxysmal, burning, shooting, or darting character. It is generally relieved by steady pressure or gentle friction. There are points of nerve tenderness corresponding to where the nerves come to the surface. Although the pain is deep-seated, the skin over the course of the nerve becomes swollen, red, hyperemic, and hypersensitive, and in one case of trifacial neuralgia I have seen a local edema over the point of the exit of the nerve of a considerable size. Sometimes the muscular system is disturbed, producing twitching of the muscles, and sometimes even loss of motion.

*Diagnosis.*—From neuritis, neuralgia is generally unilaterally distributed, while neuritis is generally bilateral. The pain of neuritis is constant, while that of neuralgia is paroxysmal.

Pressure over the neuralgia generally lessens the pain, while pressure over a neuritis increases the pain. In neuritis the tenderness is no more pronounced at one point than at another, while in neuralgia there are tender points. In neuralgia the pain has a tendency to shift from one point to another, while in neuritis the pain is always over the involved area. In neuritis there are generally muscular wasting and other reflexes, which are never seen in a simple neuralgia.

But after all the diagnostic points, we all still make errors, especially where the neuritis is deep-seated or involves a nerve trunk.

From muscular rheumatism, by the fact that rheumatism involves muscles or groups of muscles, the pain is continuous and is increased by motion.

*Varieties.*—Neuralgias are named (1) as to their cause, and (2) as to their location.

As to their cause, we have epileptiform neuralgia, which is really a neuralgia tic. Reflex neuralgia, where the pain appears at the distance from the source of irritation. Occupation neuralgia, which is really an occupation neurosis, and herpetic neuralgia, when underlying the seat of herpes zoster. We also have rheumatic, gouty, diabetic, malarial, and syphilitic neuralgias, and many more, according to some prominent causative factor.

As to location, we have: (1) *Trifacial neuralgia*, which we meet oftener, and I dare say is harder to relieve than any of the other varieties. This is the form that involves any branch of the fifth or trigeminal nerve, rarely involving all three of its branches. The first or ophthalmic branch is most frequently involved, producing supra-orbital neuralgia. When the second or infra-orbital branch is involved, the pain is over the cheek. When the third or inferior maxillary division is involved pain traverses the lower jaw and tongue, radiating to the opposite side of the face.

(2) *Cervico-occipital*, affecting the area of the neck supplied by the posterior branches of the first four cervical nerves. The pain may even extend as far as the parietal eminence and the ear.

(3) *Cervico-brachial and brachial*, involving the area supplied by the lower four cervical nerves and the first dorsal nerves.

(4) *Phrenic neuralgia* is very rare, the pain being in the lower anterior thoracic region.

(5) *Intercostal neuralgia*, generally occurring



in the middle intercostal nerves on the left side; painful spots being at exit of nerve at middle part, and end of ribs.

(6) *Pleurodynia* is a neuralgia of the nerves supplying the pleura alone, and not involving the nerves supplying the chest wall.

(7) *Mastodynia* is a painful affection of the breast in women, producing some tender lumps simulating the beginning of malignant disease, and for this reason we should be careful to diagnose it.

(8) *Sciatic neuralgia*, or sciatica, involving the great sciatic nerve.

(9) *Visceral neuralgia* is a term used to designate a variety of neuralgia affecting the viscera, being called gastralgia, where the nerves supplying the stomach are involved; nephralgia, where the nerves supplying the kidney are involved, etc.

Of course, there are many forms which, for want of space, I have not mentioned, only alluding to the more important types.

*Treatment.*—The treatment is divided into (1) that of the paroxysm, (2) that of the cause.

First of all, we have to relieve the pain. How shall we do this? Let us all beware of using morphia, except as a last resort, for fear of forming morphia habitues. Acetanilid or any of the coal tar preparations, combined with two or three grains of quinine every three hours, generally relieves the paroxysm. If necessary, we may give codeine in one-fourth to one-half grain doses every three or four hours. Caffein has been used successfully by some. Atropine has been highly recommended, but I have found very little good from it. Local applications, as menthol and various liniments, are sometimes useful, as is also pressure over the nerve.

The treatment of the cause is either medical or surgical, or both combined. The medical treatment consists of building up the ænemic patient with tonics, good food, and plenty of outdoor exercise. If malaria be present, the use of quinine and arsenic are beneficial. If the neuralgia be syphilitic, it will usually yield to potassium iodide. If eye strain be present, glasses should be fitted. If kidney or gastric trouble be present, they should be treated.

The surgical treatment consists of neurectasy or stretching of the nerves, especially used in the nerves of the extremities; neurotomy, or dividing the nerve; neurectomy, or excising a part of the nerve, and avulsion of ganglia, where no other treatment avails.

## Proceedings of Societies, Etc.

### BALTIMORE MEDICAL AND SURGICAL ASSOCIATION.

FEBRUARY 24, 1902.

*President*, Dr. J. L. Ingle; *Secretary*, Dr. Eugene Lee Crutchfield.

**Pathological Specimens**—I, Laryngo-Tracheal Diphtheria Without Finding Bacillus; II, Endocarditis of Aortic Valve; III, Septic Thrombus in Right Auricle; IV, Horseshoe Kidney in Infant; V, Double Renal Calculi—No Kidney Tissue.

*Dr. Wm. Royal Stokes* showed a few specimens which are not very rare, but interesting as emphasizing certain points in diagnosis and treatment:

I.—The first specimen is from a case of laryngo-tracheal diphtheria, which Dr. Rurah has kindly allowed me to use. It was a case of pure tracheal diphtheria. If you will handle the specimen, you can see that there is no membrane at all in the pharynx. It begins on the under surface of the epiglottis and extends down the trachea and into the bronchi. A point concerning the diagnosis in this case is of importance: We made several examinations for the diphtheria bacillus, but failed to find the organism, and that should always be borne in mind in examining cases of tracheal diphtheria, where there is no membrane in the pharynx. I have not infrequently had negative results from examinations in these cases where the diagnosis has been confirmed by autopsy. It is rather difficult to get an ordinary swab, such as is used by the Health Department, into the larynx. The specimen is not rare, but it is a good, typical case of pure laryngeal diphtheria.

II.—The next specimen is from a case of some clinical interest: *Endocarditis of the Aortic Valve, due to the Streptococcus*. Temperature somewhat resembled that of typhoid fever, and a very positive diagnosis could not be made. They failed to get the Widal reaction, or any other very positive symptoms, and not until autopsy was a decisive diagnosis made. The autopsy showed an old, deformed aortic valve. The cusps are all deformed and shrunken; and in two, there is an acute exacerbation, and the middle cusp particularly is covered with a rough, irregular fibrinous deposit. It doesn't look like such a very serious matter as you view it here, but it caused a general streptococcus in-

fection and death of the patient. It is a very characteristic appearance of a deposit of fibrin upon an old, badly damaged valve.

The subject of *diagnosis* between this and typhoid fever and miliary tuberculosis is of clinical interest. *Typhoid* may be distinguished by the Widal reaction, or in some instances culture from the urine. The streptococcus endocarditic may be differentiated from *miliary tuberculosis* by cultures taken directly from the blood. In Dr. Cole's report in the Hopkins' *Bulletin*, July, 1901, he describes his method of taking these cultures as follows: The ordinary antiseptic precautions are taken in making the surface of the fore-arm sterile, and a very hot bichloride compress enables him to get uncontaminated cultures, and also serves to bring out the veins more clearly. The veins are compressed and a sterile hypodermic needle is thrust into one of the superficial veins. He doesn't use the barrel of the syringe at all, but just the needle, and allows the blood to drip through it into his flask. One important thing to remember is that the pure blood itself is bactericidal, and the old method of allowing a few drops of blood to drip over a culture plate is unreliable for that reason. Cole's method it to withdraw 10 cc. of blood and allow 2 cc., or 30 drops, to flow into a flask with 100 cc. beef-tea. This dilutes the blood about 75 times, and the diluted blood is not so bactericidal and the bacteria grow in the tea, and a plate culture can be taken and organisms isolated. Cole took cultures from fifteen cases of typhoid, and found typical bacilli in eleven of these. Some work has been done recently in isolating the pneumococcus from the blood in this way. Cello has found it in twelve out of forty-eight cases. Most of the cases where the pneumococcus were found proved fatal. Another investigator found the pneumococcus in fifteen out of sixteen examinations by means of this blood culture. I simply mention this in connection with endocarditis to show the possibilities of such examination as a means of diagnosis. In this case no blood culture was taken during life, but it was full of the streptococci, as was also the lung.

III.—This third case is also a peculiarly interesting one. It is a *Typical Example of a Septic Thrombus in the Right Auricle*. These thrombi begin by a collection of the blood platelets, and around that nucleus strands of fibrin form, and in the meshes of this net-work there are many white corpuscles and some red ones.

This is of interest as showing the mechanism of thrombi, which it is of importance to understand. If a thrombus is not full of bacteria it may do little harm. When septic, they cause the greatest amount of trouble. Little pieces are washed off and get into the kidneys and other viscera, setting up a septic condition there. This thrombus almost entirely fills up the right auricle.

IV.—I also have here an example of the *Horseshoe Kidney taken from a Child only Four or Five Months Old*. And here also is an old museum specimen from an adult. They are not very rare, of course. They are supposed to be due to the fusion of the Wolfian ducts during embryonic development, the fusion forming a horseshoe-shaped viscus, which almost always lies in front of the aorta and inferior vena-cava.

V.—The last specimen I have to show is rather a novel one. It is from a woman fifty-six years of age, who had been sick for six months or more. She gave a history of chronic illness for about a year. She was brought into the hospital and died within twenty-four hours. The diagnosis of uremia was made—the woman having suffered from uremic symptoms. At autopsy this remarkable set of specimens were found. Here are *Renal Calculi on Both Sides; No Kidney Tissue Left* at all. Both kidneys are large shells containing moulds of the renal pelvis and calices. At one or two places are little remnants of kidney tissue. The glomeruli are all obliterated, and practically there is no functioning kidney whatever. The calculi have entirely obliterated the kidney tissue and caused pyo-nephritis, and there was a great deal of pus in this shell of a kidney. There was also a cystitis, and the cultures showed the cystitis and the pus infection in the kidney to be due to the proteus vulgaris.

There has just been an ingenious theory brought forward concerning the formation of these calculi. As you know, the typhoid bacilli have a tendency to agglutinate in masses. They have a great tendency to agglutinate in the urine, and, it is thought that other organisms after infection have this same tendency to agglutinate; and it has now been suggested that perhaps these groups of bacilli may form the nucleus for the calculus.

It is with some hesitancy that I comment upon the chemical examination of this calculus. In Professor Simon's *Chemistry*, the directions for making an analysis of calculi seem rather sim-

ple. In this case, by simply following out his directions, I think, I made a correct analysis. He makes three divisions of the examination—first, burning without flame; burning with flame; and those that do not burn at all. I found that after being dried, these calculi did not burn. I then made several tests which showed that they consisted of phosphates of some kind. This is shown by dissolving the powdered calculus in acetic acid, and then precipitating it by the addition of ammonium molybdate dissolved in nitric acid. This gives a striking yellow precipitate. It was then determined that it was a calcium phosphate by the usual test for calcium. Simon says that the uric acid calculi are the most frequent; and next, the urates, phosphates, and oxalates, and rarely those of xanthin and cystin.

On both sides, then, these were composed of calcium phosphate. In conclusion, I wish to state that in one or two of these cases the laboratory examination was misleading, particularly in the case of laryngeal diphtheria; and here the clinical symptoms should be depended upon; but in other cases the employment of laboratory examinations, the blood cultures, etc., are of great diagnostic importance.

#### DISCUSSION.

*Dr. C. Urban Smith:* I believe that in the great majority of instances bacteria form the nucleus for these renal calculi, and that this is especially true of the biliary calculi. The colon bacillus getting into the gall bladder, or into the liver itself, is often responsible for the formation of calculi.

*Dr. Stokes:* I think Dr. Smith is quite correct. In cultures from biliary calculi the colon bacillus has been found, and also, I believe, the typhoid bacillus.

*Dr. Smith:* Is it possible to get a culture from one of these hard calculi?

*Dr. Stokes:* Yes, I think a culture can be made from them.

#### REPORTS OF CASES.

*Dr. T. W. Keown* reported the following:

#### Gastritis—Diagnosis and Treatment.

The first case I wish to speak of is one that came under my notice at the St. Agnes Sanitarium; a case that had been wandering around with the diagnosis of neurasthenia, and had been taking all the depressants in the catalogue. He was twenty-eight years of age, apparently in strong physical health, except that he seemed

to be a burden to himself. He at no time felt like getting up and walking around. Every individual portion of his anatomy would at times have something the matter with it; his arms would be too heavy to lift, and if he tried to walk around he felt as though he weighed a ton. He complained of headache a great deal. He looked very well nourished, and I do not think he complained of any other trouble except the general sluggishness and inability to get about. His pulse was very regular; he ate three times a day, and did not eat too much. At one time he had been a heavy meat eater. His tongue was very much indented by the teeth, and it was heavily coated. His breath was more or less offensive. This, accompanied by the headache and general lack of energy, led me to direct my attention to his general organs of nutrition.

I examined his stomach contents, giving him the regular test meals—the double test meal—one about 8 o'clock, and another at 12 o'clock. The first meal consists of a soft-boiled egg, some rare meat, a dish of rice, and a glass of milk; the second, a roll and a glass of water or a cup of weak tea. At 1 o'clock the contents are drawn. I had great difficulty in getting the contents to flow through the tube. It was simply a mass of mucus with a mixture of all he had eaten that day. On testing it, no free hydrochloric acid was found, and the total acidity was about one-third of normal. His stomach was washed out with a sodium and calcium chloride solution to dissolve the mucus. When his stomach was perfectly clear I gave him his regular meals and administered 10 minims of dilute hydrochloric acid, about a half hour after each meal. He soon showed decided improvement. His normal energy returned, but he still had the headaches, and would lapse back again into his old condition of listlessness. Then I decided to give him the Neuheim bath-treatment. He rapidly revived under this treatment, and in the course of four or five weeks was able to go back to his business. He had been a man who had taken a great deal of interest in base-ball, and said that he now felt like going out and pitching a game of ball.

The point I desire to call attention to is the sliding over of such cases, putting them down as neurasthenia, when, perhaps, there is sufficient reason for the symptoms in some physical disorder. Here, of course, was a case of *gastritis*.

#### Mitral Regurgitation—Treatment.

The second case I would like to report was

also a case diagnosed as neurasthenia. The only symptom he complained of was that he was losing weight and getting weak, and that he wanted to lie down all the time. On getting up, he had headache, which started over the eyes and in the frontal region. He would be asleep on his couch or bed, and on getting up would say his head felt as though it would burst.

Examination showed a *mitral regurgitation*, and it is a wonder how it could have escaped notice. He did not complain of any heart pain, but had complained of a feeling of oppression in that region, and of dyspnoea. I put him on 1 gr. of the powdered digitalis three times a day, and gave him the salt baths. That was sometime in the middle of December, and he has now resumed his duties. He has taken on about thirty pounds of weight. The digitalis, when used by itself, did not seem to give him the necessary relief, though he was getting 1 gr. three times a day. Oliver, in the *London Lancet*, says that one-half grain morning and evening is a sufficient dose. When the Neuheim baths were added there was marked benefit. In cases where the apex beat is an inch to the left of the nipple, after these baths it moves over to the right of the nipple. That of itself seems wonderful, because the baths only consist of a little sodium and calcium chloride.

### Hair in Sinuses About Coccyx.

The *third case* I would report is one that I did not diagnose at all until I had operated, and then hardly knew what I had found. The case is that of a young man, who, about a year ago, fell on the ice, striking on the back in the sacro-coccygeal region. Shortly afterward he noticed in that region a small hole that constantly secreted a fluid, and the moisture gave him considerable annoyance. I cut down on it to see what was inside and scraped it out with a curette. That occurred in March or April, and he came back last month with three holes this time. The one I had opened was a little larger, probably, and there were two others down the median line of the back that you could get a small probe in. I entered the probe in the upper one and pushed it down through the other two; injected a little cocaine and slit the three holes into one, and found that I had opened into a sac that contained no pus or granulating surface. I scraped around with the knife, and then pulled out a bunch of hair. I thought at first that the opening communicated with the rectum, but on ex-

amination per rectum could find no communication. I curetted the sac thoroughly, and it is healing up very nicely.

#### DISCUSSION.

*Dr. Winslow:* In regard to this last case, it is not an uncommon thing to find that these sinuses in the region of the coccyx contain hair. The so-called pilo-nodal sinuses very often contain a bunch of hair.

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## Book Notices.

**Venereal Diseases.** *A Manual for Students and Practitioners.* By JAMES R. HAYDEN, M. D., Chief of Clinic and Instructor in Venereal and Genito-Urinary Diseases at the College of Physicians and Surgeons, New York, etc. *Third and Revised Edition. Illustrated with 66 Engravings.* Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 12mo. Pp. 302. \$1.50 net.

This "third and revised edition" is the book for the practitioner—giving in succinct statements the essentials of diagnosis and treatment of venereal diseases. It is systematic in its arrangement—treating of gonorrhoea, stricture, chancre and syphilis and their complications and sequelae. Sections on vegetations and Herpes progenitalis have been introduced. All in all, this *Manual* will serve the practical wants of the doctor who seeks the means of diagnosis and the details of treatment of the venereal diseases.

**Practical Medical Series of Year Books.** *Issued Monthly.* Under General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. *Volume III. THE EAR, EYE, NOSE AND THROAT.* Edited by DR. C. A. WOOD, ALBERT H. ANDREWS, and T. MELVILLE HARDIE. Chicago: The Year Book Publishers. 1902. Cloth. 12mo. Pp. 346. Price, \$1.50.

We have had occasion before this to commend this "practical medicine series" to our subscribers at \$7.50 for the ten volumes a year. Each book, sold separately, costs from \$1 to \$2, according to number of pages, etc. It seems a little singular, however, that so few authors are selected from the Southern States, where just as able compilers can be found as elsewhere. Many of the Northern and Western authors of such

publications are as little known in the South and Southwest as are Southern authors known in the former sections. However, our remarks in this connection do not refer to the merits of the book before us, for it is an excellent book.

**International Clinics.** *A Quarterly Illustrated Clinical Lectures and Especially Prepared Articles by Leading Members of the Medical Profession Throughout the World.* Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia. *Volume I. Twelfth Series.* 1902. Philadelphia: J. B. Lippincott Co., 1902. 8vo. Pp. 306. Cloth.

These *Clinics* are worth their annual subscription price, \$10. This first quarterly volume for 1902 is an excellent advertising number; and yet is no better than many of the series last year or the year before. Beside the clinical lectures by able authors in Therapeutics, Medicine, Surgery, Obstetrics, and Diseases of the Ear, the last section—covering about 102 pages—we regard as the most useful of the volume, giving as it does a *Review of the Progress of Medicine During the Year 1901*, edited by Dr. Edward Willard Watson, of Philadelphia. Our space does not permit of a fuller notice; but we would not leave this book without saying that the doctor who buys and reads it will get the full value of his money.

**System of Physiologic Therapeutics.** *Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Prevention of Diseases and in the Treatment of the Sick.* Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. *In Eleven Octavo Volumes, American, English German and French Authors. VOLUME VI., DIETOTHERAPY and FOOD IN HEALTH.* By NATHAN S. DAVIS, Jr., A. M., M. D., Professor of the Principles of the Practice of Medicine in Northwestern University Medical School; Physician to Mercy Hospital and Wesley Hospital, Chicago, etc. P. Blakiston's Son & Co., Philadelphia, 1901. 8vo. Pp. 372. Cloth. Price for the Set Complete, \$27.50 net.

This set of eleven volumes, when completed, promises to be one of the most valuable in the practitioner's library, to which he may daily refer for useful information in his rounds of professional work. We have already noticed the first four volumes. *Volume VI* is as *practical* a book upon dietetics as it seems possible to make. While *Part I* relates to "General Principles of Diet, and Diet in Health," and is an exceedingly instructive part, *Part II* is given up to *Diet in Disease*, and is the part to which the

general practitioner will find occasion most frequently to consult. Beginning with some general considerations of diet for the sick, it next tells of diet in each of the infectious diseases, in diseases of the stomach, blood, intestines, liver, and peritoneum; in diseases of the respiratory organs, of the circulatory organs, kidneys, nervous system, skin, and diseases of nutrition. In this Part II, attention is given to the causation of disease, especially as diet and digestion and nutritional processes are related to it. Symptoms are considered whenever it seems best to make clear the indications for dietetic and general hygienic treatment.

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## Editorial.

### Medical Department, University of Maryland, Baltimore.

According to a promise made two years ago, the Hon. Andrew J. Montague, Governor of Virginia, delivered the annual address before the graduating class of the Medical Department of the University of Maryland, Baltimore, on the night of May 5, 1902. That he made a good speech goes without saying, as he always does on such occasions.

### Graduates of the Medical College of Virginia.

Out of a class of eighteen applying for graduation in medicine, the following received the degree of *Doctor of Medicine*:

- Charles James Andrews, Brierfield, Va.
  - Alfred Sidney Black, Collierstown, Va.
  - Celus Gregory Ferebee, Gregorv, N. C.
  - Wm. Flegenheimer, Jr., Richmond, Va.
  - Ashton Harwood, Binns Hall, Va.
  - John McGwin, Hinton, W. Va.
  - Emlyn Harrison Marsteller, Jr., Gainesville, Va.
  - Thomas Eric Rucker, Lynchburg, Va.
  - Edward Sandidge, Amherst, Va.
  - W. Macon Smiley, Richmond, Va.
  - Robert Slaughter Talbot, Forest Depot, Va.
  - John Thurston Thornton, University of Virginia.
  - George Esley Williams, Petersburg, Va.
- The degree of *Doctor of Dental Surgery* was conferred upon the following:
- Charles Williams Anderson, Scottsville, Va.
  - Richard Booth, Randolph, Va.
  - William Chappell Flake, Gainesville, Fla.

Nathaniel Thomas Holland, Clayton, N. C.

The degree of *Graduate in Pharmacy* was conferred upon the following:

Franklin Porter Best, Wilson, N. C.

John Bane Crockett, Graham, Va.

George Thomas Hogg, Scottsville, Va.

Arthur Hooks, Fremont, N. C.

James Edward Stryker, Newport News, Va.

Elijah Keeling Wood, Hickory, Va.

The following appointments of Resident Physicians have been announced:

St. Vincent Hospital, Norfolk, Va., Dr. Andrews.

Old Dominion Hospital, Richmond, Va., Drs. Ferebee and Rucker.

Retreat for the Sick, Richmond, Va., Dr. Slaughter.

The Alumni Association of the College held its annual session the night of May 6, 1902. The commencement exercises were held at the Academy of Music the night of May 8th. The public address to the graduates was by Rev. Dr. Evans, rector of Monumental Episcopal church, of this city.

### Correction.

In the notice of Dr. Daniel R. Brower's book on *Practical Manual of Insanity*, in the first April issue of this journal, we inadvertently stated that Dr. Brower was in charge of the Hospital for Colored Insane established near Richmond, Va., soon after the Confederate war. We should have stated that he was placed in charge of the Eastern (Va.) Hospital for the Insane at Williamsburg, Va., during the years of reconstruction, 1867-1875.

### Transactions of the First Annual Meeting (1901) of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics.

A portion of the Table of Contents, giving the titles of papers and names of authors is sent us, with the statement that the volume contains half-tone illustration of the Craig Colony, at Sonyea, N. Y., the Massachusetts Hospital for Epileptics, and Chalfont St. Peter, with maps of the New Jersey State Village for Epileptics, and the Epileptic Colony at Abilene, Texas. Price of muslin bound volume, with gilt top, \$1.50; of paper covered pamphlet, \$1—both or either free of postage. Address the secretary of the Association, Dr. Wm. P. Spratling, Craig Colony, Sonyea, N. Y. While we have not seen the book, we notice that Dr. B. M. Worsham has

a paper in the volume on "the founding of a State institution for epileptics" in Texas; Dr. Wm. F. Drewry, Medical Superintendent of the Central (Va.) Hospital for Colored Insane in Virginia, has a paper on the "Present Status of Epileptics in Virginia"; Dr. C. B. Denson, is the author of a paper on Epileptics in North Carolina. The ability and reliability of these authors give great value to the book.

### The Tri-State Medical Society of Alabama, Georgia and Tennessee

Will hold its 14th annual meeting at Birmingham, Ala., October 8th, 9th, and 10th, 1902. This meeting promises to be of unusual interest. One of the prominent features of the last meeting, which attracted considerable attention, was the discussion of sociological questions. Dr. J. C. LeGrande, Birmingham, Ala., *President*; Drs. Pugh U. Brown, Troy, Ala., Wm. P. Harbin, Rome, Ga., J. C. Wilson, Rockwood, Tenn., *Vice-Presidents*; Dr. Frank Trester Smith, Chattanooga, Tenn., *Secretary*, etc.

### The Church Hill Medical Society.

Under the presidency of Dr. Ramon D. Garcin, this Medical Society of Church Hill, Richmond, Va., has had some valuable sessions. Beginning last October, it has held two meetings a month—on the second and fourth Thursday nights of each month—the published programme of twelve subjects by twelve of its membership being ended April 24, 1902. In addition, reports of interesting or instructive cases have been made at nearly every session. It is wonderful how much good is accomplished by just such societies as this, where members seek to benefit each other.

### Quinoliv (Davenport)

Is a *tasteless* sulphate of quinia preparation made with olive oil, without chemical change. It may be used in powder form, capsule, or tablet. It requires, perhaps, twelve grains to get the full effect of ten grains of quinia sulphate; but this is a small matter when it is remembered that the bulk of twelve grains of quin-oliv is no greater than ten grains of sulphate of quinia, and that its *tastelessness* is its recommendation. If, however, quinolv is administered with an acid, such as hydrochloric acid, etc., all the bitterness of quinia sulphate is developed. Dr. J. S. DeMuth, assistant surgeon of Twelfth New York Volunteers, in charge of the Military Hospital at Matanzas, Cuba, during the Spanish-

American war, reports that for "a month, quinine was compared in alternate cases with quinia sulphate. As a result, it is now prescribed in preference to any other form or preparation of quinia." It depends for its solution upon the acids of the stomach. It is a good thing; and now that the spring and summer time are upon us, when more quinia preparations are needed than during the winter, we are doing a service to the practitioners in calling their attention to this form of *tasteless quinia sulphate*.

### Protection of Grapes, Sweet Corn, etc., from Worms, Moths, etc.

Mr. Stephen Rogers, Bealton, Va., calls our attention to a simple device for which he is agent, by which he protects grape vines, fruits, etc., from the ravishes of flying worms, moths, bugs, etc.; and as many of our village and country subscribers are more or less interested in grape and fruit culture, they may be interested in the matter. The device consists of a "*moth-catcher*, having a central light to attract insects, millers' moths, and bugs; and also having 'bumpers' to knock the insects down as they attempt to fly around the light, and a pan below to catch and kill those that fall in a little coal oil on the surface of the water." One morning, after a calm, dark night, he counted about 1,400 of little pests caught in one trap. By killing these parents of the worms before they lay their eggs, he had a nice lot of grapes, while his neighbors "had no good ones at all." These traps also protect cabbage, tomatoes, sweet corn, etc. "I would not be without them another year;" "I can recommend them to my brother gardeners and farmers, as the best means of preserving their crops from insects," etc., are the kind of testimonials that come about the device from reliable parties.

### Pathologic Exhibit of American Medical Association.

The Committee on Pathologic Exhibit (Drs. F. M. Jeffries, 215 east Thirty-fourth street, New York city; W. A. Evans, 103 State street, Chicago, Ill.; R. G. Perkins, West. Res. Med. School, Cleveland, Ohio) is anxious to secure materials for the coming session at Saratoga Springs, N. Y., June 10th to 13th, inclusive. This exhibit was accorded much praise during the sessions at Atlantic City and St. Paul, respectively, where were collected valuable exhibits from all parts of the country. The materials

included not only pathologic specimens; but the allied fields, bacteriology, hæmatology, physiology, and biology were well represented. It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges. This exhibit has become a permanent feature of the annual sessions of the Association, and the committee is desirous of securing its list of exhibits as early as possible; and to this end asks those having desirable materials to communicate with any member of the committee.

To contribute to the value of the work, it is suggested that as far as possible each contributor select materials illustrative of one classification, and by such specialization enhance the usefulness of the display. Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the Committee, and due credit will be given in the published reports.

### The Columbian University, Washington, D. C.,

Has just completed plans and let contracts for the erection of a new hospital building and a new medical and dental school on H street, N. W., between Thirteenth and Fourteenth streets. The buildings will be colonial in style—the hospital having a frontage of 60 feet to the south; and the medical school building, 50x144 feet, will be five stories high. Large new laboratories thoroughly equipped for modern work, well-lighted lecture and reading-rooms, will afford excellent facilities for medical and dental students.

### Dr. W. E. Fitch, Savannah, Ga.,

Founder and editor, etc., of *The Georgia Journal of Medicine and Surgery*, Savannah, Ga., has sold his interest in the publication to Dr. St. J. B. Graham, who now becomes editor and proprietor. *The Journal*, under Dr. Fitch's management, merited the support of the profession, and gradually, year after year, made for itself a place among the best medical periodicals of this country. The Doctor will devote his entire attention to the practice of his profession in Savannah, Ga.

### Regional Minor Surgery

Is the title of a book about to be issued from the press of the International Journal of Surgery Co., 100 William street, New York city. Dr. George G. VanSchaick, attending surgeon to the French Hospital and to St. Vincent de

Paul Orphan Asylum, New York, the author, presents the subject in a thoroughly practical and instructive manner. The book, about 200 pages, bound in cloth and white leaf, is profusely illustrated, and is devoted to the treatment of the surgical conditions that are met with in the daily practice of physicians. \$1.50.

### The Charlotte Williams Hospital.

Corner of Twelfth and Broad streets, Richmond, Va., is approaching completion, and will be an imposing structure, well arranged and equipped by the munificence of Mr. John L. Williams, of this city, who builds the hospital as a memorial tribute.

### The Medical College of Virginia Journal

Has been determined on—to be conducted by some of its professors and adjunct professors. We have always advocated the idea of every such institution having its medium of communication between its alumni, etc. The *Bi-Monthly* of the University College of Medicine of this city has been doing good work for some years. Other universities and colleges have them, and they help wonderfully to bind the alumni in bonds of friendship, and to remind each of the other.

### The Medical Examining Board of Virginia

Will meet at Richmond, Va., June 16th, and the examination of applicants for license to practice in Virginia will begin promptly at 9 A. M. Tuesday, June 17, 1902. See notice on the last cover page of this journal.

### American Medical Association.

The meeting at Saratoga Springs, N. Y., June 10th-13th, 1902, promises to be altogether successful and pleasurable. Dr. John A. Wyeth, New York city, is President, and Dr. George H. Simmons, 61 Market street, Chicago, Ill., is Secretary, as also editor of *The Journal of the American Medical Association*. A list of the hotels of Saratoga is given in *The Journal*, issue of April 12th. Arrangements for reduced tickets are being made with the railroads. This session will be important as the first one to have the business matters attended to by a delegated body from each State Medical Society of the United States. Each State Society is entitled to send one delegate for each 500 of membership, or each fraction over 500 of membership.

### The University College of Medicine, Richmond, Va., Commencement

Will take place Thursday, May 15, 1902. It is impossible yet to say how many of the classes will pass their examinations, as the examinations are not yet completed as we go to press. This is practically one of the few colleges in the South whose diplomas in every respect are recognized by the National Association of Medical Colleges. The few days remaining before commencement will be taken up in meetings of the Alumni Association, in clinics, etc.

### Dr. Leonidas H. Laidley,

A widely esteemed practitioner and surgeon of St. Louis, Mo., has been appointed Medical Director of the St. Louis World's Fair, to begin over a year hence. He is Professor of Surgical Diseases of Women in the Marion Sims and Beaumont College of Medicine.

### Mississippi Valley Medical Association.

The chairman of the Committee of Arrangements for the twenty-eighth annual meeting of the Mississippi Valley Medical Association, Dr. A. H. Cordier, has announced the dates of the next meeting in Kansas City, Mo., as October 15th, 16th, 17th, 1902. The President, Dr. S. P. Collings, of Hot Springs, Ark., has announced the orators for the meeting, Dr. C. B. Parker, of Cleveland, O., to deliver the address in Surgery, and Dr. Hugh T. Patrick, of Chicago, the address in Medicine, selections which will meet with the approval of every physician in the Mississippi Valley. A cordial invitation is extended every physician in the United States, but especially of the Valley, to attend this meeting and take part in its proceedings. Titles of papers should be sent the Secretary, Dr. Henry Enos Tuley, 111 west Kentucky street, Louisville, Ky., at as early a date as possible to obtain a favorable place on the programme.

### Alumni of the Jefferson Medical College

Will confer a favor on the editors of *The Jeffersonian* by sending the names and present addresses of the officers of their respective graduating classes. Address *The Jeffersonian*, care of the Jefferson Medical College, Philadelphia, Pa. This memorial college is trying to get a full list of all its graduates from its foundation.



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## Original Communications.

### UNION BY PRIMARY INTENTION.\*

By STUART MCGUIRE, M. D., Richmond, Va.

Professor of Principles of Surgery and Clinical Surgery, University College of Medicine, Richmond, Va.; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital, etc.

All wounds heal by surgical regeneration, but union is said to occur by primary intention if suppuration is absent, and by secondary intention if pus is present.

Inflammation is undoubtedly due to germs, and text-books tell us that wounds which heal by primary intention are those which are aseptic and those which heal by secondary intention are those which are infected.

This is obviously untrue, as experiments have proven that as far as practical surgical work is concerned absolute asepsis is an unattainable ideal.

The bacteriologist has been able to demonstrate imperfections in the most rigid technique, and the result leads us to the conclusion that all wounds are infected.

If this be true the manner in which a wound heals does not depend on the absence or presence of microbic life, but on the preponderance of the pathologic potency of the germ on the one hand and the physiologic resistance of the tissues on the other.

In other words, if the power of resistance is greater than the force of attack inflammation does not develop, and the wound heals by primary intention; while if the force of attack is greater than the power of resistance inflammation does develop, and the wound heals by secondary intention.

The question of how to secure union without suppuration is, therefore, reducible to a mathematical proposition; lessen the potency of the germ, or increase the resistance of the tissue; practically endeavor to do both.

\* Paper read at Richmond Academy of Medicine and Surgery, May 13, 1902.

The potency of the germs must be estimated both qualitatively and quantitatively. It is to be minimized by the methods of modern aseptic and antiseptic surgery.

Fortunately the most virulent species of microorganisms inhabit material that can be completely disinfected, and the germs that exist on soil not capable of absolute sterilization can be so reduced numerically as to be comparatively harmless.

It is not the object of this paper, however, to discuss the methods employed to destroy the life of germs, but the purpose is to call attention to the equally important subject of the means to preserve the resistance of tissue. The writer believes that in surgery at least cleanliness comes before godliness, but he does not think that cleanliness is everything.

So much has been said and written about infection and so little about resistance, that the surgeon, in his efforts to secure the one, frequently fails to endeavor to maintain the other. For the best results both objects should be constantly held in view, and one not sacrificed to the other without good and sufficient cause.

When infection takes place the process that follows is commonly spoken of as a battle between cells—really it is more. The germs effecting localization undergo multiplication and produce toxins. The tissue meets the attack of the invader with phagocytes, alexins and anti-toxins.

*Phagocytes* are normally present in the blood. When suppuration threatens their number is largely increased, as if nature by phagocytosis called for conscripts to defend her soil. Phagocytes grapple in physical hand-to-hand combat with the microbes. If phagocyte is the victor it kills the germ, takes it into its substance and utilizes it as food. If the germ is the conqueror it kills the phagocyte, enters its body and employs it as a culture medium.

*Alexins* are normally present in the blood serum. They are the most powerful of all the

non-toxic germicides. They give the serum an antiseptic power, equivalent bulk for bulk with a 1-10,000 solution of bichloride of mercury. Alexins act on the microbe chemically, and perhaps are as potent in the inhibition or destruction of bacteria as are the phagocytes themselves.

*Antitoxins* are not found normally in the body, but are produced by the organism in some unknown way after infection has taken place. They have no effect on the germ but on the toxin produced by the germ. Antitoxin combines with a toxin as an alkali does with an acid, neutralizing it and rendering it inert.

The constitutional effect of an infection depends on the proportion of the toxin formed by the microbe and the antitoxin formed by the system. If the antitoxin is deficient there is fever; if it is equivalent there is cure; if it is excessive there is immunity.

The importance of the physiologic resistance of tissue to infection is generally known, but its augmentation or even its preservation is frequently neglected by the surgeon, who, in his enthusiasm over the details of aseptic and antiseptic technique, treats the body as if it were a test tube, unmindful of the fact that the fate of the wound depends not only on what he puts into it, but also on what he takes out of it.

The highest degree of physiologic resistance of tissue is to be secured by proper constitutional treatment of the patient before the operation and by skillful manipulation and judicious management of the wound during the operation.

When time permits a case should receive more preparation than the usual routine purgation, starvation and sterilization. The body should be acclimated to bed life by confinement; the nervous system should be fortified by moral and if necessary medicinal measures; the heart and lungs should be examined and faulty action or diseased conditions corrected; the digestive functions should receive careful attention, and put in good condition by diet or drugs; the emunctories, especially the kidneys, bowels and skin, should be investigated, and if healthy should be made active; the blood should be demonstrated to contain its proper percentage of hemaglobin and correct proportion of corpuscular elements; freedom from constitutional diseases like malaria should be assured, and in fact the entire system raised to its highest possible perfection, for the physiologic resistance of the individual serums and cells depend on the

functional activity and physical condition of the body as a whole.

The local treatment or the manner of making and the method of managing the wound, is even more important than the constitutional treatment, or the preparation of the patient.

It is here that the personal element that goes to make a surgeon comes into play, for a skillful operator with a poor technique will often get better results than a clumsy operator with a good technique.

Aseptic and antiseptic methods are the result of laboratory experiments and capable of definite expression. They are mechanical and can be mastered by any, and practiced by all. Surgical skill, however, is different. It cannot be taught, but must be acquired. The essential qualifications are rapidity, a trait gotten by heredity; manipulative dexterity, an art gained by practice; and surgical judgment, a talent developed by experience. While no fixed rules can be laid down the following general statements are true:

A wound should be made quickly and closed quickly, as long exposure devitalizes the tissues and lessens their resistance. A wound should be sufficiently liberal to permit necessary manipulations through it without mechanical injury to its surface, as a long clean wound heals quicker than a short bruised one.

A wound should have its hemorrhage arrested by the gentlest means that will prove effective. Fine sutures for the large vessels, torsion for the medium, and gauze pressure for the small ones. Bites of ligatures and bites of forceps are to be avoided when possible. A wound should not be irrigated unless contaminated, as the cells absorb fluid, become bibulous and edematous, and lose their vigor. A wound should not be disinfected unless certainly infected, as germicides kill cells as well as bacteria. If infected it should be left open and drained until inflammation ceases. A wound should be united so as to leave no dead spaces for the accumulation of fluid. Sutures should effect approximation without strangulation. A tight stitch kills, and is a more frequent cause of suppuration than lack of aseptic precaution.

1000 West Grace street.

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Tongaline and Lithia Tablets are almost a specific for lumbago and sciatica.

**CANCER OF EYE-LIDS TREATED BY X-RAY.\***

By W. L. KENNEY, M. D., St. Joseph, Mo.

The writer presented the patient and said that although cure was not complete, it might be of equal interest to see an extreme case in process of resolution.

Microscopic sections were also shown and writer stated that the growth had originally been a slow-growing epithelioma, but in later months had assumed the type of acinus carcinoma and grew rapidly, covering both eye-lids out to the farther corners of eye-brows with a cauliflower appearance one-half inch thick, hiding eyes completely. The orbit was involved to a depth posterior to the eyeball, and an extension ran from inner canthus across nose to other side.

Treatments given were of 30 minutes twice a week at distance of six inches from the platinum target of a "soft" tube. The tubes used had a resistance equal to one-fourth inch spark across prime conductors. The remainder of head was covered with two layers of lead foil.

Improvement was noted in one week, and was marked in one month, when the glands (pre-auricular and subauricular) had shrunken considerably and the lower eyelid was entirely healed. Progress then was slow but continuous until the present. Treatment was not pushed with extreme vigor on account of possible over-stimulation of the epithelial elements of the eye, which chanced to be his only good eye. Burns were never more severe than a dermatitis lasting three days. On the neck the skin was much thickened and exfoliated freely. Beard all fell out, but came in again as treatment was more and more closely confined to regions of actual involvement.

If metastasis has not already occurred by the general circulation the prognosis is probably safe.

The apparatus used was first a portable static machine weighing fifty pounds. Later a portable one weighing 200 pounds was used, the last one made to my order by Dodd & Struthers, of Des Moines, Iowa. He believes radiotherapy will be used much more in the immediate future. Many mistakes will be made, and the best reports will come from the men who have good fundamental training along scientific lines combined with a willingness to work hard and long on each case and to investigate each feature met with as new fields are explored. He is con-

vinced that certain portions of the invisible spectrum are more active therapeutically than other portions. He feels that this portion includes the slower X-rays waves, and these waves are to be had from soft tubes.

By a soft tube is meant one that offers very little resistance to the passage of the current, and which does not penetrate well enough at one foot from target to show the bones of an arm well. Such a tube will allow the current to pass through it when prime conductors are separated only an inch. I used tubes having a resistance of one-fourth inch only. A harder tube of two inch resistance did not do so well.

Duration of treatments where the eye is not necessarily exposed also, will be about two months.

In this case the healed portions are smooth and pliable, and much better covering is left for the eye than would have been left by surgery.

He expresses the hope that cases promising results by surgery will be so treated, and that X-rays will be used as an auxilliary in all such cases enabling the surgeon to treat inaccessible glands and prevent recurrence *in situ*, or to treat nodules that have appeared in old operation scars. The uses in deep-seated cancers and sarcomas are not yet well determined, but hope can be entertained.

413 German-American Bank Building.

**FIBROIDS OF THE UTERUS AND BROAD LIGAMENTS.\***

By EDWIN RICKETTS, M. D., Cincinnati, Ohio.

The anatomy and physiology of the uterus needs but superficial attention here. You are all familiar with it.

The circular and longitudinal fibers of the uterus surround that peculiarly-shaped cavity which is the nidus for the perpetuation of future generations. Its lining or endometrium, that should be so well guarded by cleanliness, is absolutely necessary to the child bearing period of the organ.

It should be able to adapt itself to the exigencies of the uterus, beginning with the first

\* Original synopsis of paper read before the Missouri State Medical Society, at St. Joseph, Mo., May 22, 1902.

\* Read before the Chicago Medical Society, February 23, 1902.

day of pregnancy, and ending with delivery, when nature has beautifully arranged for a period of repose and physiologic restoration.

Within the folds of one or both broad ligaments fibroids are occasionally found, but not so frequently as within the uterine tissue. It is claimed by some that fibroids always begin in the uterine zone, and if afterwards found within the broad ligaments, it is by forcible extrusion into the same, due to the contractile force of the longitudinal and circular uterine muscle fibers.

The following classification is only the ordinary anatomic one, which divides uterine fibroids into three varieties: (1) Submucous, (2) intramuscular, (3) subserous or subperitoneal.

The classification with reference to the etiology is by no means settled. The anatomic classification, however, corresponds very nicely with that etiologic one which revolves around the result of an unfertilized ovum.

Uterine hemorrhage, in many instances, comes on as a result of fibromyomata situated under the mucous layer, or reaching that region as the result of pressure. The mucous membrane is less resistant than the muscular tissue to the mechanical action of the tumor. As a result, the tumor is expelled into the cavity of the uterus rather than into the abdominal cavity.

In the subserous variety the muscular element of the uterus prevents the advance of the tumor toward the mucous layer and tends to cause a pedunculated protrusion into the abdominal cavity.

We know that the ovum does occasionally get lost within the abdominal cavity. Why may it not adhere to the abdominal surface of the uterus, to organize and be covered by its sensitive peritoneum, and by stimulation of muscular overgrowth result in a subserous fibroid? Why not the same process occur as a result of an unfertilized ovum, or a dead fertilized one, in the uterine cavity, hence the submucous variety? Lastly, why may not the intramuscular variety develop when the ovum lodges on a portion of the uterine cavity, which is for the time devoid of endometrium, and by the same stimulation thereby form the already mentioned intramuscular variety?

If these factors be proven, we ought to have a more frequent occurrence of fibroid of the tube. It has a mucous membrane, muscular and serous coats, but the fact that it has also a very considerable peristaltic action, ciliated epithelial

cells lining it, may be the reason for the rare occurrence of fibroids here.

Fibromyomata of the broad ligaments may be explained in several ways: (1) Expulsion from the uterine wall, with formation of the subserous variety from muscular contraction. (2) By tubal influence involving the retrograde expulsion and gravity. (3) Arterial origin.

The arteries supplying the uterus and ovary traverse the broad ligaments, and become tortuous and straight in turn, as the uterus becomes pregnant, or later as it undergoes involution.

The influence of the parovarium must also be considered. It would seem that the arteriosclerosis element has the greatest favor here. I am not at all sure as to the etiologic factors in the cases presently to be reported.

The classification from a pathologic standpoint is no nearer settled than that from the etiologic. Pathologic changes in the endometrium, in both its glands and columnar epithelium, would appear from careful study to be only mechanical, throwing no light on the etiology of fibroids.

Some of the most recent articles on the subject have a great deal to say about the increase in connective tissue and muscular elements found in the walls of the arteries. These changes are claimed by some to begin in the smallest arteries or arterioles; by others in the middle sized arteries, and by still others in the largest arteries. Kleinwachter claims that the change begins in the smallest arteries; Roesger in those which possess a connective tissue coat; Gottschalk believes the change to originate in the larger arteries. Coster says: "Myoma depends for its development on the capillary vessels in whose adventitia embryonic cells are found, which give rise to the formation of smooth muscular elements." Pilliet (*Bull. Soc. Anat.*, Paris, January, 1894) says: "The endometrium remains normal. The adventitia gives origin to a zone of embryonic cells which multiply and develop into rows of concentrically placed, smooth muscular fibers arranged around the vessels. The fibrous layers arise from the transformation of the most peripheral muscular layers, which are furthest from the vessel, and which, therefore, do not receive sufficient nourishment for their normal development."

There are numerous clinical facts which suggest to my mind that arteriosclerosis is a much more important etiologic factor in uterine fibroids than is generally conceded. The great

frequency of fibroids in the negro race, associated with the great prevalence of syphilis in the negro, is especially suggestive, if we consider the intimate relation of the latter disease to arterio-sclerosis in general. In my own experience I have met with uterine fibroids in syphilitic subjects in a sufficient number of instances to impel me to more careful observations along this line in future. I must confess, however, that I do not claim to be in a position to make any positive statement in this direction. Specimens of uterine fibroids exhibited by numerous authorities have shown in many instances marked changes in the walls of the blood vessels. The question as to which coat is primarily affected is, it seems to me, of no consequence whatever.

It would seem reasonable that the arteries being so tortuous, especially following involution after pregnancy and delivery, one of these vessels might become obliterated both by intrinsic disease and the muscular contractile power of the uterus. The vitality of the coats of the artery being retained, the proliferation of cells in the adventitia might well form a fibroid.

There is a difference of opinion, as before stated, as to which coat of the vessel is primarily involved; the preponderance of evidence is in favor of the middle or muscular coat, as the vasa vasorum are very closely related to this coat. The arterio-sclerotic change is said to take place as the result of increased transudation from the vasa vasorum, as a result of some toxic element, acting in manner very like inflammatory change. This is reasoning from assumed cause to hypothetical effect, but has not been disproven.

The arterial factors in the etiology would necessarily predispose to the occurrence of multiple fibroids. While I am of the opinion that arterio-sclerosis should be considered especially in multiparæ, the rather frequent occurrence in multiparæ cannot be explained by the involution theory.

I simply wish to call your attention to four operative cases which cover the field of single fibroids. One of sixty-five pounds, situated within the folds of the left broad ligament, uterus normal in size. The histology of this tumor showed it to be largely myomatous, indicating that it had been mechanically extruded early from the uterus to within the folds of the broad ligament. The same can be said of the other three cases, of twenty, sixteen, and eight pounds.

The tissue in the case weighing twenty pounds was more distinctly fibrous in character. In one case of multiple fibroids (six small) recently removed by abdominal hysterectomy, menstruation had not been interrupted; it had been regular, and without pain. Five of the growths were subserous. The sixth was submucous in character. Patient, 41 years of age. Fortunately, she had not been cured. One case of seventeen years duration, undergoing cystic degeneration, affecting fibroid of the fundus; the solid portion weighed sixty pounds, the fluid weighing thirty-eight pounds, being ninety-eight altogether.

### PUERPERAL FEVERS—FROM A SURGEON'S STANDPOINT.

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Puerperal fever is no longer known in hospital practice—owing to the application of surgical principles to obstetric practice; but in country practice and among physicians of the city who are not fully familiar with the details of the aseptic technic, and especially with midwives, the mortality is still appalling.

The high death rate is due chiefly to the following:

- I. Non-familiarity with the various causes.
- II. Inappreciation of the true meaning of the term aseptic.
- III. Gross carelessness.
- IV. Meddlesome interference with a natural process.
- V. Spread of venereal disease.

#### I. Non-Familiarity with Various Causes.

I. The time has now arrived when we must discard the names of yesterday: "puerperal fever," "puerperal sepsis," "puerperal peritonitis," etc. These expressions must give way to more definite terms, based upon an exact knowledge of the pathological conditions present and the particular cause thereof.

So far as now known the following varieties embrace all infections of the puerperal state possible of demonstration clinically (with the aid of the microscope):

\*Original synopsis of paper read before the Texas State Medical Association, May 7, 1902.

1. Saprophytic infection.
2. Streptococcus infection.
3. Bacillus coli communis infection.
4. Staphylococcus infection.
5. Gonococcus infection.
6. Pfeiffer bacillus infection.
7. Klebs-Loeffler bacillus infection.
8. Infection with vibriion septique, Pasteur.
9. Pneumococcus infection.
10. Mixed infection.

1. SAPHROPHYTIC INFECTION.—The first duty of the doctor to a case of fever following confinement is to differentiate between saprophytic infection ("sapremia" as it is improperly called) and sepsis due to infection with some of the above-named micro-organisms; for if the disease be saprophytic infection the condition imperatively demands instant cleaning out of the uterus, whereas in most of the other infections curettage is frightfully dangerous!

This distinction is easily made at the bedside, without any bacteriological investigation. Whenever fragments of placenta, remnants of membranes, or retained blood-clots become infected with the germs of putrefaction (saprophytes), and the uterus, instead of contracting to expel the decomposing material, remains relaxed and permits the absorption of the toxins of this form of fungoid plant, there is present a foul, stinking discharge, which of itself is enough to enable any doctor to make a diagnosis. But, besides this, the intense fever ( $104^{\circ}$  to  $106^{\circ}$  or more), which comes on so suddenly, generally from thirty-six to forty-eight hours after delivery, is characteristic of this form of infection. The swelling of, and pain in the abdomen should not deceive the doctor; they are not indicative of "peritonitis," and will promptly disappear as soon as proper treatment (if early) is adopted. But if right management is not promptly instituted, the high temperature terminates life very soon. Saprophytic infection of the uterus is the most common, the most easily recognized, the most readily cured of all—but delay means death.

As soon as it is decided that decomposing material in the uterus is the cause of fever, the woman must be chloroformed and the womb thoroughly cleaned out. There must be no exception to the rule to anesthetise the patient. No one can remove all the debris without it; and half-way measures in this condition are exceedingly dangerous; besides it is frequently necessary to introduce the whole hand into the

uterus. For removal of the putrefying mass the fingers sometimes suffice; usually a very large Volkmann's spoon is the best instrument; the ordinary sharp curette is worse than useless.

During the attempt at removal of the offending matter a constant stream of very hot salt solution should be thrown into the uterus—not through an "irrigating curette," which is a delusion and a snare, nor yet through a "return current irrigator," which is worse; but by means of a large tube introduced into the fundus—the return of the fluid being secured by thorough dilation of the os. If one prefers an antiseptic fluid for irrigation, one-half of one per cent. solution of formalin will be found cheap and effective.

Packing the uterus in such cases is improper—a simple gauze drain through the internal os being sufficient.

In ordinary cases, repetition of the irrigation is not advisable—the possibility of engrafting a streptococcus or staphylococcus infection upon the already weakened parts is a greater danger than leaving some little decaying matter in the uterus. On account of this menace to life, too, the utmost care must be maintained during operation; as strict attention should be paid to hand-cleansing and scrubbing the vulva as if the peritoneum were to be opened. The existence of a stinking discharge is no excuse for dirty surgical procedures.

If continued fever or persistence of a foul discharge seem to call for an intrauterine douche, it should be given by the doctor himself under fullest antiseptic precautions, and never intrusted to a nurse.

Internal medication is of little value—the course of the disease is too swift toward either recovery or death. Stimulants may be indicated by extreme weakness. Tendency to heart-failure may be combatted by hypodermic injection of strychnine.

## 2. STREPTOCOCCIC INFECTION.

Streptococcic infection is next in frequency to saprophytic, but does not make its appearance until much later after labor—from the fifth to the ninth day—is not attended by so high fever, nor does it run such a rapid course. It may assume one of three forms:

(a) *An erysipelas of the perineum*, beginning in the perineal wound—which does not differ materially from erysipelas of the face or other part of the body; and which requires the same treatment—burning the womb and

about one inch on every side with 95 per cent. carbolic acid, neutralized in a few minutes with pure alcohol, followed by 10 per cent. ichthyol ointment, with 5 per cent. carbolic acid, and strongly supportive internal medication.

(b) *An inflammation of the uterus*, which quickly spreads to the pelvic peritoneum, with all the well-known symptoms of pelvic peritonitis (as well as pelvic cellulitis), with often huge inflammatory exudates in the pelvis; the tubes, ovaries, uterus, omentum, and sometimes intestines becoming welded into a solid mass. Fortunately, the streptococcus is a germ which does not readily give rise to extensive suppuration; so, unless the physician by injudicious curettage, or the nurse by unclean douching, add a staphylococcus infection, abscess may not form—the ultimate result being clubbed tubes (with consequent sterility), fixed uterus, and semi-invalidism until relieved by the surgeon's skill.

(c) *In the third degree*, there is an extension of the inflammation until general peritonitis and death follow, or typical streptococic septicæmia from absorption of the toxins, if the woman survive—with tendency to later development of multiple pelvic abscesses or even of pyosalpinx.

These are the cases which demand active medical rather than surgical measures. The hypodermic injections of Marmorek's antistreptococcus serum is, theoretically, the ideal treatment; but thus far its use has been almost universally unsatisfactory. Far better results are obtainable from the use of a quart or more of physiological salt solution by hypodermoclysis (beneath the breasts or in the buttocks). If death appear imminent, intravenous injection is justifiable, and sometimes gives brilliant results—temporarily. The chief indications are supportive agents—whiskey, strychnine, forced feeding, etc.; non-interference with the endometrium; local antiseptic treatment; medicated vaginal douches and tampons; and opening of all pus-pockets as soon as they can be detected, either above or below the pubis.

### 3. BACILLUS COLI COMMUNIS INFECTION.

Bacillus coli communis infection, occurring through a perineal or cervical laceration, gives a form of sepsis not very different from the fever of an appendicitis, due to the same germ; a temperature rarely rising above  $100.5^{\circ}$  or  $101.5^{\circ}$ ; a thin, offensively-smelling pus on the infected surfaces; a tendency to the formation of pus in the pelvic cellular tissue, rather than

in the Fallopian tubes, but without great pelvic exudate or fixation of uterus, and tendency to satisfactory recovery under gently supportive treatment. Many cases of mild puerperal fever, heretofore regarded as mild septicæmia, will in future be classed as bacillus coli communis infections.

The principal point to be kept in mind is to watch for abscess formation in the pelvis and to open the pockets very early. Curettage and intrauterine applications or irrigations are positively harmful.

### 4. STAPHYLOCOCCUS INFECTION.

To the fact that the tendency of the staphylococci is to produce local suppuration instead of general infection (the staphylococcus pyogenes aureus being the particular germ of the "laudable pus" of our forefathers), is probably due to the rarity of unmixed staphylococcus infection of the puerperal patient, for these germs are omnipresent—in the air, in the dust, in dirt of all kinds, on all cutaneous and most mucous surfaces.

The fever which follows infection with this germ appears about the third day, does not go above  $101^{\circ}$  or  $102^{\circ}$ , and is characterized by the early and extensive formation of pus—the pelvic abscess in a few days appearing above Poupert's ligament, or pointing deeply into the vagina. The uterus is not usually tender nor firmly fixed; there has been no invasion beyond the internal os, infection of the pelvic tissues having occurred through the torn cervix, and not *via* the endometrium and Fallopian tubes.

Irregular chills, variable fever, and night sweats accompany this form of sepsis just as they do the third stage of phthisis pulmonalis.

Evacuation of the abscesses, if performed early, is followed by prompt and satisfactory convalescence under a general tonic treatment. Non-recognition and non-interference with the local pus accumulation lead to death from staphylococcus septicæmia, if abscess does not rupture spontaneously.

### 5. GONOCOCCUS INFECTION

In cities, where clap is such a common disease, puerperal fever, due to gonococcus infection, is very frequent; and it is far more abundant in country practice than generally believed—it simply has not been recognized. The course does not differ materially from gonorrhœal pelvic peritonitis in the non-puerperal woman, except in the intensity of the initial chill and fever. Nor does the local and internal treatment vary

in the acute stage. The indications for surgical treatment are different from those of the other forms of pelvic infection—the tendency is to the formation of tubal abscess instead of diffuse pelvic suppuration or multiple abscesses in the cellular tissue—and it is therefore safe to wait (unless the pyosalpinx ruptures) until the acute trouble has subsided. It is the experience of most pelvic surgeons that women subjected to operation for acute gonorrhœal suppuration die, while late abdominal or pelvic section gives nearly 100 per cent. of recoveries.

Usually, after some days or weeks, of mild fever and pelvic pain, the patient lapses into chronic invalidism, relieved, but rendered sterile, by some competent operator, or killed by an unskillful one.

The best treatment during the septic fever consists of the administration of salol and codeine in sufficient quantity to control pain, mild saline laxatives and hot, antiseptic vaginal douches twice daily.

#### 6. PFEIFFER BACILLUS INFECTION

Infection with the Pfeiffer bacillus (generally in a patient suffering from la grippe at the time of confinement) gives rise to a peculiar form of sepsis: The perineal wound (if present) has a "pseudo-membrane" like that of diphtheria, the temperature varies from 96° to 107.5°, with marked irregularity—the fever being late in appearance after labor, without fixation or tenderness of the pelvic organs, and no evidence of peritonitis. It is a general infection, with the wounded genitals as the point of entrance.

The treatment should be energetically supporting—much the same as for grippal fever of other patients; with close attention to early detection and evacuation of local points of suppuration.

The three other distinct forms of puerperal infection are so rare that they may be passed without discussion.

#### 10. MIXED INFECTION.

Mixed infection is very common, especially staphylococcus with streptococcus, and streptococcus or staphylococcus with gonococcus. It can only be determined by the bacteriologic findings; but simply adds to the seriousness of the situation and calls for greater care in the prevention as well as treatment of puerperal infection.

### II. Inappreciation of Term, Asepsis,

II. A great many physicians, especially those

who graduated before the days of the adoption of laboratory instruction in our colleges, do not appreciate the ease with which a wounded surface may become inoculated with these minute forms of plant life—they do not realize the meaning of the word "asepsis." There are thousands of practitioners who content themselves with merely washing the hands with soap and water for two or three minutes, and then mechanically dipping them in bichloride solution of uncertain strength, declaring then that their hands (which may have been in contact with scarlatinal, diphtheritic, or erysipelatonous patients an hour or so before, are "aseptic." They think they have fulfilled all of the requirements of modern obstetrics if they wash the patient's vulva with soap and cistern water, and perhaps dash a little carbolized water over the external genitals. These are the men who are filling our cemeteries with professionally murdered women; who are keeping our hospitals filled with suffering victims! Of the more than 2,000 peritoneal sections I have now made, I believe more than one-half could be traced to careless methods of physicians!

When we consider that practically every case of puerperal infection is preventable the situation is a desperate one for our profession, both teachers and practitioners. The excuse that women will not permit thorough cleaning of the external genitals is not a good one—most of them will if the necessity be explained to them. But the chief fault usually lies with the doctor himself. Filth beneath the finger nails annually kills more people than does typhoid fever. A large proportion of cases arises from the introduction of unboiled obstetric forceps through an uncleaned vulvular orifice; and in instrumental delivery there cannot be any excuse for either.

For common obstetric work the hands should be prepared thus: They should be energetically scrubbed for at least five minutes with soap and water (hot, if possible); then dried and the nails trimmed down "to the quick"; then washed in turpentine for a half minute or more; then scrubbed for another five minutes, with particular attention to the spaces under the end and around the base of the nails; then rinsed freely in alcohol, and finally immersed for two or more minutes in 1 to 2,000 bichloride solution. When thus prepared the hands may be considered fairly safe if they do not touch chair, bed-clothes, stockings or arms of the patient before introduction into the vagina.



When it is likely that the hands must be introduced into the uterus (as for version or extraction of the placenta), they must be washed in saturated solution of permanganate of potash until very brown, decolorized with saturated solution of oxalic acid and rinsed in bichloride solution—after the same careful scrubbing. The same process should be followed if an infectious case of any kind has been lately seen or an abscess lanced, or a tooth pulled, or an infected wound dressed. Anything short of this mode of hand-preparation is criminal negligence. Wearing of rubber gloves is a poor substitute, which may be employed in contingencies.

If the patient will permit it, the vulva and pubes should be shaved, scrubbed and sterilized in the same manner as the hands of the accoucheur; if not, they should be rendered as nearly sterile as possible by scrubbing, and the application of antiseptic solutions.

### III—Gross Carelessness.

III. Inattention to these details by those who know constitutes gross carelessness. Many men become indifferent to the welfare of their patients by long practice, and come to feel that nature will take care of the victim. This she will do many times; but a fatal case adds gray hairs to the head of a conscientious man who realizes that his own inattention to the necessary details of surgical cleanliness has been the cause of the loss of a human life. No man ought to become so busy that he cannot practice in a thoroughly scientific manner; and this is especially true in obstetric work.

But more often, perhaps, the carelessness lies in neglecting to have the patient properly cared for after delivery. The first twenty-four hours are the critical ones for post-partum infection; five yards of bichloride gauze cost but half a dollar, and may save a life if used instead of the (surgically) dirty cloths usually employed as vulvar pads. The ordering of vaginal douches to be given by incompetent attendants is another piece of gross carelessness; if the conditions are such as to demand a douche at all within the first two days they are serious enough to require the doctor to give it himself. It is rarely needed.

Most careless of all is the inattention paid to tears of the perineum. If the woman be in a clean bed, be carefully confined, and receive good attention after delivery, there is no great danger in a small wound of the perineum; but if she lie in bad surroundings, and if her after-

care is not to be ideal, every tear, however small, should be at once repaired, with special attention to those often non-suspected tears of the vagina with skin intact.

No doctor is justifiable in attending a woman in confinement without putting on a freshly washed (if not sterilized) muslin gown.

The ideal method of delivery is upon a portable surgical table (which costs but \$20.00), on a sterilized Kelly pad covered by freshly boiled towel or sheet.\* If the patient will not consent to this, the bed—always dirty from a surgical standpoint—must be covered by a rubber sheet positively sterile, with boiled towels over it. Anything short of this constitutes gross carelessness.

The doctor's chief fault in carrying out these details consists in using a pad which has not been rendered surgically clean after the last confinement or surgical operation. The best method, if the physician has no sterilizer, is to have the pad carefully scrubbed with soap and water, then "gone over" with pure carbolic, then with alcohol, and finally, with bichloride solution (1 to 500): and then wrap it up in a sterile cloth, instead of "jamming" it into a dirty old grip, with the thought, "It will be as clean as the patient is!" We all become too careless in such matters; and our patients die as a result thereof.

### IV—Meddlesome Interference With a Natural Process.

IV. Among the North American Indians puerperal infections are rare—in spite of their filth—chiefly because the fingers are never introduced into the vagina. There can be little doubt that repeated vaginal examinations, attempts to hasten labor by (unclean) digital dilation of the os, ruptures of the membranes, etc., are the causes of a large proportion of puerperal infections. Normal labor is a physiological, not a pathological, process. Too much interference with Nature's plan breeds mischief. One, or at most two, vaginal examinations should suffice. Instrumental or even digital efforts to hasten labor should be resorted to only on definite indications, and then with all surgical precautions.

### V—Spread of Venereal Disease.

V. The rapid and alarming spread of venereal diseases (especially gonorrhoea) needs no

\*At the Woman's Hospital of the State of Missouri, one examination is made after preparation of the woman; then an antiseptic vulvar pad is applied and left until "the waters break"; when she is transferred to the table for delivery.

extended mention. It is the duty of every doctor to caution every man who is a prospective father to carefully abstain from illicit intercourse during the latter months of his wife's pregnancy; many cases of blindness as well as gonorrhoeal sepsis may be prevented by a few words of timely advice from the not yet (thank God!) extinct family doctor.

#### CONCLUSION.

In conclusion it may be said emphatically that "puerperal fevers" will practically disappear when doctors and midwives learn that *the woman in labor and immediately after should be treated upon the same rules of antisepsis as govern the surgeon in the most extensive operation.*

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### ABSTRACTS FROM THE CURRENT FRENCH OPHTHALMOLOGICAL PERIODICALS, AND DESULTORY COMMENTS ON THE SAME.

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#### PAPER No. III.

1, *Glaucoma*; 2, *Insertion of Rabbits Eye into the Capsule of Tenon*; 3, *Modifications of Kronlein's Operation of Orbitotomy.*

**I—Glaucoma.**—It has been a long time since there has appeared an article on the subject of Glaucoma of equal value with that in the *Annales of Oculistique* for December, 1901, written by M. Uribe Troncoso, and entitled *Pathogenie du Glaucome*. It is well worth the consideration of every ophthalmologist, for it lifts one more of the veils which hang before this mystery. Though many of the questions which suggest themselves to the mind of one who contemplates the syndrome we call glaucoma still remain unanswered, M. Uribe Troncoso brings out a fact which throws much light on the history of the disease when once established.

In nineteen cases of inflammatory glaucoma, chemical analysis of the aqueous humor was made. These analyses seem to prove that the proportion of organic matter is considerably higher in the glaucomatous than in the physiological aqueous. Our author concludes from

this that ocular hypertension is an expression of the difficulty of exosmosis which a liquid more albumenoid than normal finds in traversing the angle of the anterior chamber. Hypertension, he adds, is only a symptom common to many ocular affections, while glaucoma is a clearly defined disease.

"Hypertension can be produced in two different manners: 1st, By the difficulty with which an abnormally albumenoid fluid finds in traversing the excretory angle; 2d, In a mechanical way, by the rolling back of the base of the iris against the sclero-corneal reticulum.

These albumenoid materials can come from two entirely distinct sources and characterize two different groups: 1st, They are the result of an inflammatory state of the anterior segment of the eye, which throws into the aqueous a quantity of fibrin, exudates, etc.; 2d, Or, as in glaucoma, these foreign substances in the aqueous are composed almost exclusively of albumen, and are the result of a vascular disease comparable to the condition we find in interstitial nephritis."

We should bear in mind that in glaucoma the quantity of aqueous contained in the anterior chamber is much less than we find in the normal eye (5 to 23 centigrammes for glaucoma; 30 to 45 centigrammes for the normal eye). Uribe Troncoso claims that *the presence of albumen in the aqueous humor is the initial phenomenon of the succession of symptoms which characterize glaucoma*. In the normal state, the vessels of the iris and ciliary body do not allow the albumen of the blood to be secreted—compare the urinary excretion. Landouzy, Ulrich, Schnabel, Brailey, Rochon, Duvignaud, and others have found evidences of marked arterio-sclerosis, endo-vasculitis, in the vessels of the iris, ciliary body, and retina in the glaucomatous eye; and, likewise, Troncoso places these diseased conditions of the blood-vessels—i.e., vascular sclerosis, as the principal causative factor in the passage of albumen into the aqueous. The retention of the aqueous humor in the anterior chamber, although sufficient to explain the hypertension, cannot, by itself, determine true glaucoma. It does not suffice to produce the diminution in depth of the anterior chamber, nor the small quantity of the aqueous, nor the progress, nor the termination of glaucoma. In true glaucoma the vitreous participates in the make-up of the history. The diminution of the depth of the anterior chamber—the result of the propulsion

forward of the irido-crystalline diaphragm—is produced by a sort of œdema, by an augmentation of the volume of the vitreous (witness the frequency with which successful operations for glaucoma are followed by great weakening of the accommodation; and the well-known fact that in certain severe forms of glaucoma, even after iridectomy, the anterior chamber does not reform, while the tension may even continue to increase).

The augmentation of the volume of the vitreous is one of the most characteristic signs of glaucoma, and is caused not only by the impregnation of all its tissue with the fluid retained in the attacks, but also by the fact that there transudes albumen through the walls of the retinal vessels. Thus we have the *primum movens* in dialbuminosis. When the quantity of albumen reaches a certain degree, the channels of excretion, although as yet intact, become insufficient, and filtration no longer takes place; intraocular tension begins to increase, and increases just in proportion to the quantity of new aqueous secreted, until it becomes equal to the tension of the blood of the ciliary vessels, when the secretion of aqueous ceases. Before this occurs, however, the first symptoms of glaucoma appear, œdema of cornea, slight dilatation of pupil; dilatation of the veins of the retina; arterial pulse; periodic obscuration of the vision, periorbital pain, etc., all phenomena dependent upon the increased tension, and the venous stasis, especially of the vortex veins. These attacks almost always bear a relation to some condition with reflex congestion of the vessels of the head, insomnia, etc., and take their origin in a vaso-dilatation which affects chiefly the ciliary vessels. These disturbances disappear with the cause producing them; the albumen diminishes or disappears from the aqueous and secretion is again established—only after a varying interval to be repeated and to become more durable; the vascular malady increasing until an attack of acute glaucoma supervenes. The quantity of albumen reaches a much higher proportion than in the prodromic attacks. Filtration no longer takes place. The tension rises suddenly. Cornea, iris, uveal tract become œdematous. The volume of the vitreous increases—i. e., it becomes permeated with the albumenoid fluid, pushes forward the irido-crystalline diaphragm, and the base of the iris is forced against the zone of filtration.

The anterior portions of the ciliary processes

are likewise driven forward and outward. The canal of Schlemm becomes closed—after several attacks the vitreous never again returns to its normal state; the base of the iris remains adherent, glued to the sclero-corneal reticulum, and under the influence of the albumen all the tissues bathed by the aqueous undergo a sort of chronic fibrous sclerosis.

In chronic and subacute glaucomas the same disturbances take place little by little. If iridectomy be not promptly done the application of the iris against the zone of filtration becomes complete and permanent, as the result of an adhesive inflammation. The principal channel of elimination being obstructed, the iritic vessels alone remain to absorb the aqueous humour and rapidly undergo degeneration. When the secretion of the aqueous has completely ceased absolute glaucoma results. The optic nerve becomes inflamed, excavated and atrophies. Fresh attacks from time to time are produced and finally the eye becomes disorganized. Hemorrhagic glaucoma is nothing more than a congestive glaucoma, in which all the phenomena are carried to a maximum. The grave disease of the vessel walls is at once the cause of the hemorrhages of the dialbuminosis.

In regard to the curative action of iridectomy, we must remember that at first this ocular dialbuminosis is essentially transitory, and thus we can explain how in some early cases a *paracentesis*,—by evacuating the aqueous charged with albumen and allowing the escape of the albuminoid precipitations formed on the walls of the anterior chamber and in the sclero-corneal reticulum, thus permitting fresh aqueous to come into contact with these parts—can cut short the attack of glaucoma. *Iridectomy* produces its maximum effect in acute glaucoma, in which the propulsion forward of the vitreous has mechanically applied the base of the iris against the filtration angle and in which the adhesion is not yet firm and solid. After opening the anterior chamber, the traction applied by the forceps in the performance of iridectomy can in the early stages break these adhesions.

A zone, in which the root of the iris cannot be applied against the angle of excretion and by which excretion can be slowly re-established, is thus formed and remains the sole probability of safety for the eye. The more firmly the roof of the iris has become attached to the filtration reticulum and the more completely this latter has been closed the less advantage will result

from iridectomy. Bearing these facts in mind we can see the relatively small value of anterior and posterior sclerotomies as procedures offering anything like permanent results. Uribe Troncoso thinks the chief value of eserine in glaucoma lies in the fact that it produces a contraction of the intra-ocular vessels, and thus lessens the dialbuminosis. Its use, however, cannot supersede iridectomy.

In regard to simple chronic glaucoma he brings the well-known facts that demonstrable hypertension is not constantly present at all stages of the disease; that frequently simple chronic glaucoma becomes transformed into inflammatory glaucoma with acute exacerbations; that from time to time the two forms coexist in the same individual, or in more than one member of the same family, that it is rare for blindness to set in without previous demonstrable high tension; moreover, that simple excavation of optic nerve, together with contraction of the nasal side of the field for white and colors, are not sufficient for one to make the diagnosis of simple glaucoma, provided there is no increased tension. The formation of the papillary excavation and its determining causes have been differently explained by different writers. According to Uribe Troncoso the primary cause is to be found in lesions of the ophthalmic artery. At the beginning endarteritis of the central artery of the retina gives rise to lesions localized chiefly in the optic nerve and produce the clinical syndrome called by Von Graefe, amaurosis with excavation; the vascular retinal lesions continue to progress until there results dialbuminosis into the vitreous body. The augmentation of the volume of the vitreous may be slight, the application of the base of iris against the filtration angle is brought about very slowly. The time, however, most generally comes when there takes place a sudden augmentation of the quantity of albuminoids thrown into the vitreous; and then we have acute glaucoma. *The fact that this may occur at any time not only justifies but demands that a full and immediate iridectomy be done.* A sign which throws some light upon the necessity for an immediate iridectomy is diminution of the depth of the anterior chamber.

The next part of the article treats of *secondary glaucoma*. Here, as in primary glaucoma, the causes of increase of intra-ocular tension are of two kinds:—1°—Difficulty of excretion due to presence in the intra-ocular fluids of abnormal

elements, albumen, fibrin, etc.;—2°—occlusion of the filtration angle, in some cases mechanical (as in luxation of the lens, seclusion of the pupil, etc.), in others at first mechanical and later inflammatory (anterior synechiæ).

1°—*Luxation of the lens.* The most disastrous varieties of this are seen when the lens blocks the pupil completely, causing a veritable pupillary seclusion, preventing all communication between the anterior and posterior chambers. 2°—*Traumatic Cataracts.* Here the principal cause of augmentation of tension is to be found in difficulty of filtration of the aqueous charged with an excess of albuminoid material, whose source lies in the crystalline masses. Of course, the swelling of the lens, if it be great, can cause also occlusion of the filtration angle, but the preponderating element in the production of the high tension is the one just mentioned. 3°—*Discussion of secondary cataract.* Here the high tension which sometimes appears is due to the presence in the aqueous of the albuminoids derived from the vitreous which escapes into the anterior chamber through the discission wound. 4°—*Failure of the anterior chamber to reform after cataract extraction.* When, after cataract extraction, the anterior chamber does not reform and the iris and the posterior crystalloid remain shoved against the posterior surface of the cornea, the intra-ocular tension remains, as a rule, low, but, from time to time, suddenly there appears a rise of intra-ocular tension which threatens the eye. The determining cause of this accident is adherence of the iris to the cornea, obstructing the channels of filtration. Although the aqueous humour is not secreted in these cases owing to certain peculiar mechanical conditions, the normal nutritive current of the vitreous produces, after a certain time, an augmentation of the volume of the vitreous and consecutive hypertension. Iridectomy, detachment of the iris by means of a spatule, or posterior sclerotomy, combined with pressure on the cornea, in that they destroy the adhesions between the iris, crystalline and cornea, and re-establish the secretion of the aqueous and the normal flow of the intra-ocular fluids put an end to the increased tension. 5°—*Iridocyclitis.* 6°—*Pupillary Seclusion.* 7°—*Anterior Synechiæ.* The genesis of increased tension in 7° has been much discussed. It has been attributed to the dragging in the iris and ciliary body which produces reflexly an increase in the secretion of the aqueous, but, if this were so, we should find an increase in the depth of the

anterior chamber, at least in those places where the iris is free—exactly the reverse is what we find at the beginning. The cause is to be sought partly in the application of the base of the iris against the filtration angle by the traction which this membrane undergoes at the points of adhesion, and secondary to the increased albuminoid materials thrown into the aqueous, the result of intercurrent inflammatory attacks. 8°—*Intraocular Tumors*. At a certain period of their development almost all intra-ocular tumors are accompanied by the symptoms of hypertension. The lesions found in the anterior segment of the eye are identical with those of spontaneous glaucoma. The appearance of the glaucoma is independent of the size of the tumor, nor does there exist any fatal relation of cause and effect between detachment of the retina and the glaucoma. We must seek the prime cause in a difficulty of excretion of the aqueous humour induced by alteration of its composition.

The growth of the tumor produces venous stasis and as a result a slowing of the blood current in the arteries, a determining factor in dialbuminosis. We must not, however, lose sight of the fact that the excretory channels have been found in occasional cases blocked with neoplastic masses and with pigmentary emboli.

The above gives, greatly abbreviated, M. Uribe Troncoso's article on the Pathogenesis of Glaucoma. It is a valuable contribution to this subject, inasmuch as it carries us nearer to a proper understanding of glaucoma. It does not, as the author would almost have us believe, answer all of the questions which may be asked. Uribe Troncoso's starting point in the explanation of the Pathogenesis of Glaucoma is the presence of abnormal albuminoid material in the aqueous and in the vitreous. This foreign substance must come from the blood vessels, and as the intra-ocular vessels have time and again in glaucomatous eyes been found to be the seat of degenerative changes he assumes, and with more or less justice, that certain vascular changes must exist before primary glaucoma is possible. The walls of the blood vessels being diseased, he claims that all that is now necessary for dialbuminosis to take place is vaso-dilatation. Here we butt our heads against the wall which separates the known from the unknown.

What produces these changes in the vessel walls which make dialbuminosis possible? Why does the dialbuminosis take place? These are

important questions, and their proper understanding is essential to the proper understanding of "spontaneous glaucoma." Up to the present time no explanation of these diseased conditions of the blood vessels is as satisfactory as that given by Haig, who claims that they are caused by the repeated insults offered the vessel walls by blood too highly charged with uric acid; that they are the result in part of the contraction of the minutest blood vessels, with its consequent high blood pressure, and in part of the irritation caused by the presence of undue amounts of uric acid in the blood. To follow Haig's line of reasoning, as developed from his observations and experiments, and to note the truth of both, is to be convinced of the justice of his claims. The whole subject is too broad for discussion here, but in passing one may suggest that the same parent has for his offspring migraine, hay fever, asthma, epilepsy, gout, glaucoma, and a host of other children, many of whom as yet have not found their father. The cause is the same, the results differ with the age of the patient and the part affected. It is the story again of the snow on the mountain top and the water in the warm valley below. There is one criticism to be made of Haig's theory, and of his unfolding of the same. He gives no causative place to other substances than uric acid and the urates. The acid, neutral and alkaline phosphates play, too, their part in the blood current, and in the production of diseased conditions of the vessel walls. Viewing glaucoma from the standpoint of M. Uribe Troncoso, one sees the importance of an early iridectomy, the limitations set to posterior sclerotomy; one understands the failure of late operative procedure; looking a step further back—i. e., at the causes bringing about the attack, one sees the value of internal remedies and the regulation of diet, etc., as aids in lessening the conditions of the blood which determine the dialbuminosis. Consideration of the point as to the beneficial action of eserine being nearly altogether due to its vaso-constrictor qualities and its lesser action to its contracting the pupil brings forward the question as to whether after all the iris as a whole is not merely a modified blood vessel, and, if so, whether or not the immediate action of both eserine and atropine is not primarily upon the endothelial cells of the anterior chamber.

II—Insertion of a Rabbit's Eye Within the Capsule of Tenon.—Dr. Felix Lagrange (*Annales d'Oculistique*, March and November,

1901), reports four cases in which, following enucleation, he inserted within the capsule of Tenon the eye of a rabbit. "I have for some time believed that if the eye of a rabbit were forced in its entirety within the capsule of Tenon and first the muscles and then the conjunctiva sutured over it that this eye, thus surrounded, would take root, live and serve the purposes of prosthesis far better than the silver or glass globe, or the spherical sponge." Four times has he tried this operation. Three times was it a success, the fourth time, owing to "an involuntary fault against asepsis," it failed. Case I. Boy, aged 18, eye lost through iridocyclitis, result of an injury. Immediately following the operation the eye of a young rabbit was inserted into the capsule of Tenon. The eye was small enough to enter this cavity easily and to allow the muscles to be drawn over it, superior and inferior together, and external and internal together. The conjunctiva was then sutured over it. Almost no inflammatory reaction. The threads in the muscles were left permanently. Those in the conjunctiva were not removed until the tenth day. During the first few weeks the eye softened considerably, losing half its volume. Since then it has remained stationary in size, and furnishes an admirable prosthesis. Cases II and III resulted equally satisfactorily. Dr. Lagrange suggests the following: 1°—That as each rectus is cut a thread be passed through it to prevent its reaction. 2°—Following enucleation that the eye be not inserted until all hemorrhage has ceased. 3°—That eye of a young rabbit be selected. 4°—That the opposite muscles be drawn into apposition by appropriate sutures. 5°—That the sutures in the conjunctiva be close together and be allowed to remain a week. 6°—That the most careful antisepsis be carried out. In the November number of the *Annales*, Dr. Lagrange reports eleven cases in which he has done this operation and gives a photograph of one of his patients. In ten of these cases no trouble has been experienced. In the eleventh the eye selected was from an old rabbit and was too large for the capsule. Dr. Lagrange, in conclusion, considers his method of prosthesis the best yet recommended.

**III—Modifications of Kronlein's Operation of Orbitotomy.**—Parinaud and Roche (*Annales d' Oculistique*, Oct., 1901), report a case of orbital angio-fibroma removed by a modified Kronlein operation. Kronlein made a vertical skin incision 6 or 7 centimetres long, the middle

point of which was very close to the external angle of the lids. There always resulted more or less deformity. Parinaud and Roche, after having the temporal and preauricular region of the patient carefully shaven, as well as the external half of the eyebrow, made a vertical incision 5 centimetres long, about 5 centimetres distant from the external border of the orbit—i. e., within the shaven preauricular region. From the upper extremity of this a second incision is made, a horizontal one extending toward the supero-external angle of the orbit, and where the orbital extremity curves slightly upward, following the direction of the eyebrow, in which it ends. A third incision is now made parallel to the second, following exactly the zygomatic arch, ending at the infero-external angle of the orbit. The skin is now dissected away, leaving bare the aponeurosis of the temporal muscle and the superior border of the zygomatic arch. This flap is now turned back, leaving exposed the temporal aponeurosis, the external border of the orbit and a part of the eyeball. The periosteum is now incised (and what follows is Kronlein's method) upon the border of the malar bone and with the elevator is detached from the whole of the external wall of the orbit. Next make two incisions through the orbital wall, one at the front malar suture, the other in the prolongation of the zygomatic arch. The bony fragment is then depressed, the periosteum incised and orbit explored. Parinaud and Roche claim that there results no displacement of the tissues of the external angle.

Rollet (*Annales d' Oculistique*, Nov., 1901) has practiced the following modification of Kronlein's operation. He makes an incision to the bone, extending from the external angular ligament to the maxillo-malar suture. The malar bone is denuded. With chisel and mallet its superior apophysis is cut through, likewise its posterior apophysis. Then follows an incision below for the separation of the malar from the superior maxillary. The bone is now forced down and out. The malar is mobilized but not detached. Rollet claims that by this method the depths of the orbit can be exposed without cutting any of the ocular muscles.

314 E. Franklin street.

Injections of Tongaline have been found by test to be a specific for hydrocele.

## A MODIFIED METHOD FOR TESTING DIABETIC URINE.\*

By M. D. HOGE, Jr., M. D., Richmond, Va.,

Formerly Professor Urinology, Bacteriology, etc., University College of Medicine, etc.

Owing to the character and variety of food we eat, it is not surprising that "sugar" in some form may often be found in the urine, varying from the merest trace to a pound or more in twenty-four hours.

The form of glucose (C H O) met with most frequently, and tested for chemically from the standpoint of the practitioner of medicine, is grape sugar. All of the copper tests, based originally on Trommer's, require the presence of some alkali, which, when sugar is present, has the power of reducing the cupric oxide to the cuprous oxide. A qualitative test of this character is comparatively easy, but a variety of methods, more or less complicated, have been devised to determine the quantity of sugar in any given specimen.

A very good and stable solution known as Whitney's Reagent is sold on the market, the formula of which is given as follows:

Sulphate of Ammonium (C. P.)	1.2738	Grammes.
Sulphate of Copper (C. P.)	2.5587	"
Caustic Potash (C. P.)	19.1620	"
Ammonia Water (Sp. gr. 8.80)	312.2222	"
Glycerine (C. P.)	60.	"
Distilled Water		q. s.

One drachm of this solution is decolorized by 1-30th grain of sugar. In other words, each drop of diabetic urine added to the boiled solution, when decoloration occurs, represents so many grains or per cent. of sugar per ounce.

There are several objections, however, to the published formula, though copied in some of the recent textbooks, which make it difficult to prepare. First, it deals with very large fractions, which are confusing; second, there is no ammonia water which has a specific gravity 8.80; the U. S. D. gives ammonia water sp. gr. 0.960 at 59° F., which contains 9.91 per cent. of ammonia; third, in making up the solution, to simply say "distilled water q. s.," without giving the total amount to be made, of course leaves the matter still more obscure.

In order to simplify matters and to give definite quantities, Mr. S. H. Shieb, M. S., the chemist of the Virginia-Carolina Chemical Co., has kindly interested himself in this matter at my request, and has furnished the following formula, which we have repeatedly standardized by

\* Read before the Richmond Academy of Medicine and Surgery, May 13, 1902.

adding known quantities of pure grape sugar to non-diabetic urine.

Solution No. 1.

Sulphate of Ammonia (C. P.)	1.20	Grammes.
Sulphate of Copper (C. P.)	2 60	"
Distilled Water	50.	cc.

Solution No. 2.

Caustic Potash (C. P.) by alcohol	20.	Grammes.
Distilled Water	50.	c. c.

Dissolve, and when cool, add

Glycerine (C. P.)	50	c. c.
Ammonia Water (C. P. Sp. gr. 0.960)	300.	c. c.

Add No. 1 to No. 2 and dilute the whole to 500 c. c. with distilled water. Stopper securely and shake till thoroughly mixed

As to the method. Heat one drachm of this solution in a test tube to boiling. Add the urine drop by drop, at slow intervals, boiling after each addition until the blue color has been discharged and the fluid has a light amber color or is colorless.

17	mimims urine added	represent	1	grain sugar per ounce
9	" " " "	"	2	grains " " "
7	" " " "	"	3	" " " "
6	" " " "	"	4	" " " "
5	" " " "	"	5	" " " "
5	" " " "	"	6	" " " "
4	" " " "	"	7	" " " "
4	" " " "	"	8	" " " "
3	" " " "	"	9	" " " "
3	" " " "	"	10	" " " "

If the urine contains more than ten grains of sugar per ounce it must be diluted with an equal quantity of water, and the number of grains per ounce multiplied by two.

308 East Grace street.

## CONSERVATIVE TREATMENT OF APPENDICITIS.\*

By P. S. FULKERSON, M. D., Lexington, Mo.

### I.

Until comparatively recent years appendicitis as a distinct disease was unknown to the profession. It was then regarded as a local or general peritonitis, owing altogether to the amount of peritoneal surface involved in the inflammatory process. More recently, however, it has been found to be a distinct disease, an inflammation of the appendix vermiformis, and its

\* Read before the Missouri State Medical Association, in session at St. Joseph, Mo., May, 1902.

causes, symptoms and pathology are better understood.

On looking over the audience and seeing so many distinguished gentlemen, and especially so in the line of surgery, I fear that it may be considered cheeky in me, or perhaps be regarded as an effort to intrude medicine upon surgery, to advocate the medical treatment of appendicitis, since the consensus of opinion with the profession generally, and especially so with the surgeon, is to operate as soon as the diagnosis is made out—in fact, in not a few cases the operation comes first, after which the diagnosis is arrived at.

When I first entered upon the practice of medicine, I, like perhaps many others present, felt that what we gathered from authors and distinguished men in the profession should be strictly adhered to, kill or cure; but later on, our experience and observation at the bedside of the sick teaches us, to some extent at least, to think and act for ourselves. And the man who is not capable of doing this is not capable of practicing medicine, and should "go 'way back and sit down."

During my professional career I have seen case after case of typical and severe attacks of appendicitis recover without resort to an operation, and cases that, had they fallen into the hands of the surgeon would have been ripped open before you could have said "Jack Robinson."

There are doubtless exceptional cases when it is indispensably necessary to operate, and operate at once—in fact, is the only hope for the patient. But I claim that proper medical treatment resorted to early will obviate the necessity of an operation at least nine times out of ten; and there is not a medical man present who will not admit that, with all the precautions of asepsis and antisepsis, whenever you enter the abdominal cavity, there is more or less danger attending it. Such being the case, if a cure can be effected without the operation, the patient should by all means have the benefit of it.

Of course, appendicitis, like almost everything else that afflicts mankind, has a microbic origin. Chief among the germs that are said to figure in the disease is the bacillus coli communis.

As soon as you are satisfied that you have a case of appendicitis to deal with treatment should be resorted to at once. The old maxim that "delay breeds danger" certainly holds good here. If at the expiration of from twenty-four to

forty-eight hours after commencing treatment there is a decided change for the better, and there generally is, the operation will not be needed. On the other hand, should it be necessary to operate, it is rarely performed under from twenty-four to twenty-eight hours; consequently, as a rule, no time has been lost.

Whether catarrhal or ulcerative, the attack presents itself usually in a previously healthy person, and begins with sudden intense pain in the right iliac fossa, frequently localized at a spot known as McBurney's point, and is increased on pressure; the pain may radiate towards the umbilicus, epigastrium, groin and other points; the pulse is usually accelerated and hard; fever soon develops, and usually there are more or less nausea and vomiting; the features express pain and anxiety. R. T. Morris, in the *Medical Record* of 1896, tells us that the temperature of the patient is a matter of no consequence as giving any clue to the condition of the appendix. G. F. Shrady, in the *New York Medical Record* of 1894, tells us that danger may exist without being shown by pulse or temperature. Richardson, in the *American Journal of Medical Science*, says: "Too much stress must not be laid on temperature, as recovery may follow a temperature of 105 F., and death occur with one nearly normal." George F. Shrady tells us that notwithstanding nausea and vomiting are present in the majority of cases, they furnish no information as to the seriousness of the case.

Before concluding, I desire to report the following cases:

CASE I.—I was called in consultation in February, 1891, the fifth day of the attack, to see J. D., attorney at law. Found quite a large lump in the right iliac region, suffering great pain and tenderness, frequent pulse, with a temperature of 102, nausea and vomiting. Both the attending physician and myself felt that nothing short of an operation could afford any relief to the patient, but as the services of a surgeon could not be procured until the following day, we applied a large blister over the painful region, and greatly to our surprise, the following morning found him decidedly better, pulse 98, and temperature near normal. The lump gradually disappeared, and our patient had an uninterrupted recovery. Here was a case where an operation seemed inevitable, where every symptom apparently demanded it, and yet recovery occurred without it.

CASE II.—Was called in January, 1892, to



see J. M. He was suffering from pain in the right iliac fossa, tenderness on pressure, pulse and temperature indicating quite an amount of fever, bowels constipated. Moved the bowels freely with sulphate of magnesia and enema of hot water; applied a large blister over the right iliac region, and after it had drawn, he expressed himself as feeling much better, pain and tenderness greatly relieved; ordered hot poultices to be applied over the part; the case progressed favorably, and in a few days he was discharged.

CASE III.—Was called in September, 1893, to see S. B. He was suddenly seized with severe pain and tenderness about the spot known as McBurney's point; pulse, 100; temperature, 102; bowels confined; opened them freely, as I always do, and as he was restless, used morphine hypodermically, and applied a large blister over the seat of pain; as soon as the blister had drawn and was dressed he was greatly relieved, and the improvement continued uninterruptedly until he was discharged.

[*Note.*—Right here I wish to say that some of our authors are opposed to giving an opiate in appendicitis, for the reason, as they say, that you may so conceal the mischief that is going on, by the administration of an opiate, that irreparable mischief may be done before you are aware of it, but we must not forget that pain itself, long continued, may kill. After the bowels have been freely opened, an opiate judiciously used will allay the pain and nervousness, subdue peristaltic action to a great extent, relieve mental anxiety, reduce fever and render the patient decidedly more comfortable.]

CASE IV.—B. C., reporter for *Lexington Intelligence*, was attacked with severe pain in the right iliac region, tenderness on pressure, pulse ninety-eight, temperature 102, sick stomach and occasional vomiting. Feeling that his stomach might reject other medicines, gave a full dose of calomel, followed in a few hours with an enema of hot water and epsom salts; medicine acted freely; ordered hot poultices to be kept up during the night; the following morning learned that he had passed a bad night; pulse 100, temperature 103, and the pain almost unendurable. Used morphine hypodermically, applied a large blister over the painful region; after the blister had drawn, pain and tenderness much relieved, pulse less frequent, temperature 100, recovery uninterrupted. He, however, resumed his duties too soon, had a recurrence of the attack, but

a resort to the same treatment relieved him the second time.

CASE V.—Was called April 23, 1896, to see F. C. K., German. This was the evening of the fourth day of the attack; found him suffering pain at McBurney's point, a large lump in the same locality, chilliness with fever, and at times free perspiration; here was a case where an operation was inevitable. Dr. George Halley, of Kansas City, was called, and during the operation a pus sack was opened, which discharged freely at the time, and continued to discharge through the drainage tube for some days. I am inclined to think had medical treatment been resorted to early the operation would have been unnecessary. This, however, would have deprived the doctor of a good, fat fee.

CASE VI.—Was called November 2, 1898, to see B. F. C., telegraph operator at Lexington, Mo. He complained of severe pain and tenderness, extending from the epigastric to the right hypochondriac region; the attack was ushered in with a chill, followed with fever. After opening the bowels freely the pain and tenderness in the epigastric region was relieved, and instead he complained of pain and tenderness in the right iliac fossa; directed hot poultices to be kept on during the night; on my next visit found him decidedly worse, temperature 103, pulse 120, nausea, with occasional vomiting; pain severe, and very restless; gave morphine hypodermically; directed a large blister to be placed over the painful region. Soon after the blister drew, his condition had so much improved that I felt he had crossed the danger line, and such proved to be the case. After a reasonable time he was able to resume his duties.

CASE VII.—Was called in April, 1898, to see Virgil B., student at the Wentworth Military Academy. His attack was ushered in with chilliness, pulse 120, temperature 103, more or less nausea, bowels constipated; gave calomel and ordered enema of hot water and sulphate of magnesia; bowels moved freely; ordered poultice over the painful part. On my return the following morning found his condition in every respect worse, and detected a small lump in the right iliac fossa; applied a blister, and gave morphine hypodermically; ordered the poultices to be kept up continually, and feeling that an operation was inevitable, telegraphed his uncle, who was his guardian, and resided in Texas, to come at once. In forty-eight hours, however,

there was an improvement in his condition, and by the time his uncle arrived, he was so much better that the surgeon was deprived of his job.

Before concluding, I desire to say, and to emphasize it as far as possible, that the recovery of the cases here reported was the result of the early application of a large blister over the appendiceal region; and whilst the purgatives, poultices, morphine, and other means resorted to, played a conspicuous part as adjuvants, the recovery of the patient was due chiefly to the blister; and I feel confident, if resorted to early and treated in this way, operations will rarely be required.

The blister tends to relieve the congested and inflamed condition of the underlying tissues by its revulsive action; the sulphate of magnesia acts by stimulating the exhalants and producing copious watery discharges, and at the same time expels from the alimentary canal more or less poisonous material; the poultice also is a factor in relieving deep-seated congestion by relaxing the surface vessels and inviting an increased flow of blood to the parts, while at the same time it is very soothing to the patient.

I have no experience with the ice treatment in appendicitis, and if you will pardon the digression, will add pneumonia also; and believing as I now do, don't expect to have. Apply ice for any length of time to the surface of the body and the part will become white as a cabbage leaf, for the reason that the ice constricts and contracts the capillaries of the part and drives the blood elsewhere; and should there be congestion or inflammation of any organ, it will necessarily get its full share. On the other hand, apply hot applications to the surface of the body, and the part becomes as red as scarlet, for the reason that the capillaries of the part are relaxed, and the quantity of blood in the vessels thereby increased; and should there be an engorged and inflamed condition of any organ, it is relieved to that extent. In addition the ice necessarily renders the patient uncomfortable; the poultice, on the contrary, has a soothing and beneficial effect, and if I had to choose between the two, I feel that I would rather be burnt up by a fever than frozen to death by the application of ice.

It is claimed that *ecthol* is an efficient antipurulent and corrector of dyscrasia, and that its administration tends to prevent the formation of pus; that when an abscess is really forming *ecthol* often aborts it. Encouraged by the favorable mention of it by a number of medical jour-

nals, and in view of the fact that there seems to be an inherent tendency in appendicitis to end in the formation of pus, and as there can be no harm resulting from the administration of *ecthol*, should I meet with another case of appendicitis, I propose resorting to it early and continuing its use throughout the treatment.

The cases I have reported are individuals living in and around Lexington to-day, with one exception. He died in Kansas City about three years after the attack of appendicitis with cerebro-spinal meningitis. And what seems remarkable, too, there hasn't been another recurrence of the attack in a solitary other instance.

### AUTO-INFECTION, AUTO-PHAGISM, AND AUTO-INTOXICATION.\*

By C. WALKER WATTS, M. D., Fayette, Mo.,  
Secretary Howard County (Mo.) Medical Society; First Vice-President Missouri Medical Society, etc.

I propose in this paper to give the cullings of forty years' experience and observation as surgeon and physician in military, civil, and railway practice.

The causes of auto-infection, etc., are:

1. Procrastination and violations of natural laws and forces of body, mind and spirit.
2. Hastiness in digestion, mastication, nutrition, assimilation, and in defecation, micturition, and alimation.
3. Diseased teeth and gums.
4. Oral respiration—inspiration and expiration.
5. Lack of proper co-ordination, inverted respiration (reflex), paralysis of peristalsis, absence of presence of mind to the demand of Dame Nature, resulting in constipation, obstipation, renal retention, and vesical detrition, with their evil effects, upon all the viscera and organs.
6. As a result, perverted micrococci and various germs, spores, rods, and ptomaines are found often in the brain and its meninges, lungs, liver, spleen, intestines, bladder and uterus.

*Insanity* is often indirectly due to "asanity," or a lack of asepis and antiseptics. The same may be said of Bright's disease, diabetes insipidus.

\*Original synopsis of a paper read before the Missouri State Medical Society during its session at St. Joseph, Mo., May 20, 1902.

cus, etc. Appendicitis is as often due to these causes as it is to cherry or grape seed. *The name of irregularities in attention to the just laws of nature and her demands is legion—and none know this so well as the careful, painstaking physician and surgeon. The signs of the times, the practicability of this age, the manifestation of common sense in an uncommon degree, demand of us a careful investigation for the relief of these curable maladies. The small things, the minutiae of the laws of life and health and disease are as important to success in our profession as the grains of sand to make the sea shore, or the drops of water the ocean.*

Let quacks and charlatans howl and rage; let surface skimmers and superficial observers make light of our duty as custodians of the health, welfare and life of the people. *Duty*—the sublimest word in our Anglo-Saxon—demands of us a just consideration of these patent facts. The laity and common people are ahead of the profession of medicine often as we our up-to-date Christians and philosophers. The greatest surgeons and physicians of to-day are the most successful ones who take care of the "little foxes who eat the vine" of life—human life.

Dr. Dio Lewis, the master of dietetics, once said to me: "Doctor, a proper observance of the laws of health will abrogate the 'three score and ten' period, and lengthen our normal age to 125 years." Who can successfully deny or contradict his statement?

7. Trying by haste and spasmodic effort to hasten defecation or micturition is often a cause, as this is in part a reflex act, as well as voluntary.

8. The excretions and secretions are under the control of the involuntary as well as in part voluntary.

9. Obstipation, constipation and various other sequelae are due to haste as well as waste, and should be corrected by proper observance and respect for our best friend, Dame Nature.

When we are asleep or comatose, these functions are often performed when will power is suspended. Why are women more subject to these maladies than man? The answer is found in their habits of life.

10. Are the victims or sufferers from these maladies due to self-abuse and neglect of self, subject to curative remedies? They are. The curative remedies are personal supervision, sanitary, hygienic, surgical, medical, mental and moral. Some of them we mention: A correct

inspection, retrospection, and investigation of our asylums, hospitals, sanatoria, hotels, privies, water-closets, wards, cells of our prisons, and incineration of decaying bodies, filth, and decaying matter, with a proper use of disinfectants, asepsis and antiseptics. A correct, intelligent observance of all the fixed and unchangeable laws of nature and assistance at repairs in an intelligent, sensible act of the surgeon and physician who is but the Dame's handmaiden or "trained nurse."

Every surgeon who succeeds in life must necessarily be not only a good physician, but he must also study the book of nature and his microscope, as the immortal Gross taught—as Hunter McGuire practiced, and the illustrious Nicholas Senn now teaches and practices. We owe them all a debt of gratitude.

11. *Insistence* upon correct regular hours for our duties to self and patients—bringing system and order out of chaos, and life—healthful life—out of living death. I had rather be a Prometheus chained to his rock in a clean health Sahara, with good sanitary surroundings, than to have to live in some of our hotels, prisons, fashionable dwellings, side-rooms and wards of our hospitals, which are a disgrace to our nation and people, and which breed all the streptococci and staphylococci, and other germs.

12. A due respect for aseptic and antiseptic precautions, conditions and surroundings. Do not forget that cleanliness is Godliness—not next to it; and that there is no hope or chance for a dirty doctor or unclean patient or room, in this world, nor in the world to come. They stand condemned, and justly so.

13. It always pays the doctor and patient to be prompt, obedient, wise, sensible, and submissive to Dame Nature. Respect her, gentlemen, and she will reward you. Remember her *vis a tergo* as well as her *vis a fronte*.

14. *Surgical*.—When there is an offending tooth, tumor, or traumatic cause, remove it. Nature has no favorites; she is no respecter of persons. Like her wise Creator, she demands a just obedience to her laws, without an exception. You dare not violate or treat lightly her admonitions and commands. Of course, perverts, idiots, infants, imbeciles, require nurses to enforce obedience to her.

15. *Mental*.—The law of suggestion—moral and mental and physical—plays an important part in the case.

Our recent progress in our schools of psychol-

ogy are phenomenal as well as wonderful. They deserve credit for merit, and a proper recognition by our profession.

16. *Physical*.—Manipulations, massage, position and posture.

17. *Hygienic*.—Pure, fresh air, exercise, open air, athletics—exercise to a degree not beyond fatigue—pure water, pure air, rest, pure food, suitable clothing, cheerful surroundings and suggestions.

18. *Medical*.—Electricity, magnetism, oxygen, medicines adapted to the individual case. Pure medicines are as essential as pure food, or water.

As an *example of auto-infection* and its sad results, we may mention the case of Baron D. G. of V., who, after a life spent for the human family as a martyr with his microscope, was infected by the poisonous ptomaines, spores and rods of the cecchinococci brood. The autopsy made of his case revealed the various bacilli in nearly every viscera and organ of his body—a victim of auto-infection.

As an *example of auto-phagism*: Sir John J. died in his laboratory in Berlin, with the remains of a sandwich and cracker in his stomach, showing inanition, self-fasting, and self-abnegation. He was a student, slave and martyr for the advancement of our profession.

*Example of auto-intoxication*: All the drug fiends and cranks of our profession, who are not satisfied with destroying themselves, feed their patients on a like diet. Charles G. S. and John M., who died in St. L. recently from effects of uremia—absorption of the spores and cocci from kidney, bladder and brain circulation and tissue, drunk and crazed from their invasions upon healthy tissue—upon whose lives and in whose fissure of Rolando were found floating, in full health, streptococci and staphylococci—alive with them—and whose intoxication was auto-toxic, pure and simple. Their alimentary tract, from œsophagus to rectum, was lined with these bacilli in different forms and stages of development.

Alas! alas! how many useful lives would be saved to active and useful lives if auto-infection, auto-phagism, and auto-intoxication were duly considered, understood, and treated by our profession!

We are a little late with this issue, but hope to catch up by the next.

## Book Notices.

*Syphilis. A Symposium.* Special Contributions by Seventeen Different Writers, nearly all of whom are Syphilographers of Prominence. E. B. Treat & Co., New York. 1902. Cloth. 12mo. Pp. 122. Price, \$1.00.

While the seventeen contributions have been heretofore published in journals, their collection and publication in book form forms one of the most valuable aids to the doctor in general practice that we know of—so far as this monster of diseases is concerned. The book is arranged in as nearly a systematic order as possible. On page 107 are six questions propounded to syphilographers—the questions covering some of the more interesting of the doubtful points in regard to syphilis—the answers to which, as they appear in succeeding pages, are of great interest and value.

*A Brief Manual of Prescription Writing in Latin or English for the use of Physicians, Pharmacists, and Medical and Pharmaceutical Students.* By M. L. NEFF, A. M., M. D., Cedar Rapids, Ia. Pages v-152. Size, 8x5¼ inches. Extra Cloth, 75 cents, net, delivered. Philadelphia, Pa.: F. A. Davis & Co., Publishers.

If one wishes to see the need for such a *Manual* as this, let him get an opportunity to run over the prescriptions daily received by the apothecaries in any large city. In this day of a four years' required course for graduation, it is remarkable how little attention is paid by some colleges to the teaching of neat prescription writing. This little book would be useful as a text-book or as an instructor to the young doctor if he would read and study it. But what is the use of the book upon the shelf if never read? While Latin is the adopted language for prescription writing, no preliminary examinations are made of students entering medical colleges on even the declensions. This little book comes in to fill the gap of information required by the prescriber, and can be easily acquired in a few hours' of careful study of this little book.

*Transactions of the Climatological Association for the Year 1901.* Vol. XVII. 8vo. Pp. 414. Cloth. Dr. Guy Hinsdale, Philadelphia, Secretary; Dr. R. H. Babcock, Chicago, President.

This volume is rich in information—composed of papers prepared by able writers for the Association. Each paper is worthy of study.

The president's address, on the "Limitations of Drug Therapy," Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago, Ill., is a remarkable concession to the inertness of drugs in the remedy or cure of disease, which we are scarcely prepared to accept *in toto*. His illustrations appear to us to be too closely drawn from the class of diseases for which remedies have never been brought to light. Until we looked up the record of Dr. Babcock, we had thought that he was one who *limited* his practice to surgery—one of those who are in the habit of resorting to surgery for everything, on the principle that "if thy right eye offend thee, pluck it out." And yet the practitioner who has had much experience can read this paper with great profit. But our want of space forbids a notice of other strong papers in this volume. Most of the papers apply to tuberculosis, and there is a very general recognition of the value of climatic treatment. Drs. E. O. Otis, of Boston, and W. E. Casselberg, of Chicago, have papers of instructive value, respectively, on "Further Diagnostic Tests with Tuberculin," and "Cases in Which the Tuberculin Test Seemed Justified and Decisive."

**Psychopathia Sexualis.** *With Especial Reference to Antipathic Sexual Instinct—A Medico-Forensic Study.* By Dr. R. V. KRAFFT EBING, O. O., Professor für Psychiatrie und Nervenkrankheiten an der K. K. Universität Wien. The only Authorized English Translation of the Tenth German Edition, by F. J. Rebman. Chicago: W. T. Keener & Co. 1901. Cloth. 8vo. Pp. 585. Price, \$5.00 net.

It is impossible, in the limits at our disposal to give even a fair outline of this work, the sale of which is rigidly restricted to members of the medical and legal profession. It is an attempt to establish a system of psychology of sexual life. It recognizes sexual desire as an instinct of our being, intended to cement the bond of true and proper love between husband and wife, which results in the desire to continue the species or the individuality of mental and physical qualities beyond time and space. "Man puts himself on a level with the beast if he seeks to gratify lust alone; but he elevates his superior position when, by curbing the animal desire, he combines with the sexual functions ideas of morality, of the sublime, of the beautiful." But the illicit indulgence of this instinct—of this passion—constitutes crime, brings on disease, or

may be is the result of disease. All kinds of sexual immoralities are described in this book, some of which shock the mind and sensibilities of any man.

**Compend of General Pathology.** By ALFRED EDWARD THAYER, M. D., Assistant Instructor in Gross Pathology, Cornell Medical College; formerly Professor of Pathology and Bacteriology in West Virginia University, etc. *Containing seventy-eight Illustrations, several of which are printed in colors.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. 12mo. Pp. 322. Price, 80 cents net.

This is one of "Blakiston's Quiz Compend"—a series of text manuals for students, and for doctors to appear before Boards of Examiners, etc., that can hardly be excelled. For the general practitioner, who wishes to be informed as to the germ or result of disease, this *Compend* will supply all practical needs. Of course, there are more exhaustive works on the subject, which the specialist in pathology, in bacteriology, etc., would prefer when discussing a point, but as instruction in the essentials which the general practitioner seeks to know, this "Compend" well fills its sphere, and is remarkably cheap for a book of its size issued so attractively.

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## Editorial.

### University College of Medicine, Richmond, Va.

The ninth annual commencement exercises of this institution were held May 15, 1902. The following were the graduates in the different schools of the University College, to whom diplomas were awarded:

#### Doctors of Medicine:—

- Dr. Nicholas I. Ardan, Olyphant, Pa.
- Dr. Frank L. Costenbader, Potomac Mills, Va.
- Dr. John Decker Frazer, Za, Va.
- Dr. James W. Miller, Simmonsville, Va.
- Dr. Garland L. Morriss, Sultan, Va.
- Dr. Harmon L. Pippin, Greendale, Va.
- Dr. Henry Ward Randolph, Richmond, Va.
- Dr. James O. Wilson, Shelby, N. C.

#### Doctors of Dental Surgery:—

- Dr. J. Thomas Conduff, Jr., Willis, Va.
- Dr. Jesse Nolan Davis, Forksville, Va.
- Dr. G. B. Graves, Castor, Va.
- Dr. Charles M. Griffith, Clifton Forge, Va.

Dr. M. C. Horton, Wakefield, N. C.

Dr. Samuel Albert McAnally, Red Shoals, N. C.

Dr. Bernard Van Buren McCray, Hot Springs, Va.

Dr. Charles Edward McManus, Harper's Cross Roads, N. C.

Dr. L. Connie Smith, Wyatt's Mills, N. C.

Dr. James McNair Stover, Churchville, N. C.

Dr. W. H. Traynham, Dillwyn, Va.

Dr. Austin Alvin Weaver, Lexington, Va.

*Graduates in Pharmacy:*—

Mr. Meredith Daniel, Norfolk, Neb.

Mr. Arthur M. Duvall, Farnville, Va.

Mr. Charles L. Guthrie, Willis, Va.

Mr. Leon E. Johnson, Pamplin City, Va.

Mr. James Marcellus Lea, Danville, Va.

Mr. John W. Rison, Richmond, Va.

Mr. George J. Savage, Cherriton, Va.

Mr. Dexter E. Seagle, Pulaski, Va.

Mr. S. W. Wood, Richmond, Va.

*Bachelor of Pharmacy:*—

Mr. W. F. Rudd, Richmond, Va.

The following Hospital Appointments were announced:

*Virginia Hospital*, Richmond, Drs. H. W. Randolph and N. I. Ardan.

*St. Luke's Hospital*, Richmond, Dr. F. L. Costenbader.

*City Almshouse*, Richmond, Dr. G. L. Morriss.

*Retreat for the Sick*, Richmond, Dr. H. L. Pippin.

*Sheltering Arms Hospital*, Richmond, Dr. J. O. Wilson.

*Richmond Eye, Ear and Throat Infirmary*, Dr. J. W. Miller.

*Virginia Home for Incurables*, Richmond, Dr. G. B. Graves.

*The Address to the Graduates* was delivered by the Hon. John Goode, chairman of the Constitutional Convention of Virginia, 1901-2.

A sumptuous banquet was given immediately afterwards in the banquet hall of the new Murphy's Hotel in honor of the graduating classes, the alumni and the Board of Visitors. Without an incident to mar the pleasures of the occasion, which lasted until long past midnight, we may say that the responses to some of the toasts were among the best speeches we have ever heard. That grand old hero, the Hon. John Goode, in response to the toast "Virginia," gave such a glowing account of her history, her present surroundings and capabilities, and her future as he

sees it in the young men in the Constitutional Convention, in the Legislature, in her educational institutions of all kinds, in her business enterprises, etc., as to make the older of the audience wish they could add just a few years to this natural life to enjoy what is to come. Scarcely less forceful and eloquent was the response to the toast "Richmond," by that talented member of the Richmond bar, Mr. J. F. Bryant, Dr. John N. Upshur, of Richmond, responded to the toast "The Medical Profession," in a speech, the sentiments of which will, we trust, long remain in the memory of the young doctor. In fact, there was not a response to any of the toasts that was not strong and well said.

### American Medical Association.

The session of this Association, to be held at Saratoga Springs, N. Y., June 10-13, 1902, will be one of great importance to the various State societies from which delegates are to act as representatives. The plan of organization of the American Medical Association is in itself under discussion, and we cannot get a clear idea of all that is intended—even after reading all the reports as they are issued in the *Journal* of the Association. It is evident, however, that very radical changes are contemplated in the organization of the various State societies.

In the first place, all the business affairs of the American Medical Association are to be entrusted to the care of a House of Delegates composed of one member for each 500 members of each of the several State organizations. Thus, a State association that has less than 500 members is entitled to one delegate; over 500 but less than 1,000, two delegates; over 1,000 but less than 1,500, three delegate, etc. These delegates from each of the State societies are to form the House of Delegates of the National Association, and are to transact all the business of the Association—even down to the election of its officers. A full report of the committee to suggest details of the reorganization of the State Medical Societies is given in the *Journal of the American Medical Association*, May 3, 1902. That committee is composed of Drs. J. N. McCormack, of Bowling Green, Ky.; P. Maxwell Foshay, Cleveland, Ohio, and George H. Simmons, Chicago, Ill., and is based very much upon the plan of organization of Alabama State Medical Association. As that report is accessible to our readers, we forbear its publication for the present.

To our way of thinking, there are many ob-

jections to the plan proposed for a number of States of the Union. In the first place, so far as we are aware, Alabama is the only State in the Union where membership or registration of every practitioner by the county or city medical society is required by law. The State Board of Health and the State Board of Medical Examiners are all a part of the State Medical Association, and divorcement of one from the other can only be effected by legislative action. So that, until all the States have legislation similar to that of Alabama, it would be idle to talk about reorganization of other State societies upon its basis. The Medical Society of Virginia, for instance, is entirely a voluntary organization, and has over a thousand active members. There are many counties in which it would be impracticable to organize a medical society with any idea of an established membership or regular meetings. Again, in some of the larger cities, there are two or more local societies doing good work; but it would be hard to have all the members of each to fraternize with all the members of the other body; and yet the members of each of the local societies can belong to the State society so long as they yield obedience to the Code of Ethics of the National Association. Sometimes one or two leaders in the local societies so brow-beat, or by plausible yet untrue statements, or by embarrassing solicitations for honors, etc., gain control or influence. Such narrow-minded people are so prejudiced in their dislikes and hatreds as not to render even justice to their opponents, and in the matter of delegations oftentimes gain control of bodies. We are afraid the time has not come to attempt to compel all States to adopt the plan proposed by the committee referred to in our last paragraph. Leave the States some rights of their own—even if the doctrine of State rights be no longer tenable in the political arena. The dangers of centralization are too great, when the doctrine is applied to the “running of the profession.”

There seems to be a growing apprehension that a tendency exists among some of the “leaders” of the profession of America to let down the bars between the different schools of practice, simply to gain popularity and patronage. These are the “so-called leaders” who seek, in many instances, to become the delegates from their State societies. Their profession of principle becomes subordinated to personal interests. It is a peculiar fact that many of these so-called

leaders are surgeons by profession, but gladly take any pay case that may arise in ordinary practice. The point just here is so delicate that we wish most emphatically to exclude many honorable surgeons in this as in other States. But it is just as impossible for the regular doctor who has regard for the ethics of his profession to hold consultations with those who hold to the creed of the homeopath, of the eclectic, of the osteopath, etc., as it is for the Protestant and the Catholic to hold satisfactory consultations as to the doctrinal points of their churches. The end in view does not justify the means proposed. Do no evil that good may come of it is Biblical, and the doctrine is as applicable to our medical profession as it is to him or her in the churches who might wish that some things were not as they are.

The Southern doctors are not yet ready to make a concession on this point of brotherhood with quacks, charlatans, or even those who as an exclusive school proclaim the doctrine of *similia similibus curantor*, or another school of practitioners who absolutely exclude the use of mineral or metallic salts from their pharmacopœia. The regular profession bases its practice upon the doctrine of the use of any medicinal agent which experience or observation has taught to be useful in the treatment of disease, and in any dose that is best for the case in hand. When the regular profession comes to recognize homeopaths, eclectics, etc., as their equals in the advancement of the cause of medicine, then it will be time to consider the question of their recognition. The regular doctor has already the right to use any means adopted by the exclusive schools which have proven useful or curative; but the tenets of these exclusive professions are too exclusive—too narrow to be adopted as the principles of the practice of medicine.

We understand that many essentials, as we view them, in the “code of ethics” are in danger of change or abrogation. And the misfortune is that the House of Delegates—composed of one doctor for each 500 of the State societies or associations—has power to act in many such questions which may spring up in discussion without consultation or instructions from the body he is presumed to represent. Let us, however, wait and see.

It seems to us a little unfortunate for the Southern and some of the far Western States that the meeting for discussion on so many important matters as may arise before the “House

of Delegates," that this session is to be held in one of the most expensive cities of fashionable resort of the United States. Even the trunk lines of travel allow only a third reduction on their usual rates, and the hotel expenses will be high. We will be surprised to find a full delegation from a number of States where professional fees are small and hard to collect.

### Puerperal Fever From the Surgeon's Standpoint.

We are greatly indebted to Dr. Lanphear, of St. Louis, for the full abstract of his paper on this subject read before the Texas State Medical Association, May 7, which appears in this number. His expressions of "criminal negligence," etc., may sound extreme and harsh to many doctors who have escaped the experience of having had cases of so-called "puerperal fever" occur in their own practice, but they are allowable, and help to enforce the idea of thorough surgical cleanliness in attention to the child-bearing woman. No subject could better engage the attention of medical men or women than this one. How many doctors—satisfied as to their past record—become careless as to themselves or the preparation of their patient for the ordeal of labor? How many get off their horses or out of their buggies, or from the street-car, go directly to the lying-in chamber, dip their hands in some bichloride solution of moderate strength made in an unwashed bowl, and then fumble about the bedclothing and the skirts of the woman in labor, and speak of themselves as aseptically clean?

In some matters, perhaps, our author is extreme, as, for instance, using a surgical table for labor, after the bag of waters has broken. It is not the matter of getting the patient on the table, for assistants may lift her there; but in some instances it would require more force than is allowable to keep her there—even though chloroform be freely given, which is not always desirable. The every day obstetrician has not the advantage of hospital surroundings, of trained nurses, of antiseptics at hand, etc. He is often called hurriedly to a case he has never heard of before, where no preparations have been made for the birth, with nothing but ordinary washpans, not sterilized, at hand, etc., and he arrives just about the time the baby is coming into the world, with no assistance except some old grandma or neighbor, who has just come in "to give a helping hand" in an emer-

gency. Such cases are frequent enough in the experience of the doctor. Hence the food for the surgeon, who could not have acted differently if he had been the obstetrician. Do not, therefore, always condemn the doctor, for circumstances alter cases.

But none of this criticism lessens the value of the paper, and we hope all our subscribers will read it—old doctors as well as young ones, and follow its teachings as far as possible. It will save human lives.

### Antigia Chemical Company.

We call attention to the advertisement of the Antigia Chemical Co., on another page of this issue. This is a new combination of well-known preparations which has been liberally prescribed by leading physicians wherever introduced, and which has met with marked approval of the medical profession. The Antigia Chemical Co. is an incorporated stock company, organized and chartered by well established business men of Richmond. We extend to this new company our wishes for the great success it deserves.

### For Sale—Physician's Residence and Practice.

One of our subscribers, and a Fellow of the Medical Society of Virginia, who has developed a three thousand dollars country practice in Southwest Virginia, wishes to sell his residence and his practice to a worthy successor, whom he would introduce to his *clientele*. For further particulars address "E.," care *Virginia Medical Semi-Monthly*, Richmond, Va. From our knowledge of the party, we feel sure that the right man, who is interested, will receive at the hands of "E." courteous consideration and upright dealing. Letters of inquiry, addressed to E., will be promptly forwarded.

### The Medical Examining Board of Virginia

Will meet at Richmond Monday night, June 16, 1902, in executive session. Examinations for license to practice in the State of Virginia will begin *punctually* at 9 A. M., *Tuesday*, June 17, 1902; but *applicants for examination must report* to the Secretary in the hall of session (which will be duly announced in the Richmond daily papers) from 8 A. M. to 9 P. M. *Tuesday*, June 17th, to secure their permits for examination. The last cover page of this journal contains the announcement in full.



# THE Virginia Medical Semi-Monthly.

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10 Cents a Copy.

## Original Communications.

### CASE OF LOCOMOTOR ATAXIA DETECTED IN ITS INCIPIENCY BY EXAMINATION OF PATIENT'S EYES, WITH OBSERVATIONS CONCERNING THE DISEASE.

By GEO. F. KEIPER, A. M., M. D., Lafayette, Ind.,

Eye and Ear Surgeon to St. Elizabeth Hospital, St. Joseph Orphan  
Asylum, Children's Home, Indiana State Soldiers' Home, Lec-  
turer on Eye and Ear to Training Schools of St. Eliza-  
beth Hospital and Indiana State Soldiers' Home.

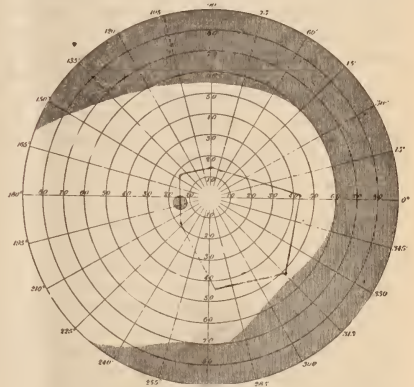
"We find in the eye more satisfactory and plain illustrations of the general facts and doctrines of pathology than in any other single organ of the body; certain changes in the eye are known to accompany certain diseases of the brain and spinal cord, and also certain lesions of organs more remote, which are also the expressions of general and constitutional disease."—Sir Thomas Watson, and quoted March 29, 1902, by Dr. H. I. Jones, in *Jour. Amer. Med. Association*.

With that as our text we will adduce one case in proof thereof.

On October 29th, 1897, Mr. William R— came into my office, saying that he had suddenly lost eyesight in his left eye. Examination showed that he could only count figures at two feet, that he had the Argyll-Robertson pupil; and with the ophthalmoscope, grey atrophy of the temporal portion of the optic nerve and contraction of the visual field. Having two marked symptoms of locomotor ataxia, his knee jerk was tested and found absent. He was immediately informed of the gravity of his condition, and he was asked who his family physician was. He replied "Dr. Webster," whereupon he was advised to see him for general treatment, which he did.

From that time on he developed all the classic symptoms of locomotor ataxia. He had lancinating pains between the joints, thus differentiating them from rheumatism. After these subsided the skin over these areas was very sensitive

—the sensitiveness lasting but a short time and giving way to anesthesia of the skin surface. The patient suffered because of frequent urination. This was accompanied with pain. Incontinence supervened. The patellar reflex was absent. The Argyll-Robertson pupil was well marked. He had sensory disturbances through the center of the forehead, radiating down to the shoulder and arm of the right side. From the waist to the feet analgesia was present. Conduction of pain sensations was delayed. The Brach-Romberg symptom was well marked. He could not stand erect with his eyes shut, neither could he lean forward without falling. A little exercise was accompanied with a great feeling of

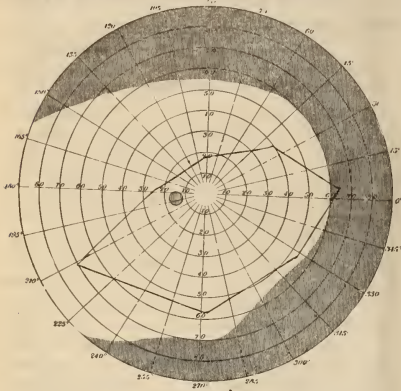


LEFT EYE—TAKEN NOVEMBER 19, 1897.

exhaustion. He had the ataxic gait well marked. He was compelled to keep his eyes upon the ground while walking. Sexual weakness was noticed. His joints would get stiff. Gastric crises were also present. His personal history is clean. No evidence of lues could be detected.

The writer took charge of the eye treatment,

while Dr. Webster looked after the general condition. He was subjected to the hypodermic injections of strychnia sul. gr. 1-20 twice daily into the temples, besides taking a usual dose between times. Dr. Webster subjected him to



LEFT EYE—TAKEN NOVEMBER 29, 1897.

the standard general treatment. He remained under constant and daily treatment until about April 1st, 1898, with a gradual improvement of his condition. He seemed to be cured, and has stayed so until the present writing, except that the knee jerk is still absent. Because of this an application for life insurance was recently declined by the company.

On account of this application the writer gave him a very critical examination.

The lancinating pains are all gone. There is no paresis of the bladder. The pupils react to both light and accommodation. Myosis is not present. The sensory disturbances through the center of the forehead and radiating down into the shoulders of the right side bother him no more. The analgesia of the skin from the waist down has disappeared, as well as the Brach-Romberg symptom. He does not become exhausted upon exertion, neither has he the ataxic gait, nor sexual weakness. The gastric crises are absent and beyond the absence of some of the smaller retinal vessels there is no evidence of optic atrophy. We would say that he is cured, were it not for the fact that the knee jerk is absent.

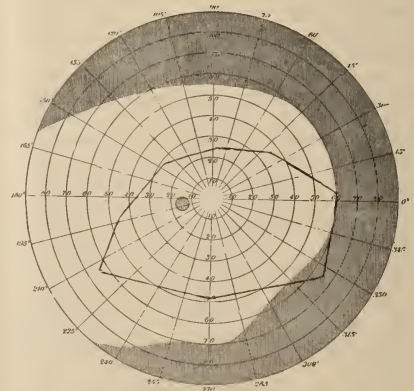
As stated above, the left eye became almost blind. He now has vision of  $\frac{2}{3}$ , which a +

1.00 D lens corrects to nearly  $\frac{3}{8}$ . The right eye was afterward affected. The vision sank to  $\frac{2}{20}$ ; now it is  $\frac{3}{20}$ , and a + .50 D lens corrects to nearly  $\frac{3}{8}$ . The left eye cannot read No. 14 Jaeger, but a plus 3.00 D lens enables him to read No. 1 Jaeger. The right eye cannot read No. 14 Jaeger, but a plus 3.00 D lens enables him to read No. 11 Jaeger.

This confirms what our neurologists are now teaching, that if locomotor ataxia is seen early enough, it is in many instances a curable disease. It may be of interest to note what the authorities have to say concerning the eye symptoms noted above:

"The grey atrophy of the optic nerve is usually visible over the outer half of the nerve and gradually extends all over the nerve head. Both optic nerves are not attacked at once. No inflammatory symptoms are present. The degeneration is like that of atrophy of the posterior median columns of the spinal cord. It is a granular degeneration and a simple descending atrophy" (Knies). "It usually occurs before there is much disturbance of vision" (Knies).

Benedict (*Wien Med. Woch.*, 1887), states that motor tabetic symptoms subside, no matter how severe they may be, as soon as atrophy of the optic nerve appears. As a later symptom it presents an unfavorable aspect; it is rare for a tabetic who goes blind early to become



LEFT EYE—TAKEN DECEMBER 17, 1897.

ataxic later. Swanzy states that it is very often the first symptom, preceding the lightning pains

and loss of the patellar reflex. "Color blindness is almost always associated with optic nerve atrophy, but need not be in direct proportion to the diminution of acuteness of vision, nor contraction of the field of vision." (Swanzy.) Uthoff has collected 183 cases of optic atropy, of which 59 were due to diseases of the spinal cord. It may be well to notice the frequency of this symptom in tabes. There is a wide diversity of opinion between neurologists and ophthalmologists, as revealed by the following table:

NEUROLOGISTS.		OPHTHALMOLOGISTS.	
Gowers.....	13.5 per ct.	Galezowski.....	67 per ct.
Marina.....	10 per ct.	Peltersohn.....	80 per ct.
Walton.....	21 per ct.		
Leber.....	26 per ct.		
Berger.....	33 per ct.		
Uthhoff.....	20 per ct.		

The great discrepancy may be due to a duplication of cases among the eye men because a patient with such a disease is likely to visit a

the temporal region to be insensible. Berger claims to have seen epiphora in one-half of all his cases, which may be due to the imperfect action of the orbicularis. Gowers and Openheim do not mention this symptom in their manuals. Panas (*Gaz. Med. de Paris*, 1894) relates a case of tabes in which epiphora was the first symptom. The tension of the globe is raised in one-third of Berger's cases.

After a tabetic has closed his eyelids for a few minutes fibrillary twitching takes place in the orbicularis. If one eye only be closed, the twitching will take place in the other orbicularis. This imperfect closure is due to slight facial paralysis (Berger). Muscular disorders are present, according to Dillman, in 42 per cent. of all cases, according to Uthoff in 20 per cent., and according to Berger in 38 per cent. "The external ocular muscles are often affected bilaterally, but not symmetrically. Often the paralysis is unilateral and of only a single muscle. The trouble develops suddenly and will ultimately disappear. This is in direct contrast to syphilis, where a large number of muscles are paralyzed, with headache, vertigo, aphasia, epileptiform attacks, and mental disorders. Syphilitic paralyzes develop slowly and last. Tabetic paralyzes develop rapidly and subside likewise. Relapses are common, too." (Knies.)

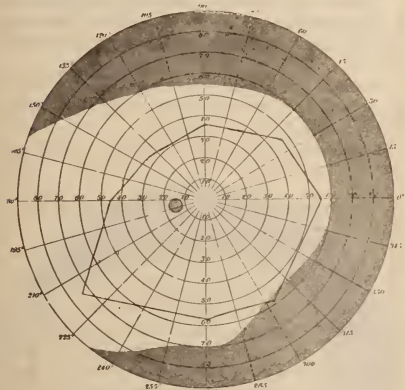
Paralysis of accommodation with asthenopia has been noted. (Landolt.)

Dillman gives the following table to show the frequency with which the muscles of the eye are affected:

Motor oculi.....	26
9 of all branches.	
3 of external branches.	
6 of ophthalmoplegia interna.	
1 of accommodation.	
5 of individual branches.	
Abducens.....	12
Trochlear.....	3
Nystagmus.....	1

Kahle thinks that he has noticed abducens paralysis most frequently. Concerning the Argyll-Robertson pupil: The phenomenon noticed is that the pupil does not react to light thrown into the eye, but does to accommodation. Dillman found it present in 76 per cent. of all his cases.

Dr. Henry Swanzy, in the fourth volume of Norris & Oliver's *System of Diseases of the Eye*, writes thus: "The writer is led to think



LEFT EYE—TAKEN JANUARY 12, 1898.

large number of oculists and but few neurologists.

The percentage is greater among males than females. In my own experience I have never seen a woman thus affected. The treatment of this atrophy is not encouraging, though the ease related above made a fair recovery.

Concerning the Brach-Romberg symptom, Bernhardt found it present in 90.2 per cent. in 58 cases, and Erb out of 56 cases found it present in 83.5 per cent. Galezowski (*Rec.d' Opth.* 1888) noted patches of skin near the eye, and in

by some cases which have come under his observation that the full value of the Argyll-Robertson pupil as a very early premonitory symptom of serious general nervous disease (general

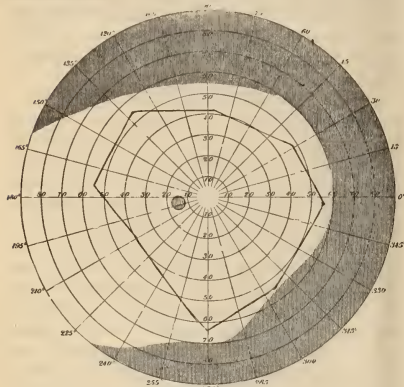
into a dark room and dart the light into the eye reflected from a mirror. In optic atrophy due to inflammation the pupil is dilated because the light reflex is lost. In atrophy due to tabes the pupil is contracted, due to paralysis of the sympathetic.

The vision is naturally affected. The color sense is diminished. The fields of vision are concentrically contracted with re-entrant angles. The impairment is usually slow, in some cases ten to twenty years being required to complete the blindness. Hirschberg reports a case in which a patient became blind in eight weeks. If central scotomata are present the probability is that a mistake has been made in diagnosis. Landolt (Nossis & Oliver's system) observed a case of tabes in which convergence was considerably limited. De Watteville (*Newvol Centralblatt*, 1887) published a similar case. Graeme Stewart, in Knies' work, reports a case. So do Gowers, Samelsohn and Brung.

Concerning these and the other symptoms of a general nature, Eichorst makes the following observations based upon the cases of Bernhardt and Erb (Ranney's *Nervous Diseases*):

Absence of patellar reflex according to Bernhardt was noticed in 100 per cent. of his cases, according to Erb in 98 per cent.

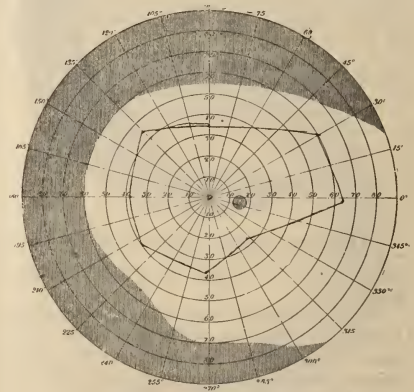
Lancinating pains were present in 79.5 per



LEFT EYE—TAKEN JANUARY 27, 1901.

paralysis or tabes) has not yet been fully appreciated, and that it perhaps plays this *role* more frequently than is generally supposed. An interesting question, too, as regards this symptom is, whether or not it may be present without foreshadowing the approach of any general nervous disease—i. e., as a purely local symptom. The writer would be inclined to give a negative reply to this question, and in this opinion is supported by that of Dr. Byron Bramwell, kindly expressed to him by letter. Dr. Bramwell says: "I should certainly say, in my experience, the Argyll-Robertson symptom is significant of some general nervous affection. I only remember to have once met with the condition unassociated with other symptoms and signs of nervous derangement, and I do not feel definitely sure about that case. In the vast majority of cases in which I have found the Argyll-Robertson pupil present, the case has been one of either locomotor ataxia or general paralysis of the insane. \* \* \* \* Neither the Argyll-Robertson pupil nor primary optic atrophy occurs in peripheral neuritis, a disease which is liable to be occasionally mistaken for tabes."

In testing for the light reflex one must be careful not to touch the skin of the face and eyelids. If touched, sympathetic contraction will take place. It is best to take the patient



RIGHT EYE—TAKEN JANUARY 27, 1901.

cent. of Bernhardt's cases, and in 92.5 per cent. of Erb's cases.

Paresis of bladder in 74.1 per cent. (Bernhardt's), 81 per cent. (Erb's).

Paralysis ocular muscles 39.6 (Bernhardt's), 38.7 per cent. (Erb's).

Myosis 27.2 (Bernhardt's), 54 per cent. (Erb's).

Rigidity of pupils, 48.4 per cent (Bernhardt's), 50 per cent. (Erb's).

Optic atrophy, 10.3 per cent. (Bernhardt's), 12.4 per cent. (Erb's).

Sensory disturbances, 85.9 per cent. (Bernhardt's).

Analgesia, 31.6 per cent. (Bernhardt's), 69 per cent. (Erb's).

Delayed conduction of pain, 34.4 per cent. (Bernhardt's), 89.5 per cent. (Erb's).

Brach-Romberg symptom, 90.2 per cent. (Bernhardt's), 83.5 per cent. (Erb's).

Feeling of exhaustion, 92 per cent. (Bernhardt's), 97.9 per cent (Erb's).

Ataxia, 94.1 per cent. (Bernhardt's), 100 per cent. (Erb's).

Sexual weakness, 43.7 per cent. (Bernhardt's), 78.5 per cent. (Erb's).

Joint affections, 9.6 per cent. (Bernhardt).

Gastric crises, 5.2 per cent. (Bernhardt).

*Corner of Sixth and South Streets.*

## ACUTE OBSTRUCTION OF BOWEL.\*

By J. B. BOUCHER, M. D., Hartford, Conn.,

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Few diseases or conditions at the present time require more care and skill, both in the diagnosis and treatment, than intestinal obstruction. The limits of this paper will not permit me to go into detail; neither can I take up each of the forms and conditions that may produce obstruction, but I will endeavor to bring out some of the most important points regarding the more frequent forms which we are liable to encounter in our daily practice.

### CAUSES, FORMS, AND SYMPTOMS.

The acute obstructions are caused by mechanical lesions not associated with disease. Simple mechanical closure may be congenital. It may be caused by intussusception, volvulus, internal and external strangulation, kinks and flexures, and the impaction of foreign bodies.

The passive obstructions met with in peritonitis, in mesenteric embolism and thrombosis are due to intestinal paresis.

The commonest form of mechanical obstruction is that due to the various forms of *external hernia*, which time will not allow me to discuss in this paper.

The next in frequency is *intussusception*, which represents about 35 per cent. of all forms of obstruction. The majority of cases occur in children.

Dr. L. Emmet Holt collected 385 cases of intussusception under three years of age. Three-fourths of all these cases occurred in the first two years of life, and one-half between the fourth and ninth months. In children it is nearly twice as common in males as in females, but in adults it is more frequent in women.

The most frequent seat of intussusception is at the ileo-cæcal valve, where the small intestine is invaginated into the large, but it may be confined to the small intestine proper. In rare cases a double invagination may occur.

It is caused by irregular action of the muscular walls of the intestine. One part of the tube, by reason of irritation, becomes stiff and small by contraction of the circular muscular fibres, while the part immediately below is relaxed, and into this the smaller and stiffened part telescopes. The mesentery is drawn in with the bowel. Gangrene may occur, due to strangulation of the mesentery, as it becomes crowded in with the invaginated gut. In some instances, parts of the gangrenous intestine are passed by the rectum. It may be produced by anything that causes vigorous peristaltic action, such as a powerful cathartic, by constipation or diarrhœa, or even sudden and severe jolting of the body.

*The main symptoms* are sudden and severe pain and vomiting, with indications of abdominal shock—tenesmus—especially when the tumor is low down toward the rectum, and bloody and mucus evacuations. A tumor may usually be felt on the left side along the sigmoid flexure or by rectal examination. The abdomen is not distended in the early stages of the disease, but when obstruction becomes established tympanites is well marked. The pain is usually intermittent, colicky and excruciating during the attacks. The most marked symptom is the passing of blood and bloody mucus. The temperature may be normal or subnormal in the early stages of the attack, but usually rises in the first twenty-four to forty-eight hours.

\* R-ad before the Connecticut State Medical Society, May 22, 1902.

*Volvulus* or twisting of a loop of the intestine occurs usually in the sigmoid flexure of the colon, although any portion of the intestine may be occluded by this accident.

An intestinal coil heavily loaded with feces, hanging by a long mesentery, presents the most favorable condition for a twist. It is not uncommon to find an enormously lengthened coil in the form of a huge S stretching from the sigmoid flexure to the liver, thence into the pelvis.

The symptoms of *volvulus* are those of acute intestinal obstruction. Pain similar to colic is present from the start. Constipation is the rule, and indicates the sigmoid colon as the seat of the lesion. If tenesmus is present it is an additional evidence that the colon is involved. Extreme distention of the abdomen occurs in a large proportion of cases. Vomiting is rarely present until late in the history of the case. When it appears early it suggests obstruction in the small intestine. The urine is diminished in a certain number of cases. The course of the disease is violent and fatal if relief is not afforded by early operation. The diagnosis of *volvulus* cannot be made with certainty, as the symptoms may be confounded with intussusception. If the symptoms of acute obstruction develop suddenly, late in life, in a patient habitually constipated, together with the detection of an ill-defined tumor of a distended and resistant intestinal coil, and the absence of bloody stools, *volvulus* may be suspected; but an absolute diagnosis can only be made by exploration. Constriction by bands of cicatricial tissue, resulting from acute and chronic peritonitis, causes intestinal obstruction in a certain number of cases. This accident occurs chiefly in adults about equal in both sexes. They are frequently due to pelvic inflammations in women and to appendicitis and traumatic peritonitis in men. The bands vary in length and points of attachment, the lower jejunum and ileum are involved in most cases.

The symptoms are in general those of acute obstruction of the small intestine. Pain is violent in the beginning, and is usually referred to the part involved. Vomiting is an early and persistent symptom, and as is common in obstruction above the ileo-caecal valve, is apt to be stercoraceous. Shock is more prominent in this form of occlusion. The abdomen is not tympanitic as a rule, although the constricted loop may be greatly distended and may be recognized as a distinct tumor by palpation, percussion or by vaginal or rectal exploration. The

diagnosis must be made from the presence of the symptoms above given, together with the history of a former peritonitis.

These three conditions which I have described comprise the most frequent forms of obstruction.

Among other causes may be enumerated internal strangulation, which may be caused by constriction of the bowel through slits in the omentum and mesentery. The ileum is most frequently involved, and the mesentery in the lower part of the organ is usually the point of constriction.

The symptoms are those of hernia of the small intestine, with strangulation. Early operation is the only hope of relief.

Meckel's diverticulum, when it exists, represents the vitelline duct of the embryo, in which the normal process of closure and obliteration has not taken place. When present it is attached to the last two or three feet of the ileum, and may remain patulous and open at the umbilicus or more frequently it ends in a blind extremity, which may be continued as a cord to the umbilicus.

There are no symptoms peculiar to this form of obstruction. The nature of the lesion can only be discovered by abdominal section, which is always indicated.

Acute obstructions result occasionally from the impaction of foreign bodies—gall stones, enteroliths, and from masses of round worms, the latter found usually in children. When a partial obstruction is present a very small foreign body no larger than an orange seed may cause an acute obstruction.

Neoplasms, sarcoma and carcinoma, stricture, both congenital and acquired, all may occasionally produce obstruction, but they are less common and cannot be differentiated from other forms of obstruction except by exploratory operation.

PROGNOSIS.—All forms of acute obstruction of the intestines are very serious, and carry with them a high mortality, depending largely upon the time which elapses between the obstruction and the time medical or surgical treatment is instituted. It is especially serious in those lesions attended by necrosis of the bowel wall and general peritonitis. The prognosis is more favorable in obstructions due to impactions, bands and internal strangulations than to those due to intussusception, *volvulus*, embolism and thrombosis.

All forms of acute intestinal obstructions,

which have been relieved in the first few hours of an attack, have a favorable prognosis, but as soon as the death of the bowel wall takes place and general infection or peritonitis develops, the mortality from any form of treatment is excessive, probably over 90 per cent. being fatal.

**TREATMENT.**—The first in importance is an early diagnosis. On it depends the success or failure of the case. In certain forms of obstruction early medical treatment may be available, depending upon the time and nature of the obstruction.

In intussusception palliative measures, including massage, rectal injections, with the patient inverted, and inflation of the colon with air or gas may be tried.

In intussusception of children, if taken early, a few cases may be relieved by inflating the colon, holding the child by the feet over the head of the physician, who then should rise on his toes and drop suddenly on his heels. The jar may, in a limited number of cases, reduce the intussusception, and should be tried in all cases which are seen early, before adhesions are formed.

Forced injections, however, beyond the ileo-cæcal valve are never justifiable in view of the great danger of rupturing the intestines.

Inflation is preferable to injection for the reason that it is more easy to determine whether reduction has been accomplished by air than by water. Rupture of the bowel occurred only once in 225 cases in children. An ordinary hand bellows may be used with a long catheter attached, introduced well up in the colon. The introduction of air should be gradual, and its escape prevented by pressing the buttocks closely together. Manipulation of the tumor is advised while the air is being introduced. In intussusception and volvulus cathartics should never be used at any time.

After distending the colon gentle massage may be practiced. If unsuccessful, little time should be wasted before arranging for surgical interference.

In the treatment of volvulus palliative measures are of no avail. By the time formidable symptoms of acute obstruction have become manifest the intestine is fixed in its abnormal position. Injections and external manipulations accomplish nothing, but may do much harm. Unfortunately, during delay before surgical relief can be applied in most instances, adhesions are formed and the constitutional de-

pression is extreme, especially in old people, and consequently the mortality is excessive.

Palliative measures should never be tried for over a period of a few hours, when surgical interference should be instituted.

Owing to the rapid strides in surgery the high mortality of the past will undoubtedly be greatly reduced in the future. Out of 16 operations for intussusception done on the first and second day 45 per cent., or nearly one-half, recovered. In 44 operations after the third day there were but 7 recoveries. With our present knowledge of antiseptic surgery, little need be feared from the operation, and as the successes of the surgeon become more numerous earlier surgical interference will be instituted, and consequently the mortality much diminished.

When surgical interference is decided upon, it should be done under the most thorough and rigid antiseptic precautions. When the seat of the lesion is determined the incision should be made directly over it. When in doubt as to the seat of the obstruction, or when it cannot be exactly determined, the linear alba should be selected. The cecum, ascending and descending colon can be more directly approached from an incision in the lateral aspect of the abdomen over these viscera. If the sigmoid flexure and upper portion of the rectum are involved, an incision parallel with Poupart's ligament, and about two inches internal to the left anterior spine of the ileum.

Contrary to most authors, who advise a small incision, I believe the incision should be sufficient to admit of thorough exploration. Small incisions are a detriment to the patient, as in these operations the time consumed is of the utmost importance.

Usually the bowel is found in a swollen, congested and soft condition, and therefore the incision should admit of the most delicate and careful handling of the intestines.

The patient should be placed upon the back, the head and shoulders slightly elevated, in order to relax the abdominal muscles. Many times the modified Trendelenburg posture is advisable. All bleeding should be arrested before the parietal peritoneum is opened. The peritoneum should be punctured and divided on a dull pointed grooved director. The escape of the intestines or omentum through the opening should be prevented by placing a sterile mat over the viscera and pressing them back into the peritoneal cavity. It is rarely possible in the

condition in which the viscera will be found to determine which is the upward and downward direction of the bowel. It may be necessary to begin at the secum and work upward. If some of the coils are found greatly distended, while others are collapsed, the collapsed loops should be passed carefully between the fingers up to the point where the bowel is distended, here the obstruction will be found. At times the coils of bowel are so enormously distended that they seriously interfere with exploration. The gas should be evacuated by puncture, and the bowel immediately closed by Lembert's sutures.

If intussusception is found, the invaginated portion should be brought into full view, and careful traction employed in the effort at reduction.

If strangulation and necrosis exist, exsection of the necrosed portion should be made at once if the patient's condition justifies a prolonged operation. If not, the dead loop should be brought out of the abdominal incision, the necrosed portion cut away, and a faecal fistula established.

When constriction is caused by peritoneal bands, these should be ligated if necessary and divided. When a loop of intestine has become imprisoned in a slit in the mesentery or omentum, the slit should be enlarged, the loop released, and the opening closed by catgut sutures.

If Meckel's diverticulum is excised, the peritoneal coat should be turned in by Lembert's sutures in closing the stump.

When, as frequently happens, the patient's condition is so critical that a prolonged operation is contra-indicated, it is better practice to make a smaller abdominal incision, seize the first presenting loop of distended intestine, establish immediately an artificial anus. The alarming symptoms thus allayed, the occlusion can be dealt with at a subsequent operation.

I am able to report two cases that have come into my own experience, in both of which a peritoneal band was the cause of the obstruction.

CASE I.—J. H., aged 25, was operated upon for appendicitis in July, 1899. The appendix was gangrenous, and the wound healed by granulation—the patient being confined to bed about eight weeks. He apparently made a good recovery, and continued well about two months, when he was suddenly taken with violent pain in the right lumbar region, vomiting, stercoraceous in character, constipation, chill and rapid rise in temperature to 102°. I saw him

about twenty-four hours after the attack began. I tried to move the bowels, and used stomach sedatives, but to no avail. After exhausting all means, I concluded there must be an obstruction, and advised immediate operation, which was accepted.

The incision was made parallel to and extending about three inches above the old incision. Here I found two bands of adhesions about three inches apart, which completely obliterated the small intestine. The bands were divided, search made for further obstruction, which was not found, the abdominal wound closed without drainage. The patient made a rapid recovery. Unfortunately the case has left the city, therefore I am unable to present it.

CASE II, I am able to present to you to-day, with a brief history furnished me by the hospital.

Albert H., aged 15, a resident of Portland, Conn., was attended by Dr. James Murphy, who gives the following history: Saw patient March 15th, this year. Temperature 103°. The case ran a typical typhoid, which lasted six weeks, and made a good recovery. The patient continued well until August 16th, when he was taken with diarrhœa, which lasted two days, and was followed by constipation. On August 19th, while working, he was taken with severe pain and vomiting and symptoms of acute obstruction. On the following day Dr. A. J. Campbell, of Middletown, was called to attend him. He tried all known methods to relieve the symptoms and move the bowels without avail, so sent the patient to the St. Francis Hospital for surgical treatment.

On admission to the hospital the patient was suffering little or no pain, obstinate constipation, frequent stercoraceous vomiting. During the night attempts were made to relieve the symptoms—all to no purpose. The following morning the patient was in a condition of collapse, abdomen distended, pulse 140 and thready, temperature 102°, and rapidly losing ground.

An operation was decided upon as the only possible chance—a slight quantity of ether administered, an incision made over the median line sufficiently large to admit of exploration of the abdominal cavity.

On opening the abdomen there was found an advanced stage of peritonitis, the bowels being badly swollen, both the intestines and peritoneum nearly black and covered with masses of



blood, fibrin and exudate. No obstruction was found in the lower part of the abdomen.

The incision was then prolonged upward, when we were rewarded by finding, with the finger, under the lower border of the stomach, a band of adhesions about one inch wide by one-half inch in thickness, extending across a loop of intestine and completely occluding its lumen. The band was ligated and incised. Nearby was found several loops of intestine matted together by the recent inflammation. These were carefully separated, the abdominal incision closed with drainage. Primary union was secured with the exception of a superficial stitch abscess.

The operation lasted forty minutes. The patient's condition seemed hopeless when he left the table. Restoratives were applied—the patient soon rallied, did not vomit after the operation, and made uninterrupted recovery.

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### ALCOHOLIC PSYCHOSES: CLINICAL ASPECTS AND DIFFERENTIAL DIAGNOSES.\*

By CHARLES E. STANLEY, M. D., Middletown, Conn.,  
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Of the 996 cases of insanity (523 males, 471 females) admitted to the Connecticut Hospital for Insane for the years 1899-1900, 95 were of alcoholic origin. Eighty, or sixteen per cent., of the male admissions were due directly to alcohol. From this statement it would appear that alcohol exerts a most deleterious effect on the mind, producing psychic debasement.

In seeking the truth regarding the evil effects (immediate and remote) of alcohol, the tendency to-day, I believe, is to underrate its poisonous and deteriorating influence on the race. In the last fifty or seventy-five years temperance reformers and others have unintentionally greatly exaggerated the evils arising from its abuse; and prohibitory laws, based on these mistaken ideas, have proved too abrupt and radical, and have consequently been ineffectual and productive of little real benefit. There is no nation, and hardly a tribe of the human race which has not succeeded in inventing some method of producing intoxication, and of all in-

toxicants which are, or have been, in use by mankind, alcohol easily takes the lead. Civilization has greatly multiplied the number and uses of stimulants, and commerce has made the product of each clime the property of all. Our remote ancestors indulged only in home-made varieties, but we moderns are content with only all of the best of the world produces. The vine is supposed to have had its origin in India. The Romans introduced it into England. It was not, however, until about the sixteenth century that wine bibbling in Great Britain became the common practice of all possessing sufficient means to indulge the habit. In speaking of the prevalence of the drink habit in our time, Dr. Kerr (alienist and author of work on inebriety) states that there is scarcely a family in the United States or Great Britain which has not at least one relative who has been the subject of inebriety.

The symptoms of alcoholic intoxication described by medical men of olden times differ materially from those ascribed to the alcoholism of to-day. This is accounted for, in part, at least, by the kind, quantity, and, particularly, by the adulteration of the liquors imbibed. Physicians of to-day not only have to note the poisonous effect of the narcotic on the individual, but must study the individual himself. In other words, individual inheritance plays a prominent role in the alcoholism of the present day. Unfortunately, the greatest predisposing factor to the disease to-day lies in the individual himself. Until comparatively recently the writings of medical men contain no mention of the narcotic or neurotic diathesis of which we hear so much at present, and which, undoubtedly, is the underlying cause of many nervous and mental diseases. Evidences of degeneration, of alcoholic origin, in individuals and families are only too apparent. Anstie puts it very forcibly thus: "Nervous enfeeblement produced in an ancestor by great excesses in drink is reproduced in his various descendants with the effect of producing in one insanity; in a second, epilepsy; in a third, alcoholic excesses, neuralgia, hysteria, and the whole train of nervous disorders." Idiocy, imbecility and criminality might also be added to the list.

All unbiased thinkers admit the value of alcohol in certain diseased conditions of the body, when judiciously employed by the physician. In moderate amounts it increases the flow of ideas, renders the senses more acute, speech more

\* Read before the Connecticut Medical Society, May, 1902.

fluent, and movements more active. The physiological action, however, may be quickly transcended and the toxic influence obtained, by the frequent ingestion of the drug, even in moderate amounts, and despite its rapid climination. The difference between its physiological and toxic effect is merely one of degree, and varies with the individual affected.

Nearly, if not all, the symptoms of the different forms of insanity are obtained in one or other of the phases of acute alcoholic intoxication. In the rapid release of ideas and motor impulses generally, the excitement, restlessness, talkativeness and distractibility of the beginning stage or stage of exhilaration, is noted a marked resemblance to periodical insanity, maniacal form; on the other hand, the symptoms of depression, with slowness of speech and retardation of thought and movement of a later stage, are characteristic of depressive mania; and lastly, the expansiveness, extravagant speech, rapidly changing emotional states, unequally dilated pupils, ataxic gait, sluggishness, stupor and paralysis of the last stage of alcoholic intoxication furnish a picture of general paralysis.

By repeated poisonings of the system with alcohol, chronic alcoholism results with the effect that the moral sense is perverted and enfeebled; the will is weakened and becomes uncertain and vacillating; and at last the intellect is progressively invaded until psychic debasement is complete. The process of deterioration, so gradual as to be barely detected at first, finally becomes general, ending in moral and mental ruin.

In chronic alcoholism there may develop a condition resembling general paralysis of the insane, which has been denominated *alcoholic pseudo-paresis*. It is often difficult to differentiate the two diseases. In both there is gradual and progressive impairment of memory and judgment with stupidity, hallucinations, weak expansiveness, a sense of well-being, and delusions of persecution and infidelity. Physically, each is accompanied by muscular tremor, absent or exaggerated tendon reflexes, ataxia, disturbances of speech, and not rarely by epileptiform attacks. In alcoholic paresis, while the course may be protracted, yet in time the more marked symptoms disappear or remain stationary; in general paresis, the course progresses to a fatal termination. The paretic is more indifferent and less logical than the alco-

holic, reacts less to hallucinations, delusions, or emotions of fear, etc. In both diseases, the pathological changes in the brain are similar. The granulations in the ventricles of the paretic are absent in the alcoholic, according to Krafft-Ebing.

In a small group of cases of chronic alcoholism, with no clouding of consciousness, persistent but feebly systematized delusions of jealousy gradually develop. Although scarcely worthy of being designated a psychosis, it is known as *alcoholic paranoia*. The most marked and diagnostic symptom of the disease is a delusion of infidelity entertained by wife for husband or husband for wife, growing out of the estrangement which naturally arises from excessive indulgence in alcoholics. Failing sexual powers, due to alcoholism, may also be a factor. The patient's jealousy is aroused by the most trivial circumstance, such as a word or a glance. Neighbors, chance callers, and others are often drawn into the family strife. Delusions of poisoning also are sometimes associated with delusions of infidelity. Frequently, the patients react emotionally to their delusions, concerning which their reasoning is weak and absurd, and with which their actions are often strangely at variance. The disease is differentiated from true paranoia by the lack of system in the delusions, and by the symptoms of chronic alcoholism. Prognosis is poor in these cases. They may be made comfortable by change of environment and abstinence from alcoholics, but a return to their homes and alcohol soon relights the same train of symptoms.

Finally, upon a basis of chronic alcoholism, two very interesting and important psychoses may arise—viz., alcoholic delirium and alcoholic delusional insanity.

*Alcoholic delirium* is sudden in its onset, and attended by more or less clouding of consciousness. Its peculiar symptoms are due to nutritional changes in the cell elements of the gray matter of the brain, and may occur either after excessive indulgence in alcoholics or after their sudden withdrawal. One of the most striking peculiarities of the delirium relates to the hallucinations, which accompany it. These are almost without exception visual in character, although illusions or hallucinations of any or all of the other senses may also be present. The erroneous perceptions are numerous, embrace all manner of living, creeping things, often grotesque in form and terrifying in character, and

which are always in constant motion. In contradistinction to the above, in ordinary delirium (of pneumonia, typhoid fever, etc.) the hallucinations are single and fixed. A second peculiarity is noticed in the restlessness of the delirium. The patient is uneasy, and always on the alert, and finds rest nowhere. Emotionally, he is apprehensive, fearful that some calamity threatens, or that some evil is about to befall him. Reacting to hallucinations he peers beneath the bed and into corners and closets in search of some realizations of the fears that torment him. His fear is increased to terror by the ever-varying but constant hallucinations, and in his endeavors to escape, he may do bodily injury to himself or others. Physically, the chief diagnostic symptom is tremor; gastritis may also be present. With supportive measures generally, the main indication in treatment is to promote sleep; with this accomplished, the delirium subsides in from three to twelve days. Recovery is the rule; death occasionally results from exhaustion or complications, and chronic insanity claims now and then a case.

Finally, one of the most interesting of the alcoholic psychoses is that described and denominated by Prof. Kræpelin, of Heidelberg, as *alcoholic delusional insanity*, in which the clinical picture is as clear as that in delirium tremens. With a sudden or sub-acute onset and no observation of consciousness, the most marked and characteristic symptoms of the psychosis are delusions of persecution based on hallucinations of hearing. Why, under the same casual conditions, alcoholic delusional insanity should develop in one individual and delirium tremens at another, or why in the same individual, alcoholic delusional insanity should develop at one time and delirium tremens at another, has not been explained. Unlike delirium tremens, in alcoholic delusional insanity consciousness is not clouded. Loss of sleep, headache, dizziness and irritability may for a brief period precede the actual attack. Sleep is disturbed by strange sounds, which suddenly arouse the patient from his slumbers. Later, these sounds take shape, are clearer, are heard in the daytime, as well as at night, and are finally resolved into voices. At first, a single word, an oath, or it may be the patient's name is heard, and finally sentences which have direct reference to the patient. The voices seem to be those of nearby shopmates, acquaintances, etc., and may seem to come from the wall, from an ad-

jacent room, or it may be over the telephone. The patient hears himself accused of crimes, reminded of past misdeeds, is called thief, liar, murderer, traitor; he is to be hung, shot, burned; he hears that his children have been drowned, that his wife is unfaithful. All that he hears is derogatory to himself, defamatory, to all of which he is a powerless and unwilling listener. Delusions of reference are especially prominent in all cases of this psychosis. Everything going on in the patient's vicinity has reference to himself; all his thoughts and actions are commented upon. He is watched, jeered at, shot at, and pursued for imaginary crimes. Reacting to his delusions he becomes alert, suspicious, distrustful, fearful, and often antagonistic. In his desperation he may commit suicide, or in response to hallucinations, having been called a vile name, he may suddenly strike the supposed aggressor.

The patient's actions, especially in the beginning of the psychosis, may be well directed; he often performs his accustomed employment for days before his psychosis attracts attention.

Physically, impaired appetite, loss of weight, insomnia, tremor of hands and tongue, occasionally exaggerated reflexes.

The course of the psychosis, like its onset, is acute or sub-acute. Usually in two or three weeks the symptoms rapidly disappear, sometimes very suddenly, occasionally they persist from one to eight months, gradually passing away.

The alcoholic history, acute onset, delusions of persecution, based on hallucinations of hearing, with clear consciousness, form a symptom group by which it may be readily diagnosed.

The prognosis is usually favorable. It is rendered less so by marked physical changes of chronic alcoholism (arterio-sclerosis) and by a defective constitutional basis, according to statistics at Connecticut Hospital for Insane.

Frequency: Seven per cent. of all alcoholic psychoses.

Treatment consists in careful watching to prevent suicide, and in the promotion of sleep.

*The epidemic of insanity among our soldiers in the Philippines in the late war, and which was chronicled in the newspaper at the time, was probably one or other of the two last named psychoses, caused by the excessive indulgence of our men, in a warm climate, in some alcoholic drink mixed with the juice of a native plant containing a narcotic principle.*

I have shown that sixteen per cent. of the male admissions to the Connecticut Hospital for Insane for the years 1899-1900 were alcoholic psychoses. These were severe and protracted cases, demanding special care. While it does not necessarily follow, yet the above figures would naturally lead to the conclusion that the lighter forms of alcoholism must be common in the State. The milder cases of inebriety, in which there are no organic changes due to alcohol, and in which there is simply an uncontrollable thirst for drink, are cared for at home or in private sanitarium. It would be manifestly unfair to make a comparison between cases ordinarily admitted to a "cure," sanitarium or similar institutions, and those met with in an insane asylum. Many cases of acquired alcoholism, taken in their inception, are curable, under good hygienic conditions, change of environment, suggestion and abstinence from alcoholics. According to good authority, the use of double chloride of gold and sodium, reinforced by nitrate of strychnia, has been productive of good results. A certain percentage of cases so treated make quicker recoveries with less danger of the development of delirium tremens than those treated with strychnia alone.

Of eighty-seven cases of alcoholism under treatment in the Connecticut Hospital for Insane, taken in the order of their admission, twenty-five were diagnosed as delirium tremens, twenty-one as alcoholic delusional insanity, thirty-two as chronic alcoholism, and the remainder as pseudo-paresis and alcoholic paranoia. As a large percentage of these cases are recoverable, the question of the advisability of committing the alcoholic to a hospital for the insane arises. Should not some other provision be made for his care and cure, thus avoiding the inevitable stigma which must attach to one adjudged to be of unsound mind and legally committed to an asylum for the insane? One who has been so committed, after his cure and release, often labors under a disadvantage in obtaining employment and otherwise, to say nothing of the unenviable heritage to his descendants.

The indirect and remote effects of alcohol are most damaging and difficult to calculate. Probably the worst effects of intemperance in the use of alcoholic liquors are least known and least noticed. It is in the silent destruction of the nervous system, the slow poisoning of the great centres of thought, that alcohol exerts its most

injurious and far-reaching effects, and in the transmission by inheritance of the evil from parent to child from generation to generation.

### THE TOXIC EFFECTS OF TRIONAL.

By E. PIERRE MALLETT, M. D., New York, N. Y.,  
Lately Physician to "The Princess Anne" Hotel, Virginia Beach.

There have been as so many new hypnotics, anti-pyretics and analgesics introduced in recent years that it is somewhat difficult to define their true physiological action, and the symptomatology of their toxic dosage. This has been due largely to the fact that these new products have succeeded one another with such rapidity that their therapeutic status would hardly be established before they would fall into disuse by the introduction of another, for which even greater claims were made.

I have not been able to look up the literature of trional, but as I do not recall any article relating to its toxic effects, and as the dosage and the quantity of the drug consumed in this case were so large, its report may possibly be of some value in establishing and recognizing its toxic dosage and symptomatology.

The patient was a man of about 50 years of age, not addicted to the use of either drugs or intoxicants. Trional had been prescribed for him on a previous occasion in doses of from 15 to 30 grains, when suffering from insomnia, and its effects had been all that could be desired. At the time this patient came under my observation he was under a great mental strain, and was unable to sleep, and I might add that, while he did not come under my professional care for several days later, still I saw him frequently, and could observe his condition each day, until I was asked to take charge of him.

Being unable to sleep for several nights, he had bought an ounce of trional at noon on Wednesday, and not remembering, or being indifferent to the former dose, simply took it from a teaspoon. He slept all of that afternoon, and appeared at dinner rather late. He was quite uncommunicative, and ate very little, leaving the table and going to his room. He took another dose out of the teaspoon as before, and went to bed. He slept soundly until noon the next day (Thursday), when he got up and came down to luncheon. His condition at that time

was quite noticeable, his face seeming slightly swollen, with puffiness about the eyes. His loss of muscular co-ordination was becoming very marked, more so in the movements of the legs and feet than of the arms and fingers. On being spoken to he would reply in monosyllables, was dull and apathetic. His walk was slow and uncertain, frequently steadying himself upon the backs of chairs, the doors and banisters, etc. He went to his room again after luncheon, and took another dose as before, and slept on until dinner time. He was aroused at dinner time (7 P. M.), and with difficulty managed to get down stairs. His condition was very noticeable to every one. He walked with great difficulty—not the uncertain, staggering gait of intoxication, but rather with the muscular weakness and inco-ordination of paresis. His apathy had deepened, so that he could not follow an idea; but on being spoken to he would rouse up sufficiently to make a monosyllabic reply, and relapse again into a condition of semi-coma. Walking was very difficult, seemingly due to his inability to raise the feet and to put them forward in stepping. Equilibrium was also disturbed; all movements were performed with great deliberation and seeming difficulty, apparently from complete muscular relaxation. Articulation was difficult and almost unintelligible (motor aphasia), though he himself said that his tongue was swollen. From a perfectly well and healthy-looking man in the very prime of life, he had, in the last three days, become like an infirm old man of eighty, or a hopeless looking paralytic.

At this point I was requested by his friends to take care of him. I found out both from the patient and his friends that he had taken very little liquor during the last three days, not enough to have any effect whatever in bringing about his present condition. I found that the box of trional which he had bought on Wednesday noon had been almost consumed in about two and a half days, there being only about 80 to 100 grains left of the original 480. His condition and general symptoms were as I have described. His pulse was 100, but weak and compressible, his tongue heavily coated; his bowels constipated. He said his head felt somewhat queer, but complained of no headache.

The treatment was simply eliminative and symptomatic. Active catharsis was induced by three (3) C. C. pills, followed in the morning by a copious draught of sodium phosphate

in hot water. Later in the day he was given a hot bath, followed by an energetic massage for about an hour and kept in bed all day. He slept well that night, and awoke feeling very much better. His head was clear, although he complained of a "queer feeling" in it. On getting up his movements were somewhat unsteady, but rapidly improved, so that by Sunday, or forty-eight hours after stopping the drug, it seemed to have been completely eliminated, and he was so far recovered as to be able to attend to his business matters and leave for home.

72 West 68th Street.

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### SOME FEATURES OF MEDICAL AND SURGICAL STUDY IN LONDON AND BERLIN.\*

By ALVA S. GRIMM, M. D., St. Marys, W. Va.,  
Surgeon O. E. Railroad, etc.

The saying that "great bodies move slowly" applies to medical and surgical study in London most appropriately, although I do not mean to say by this that these studies are not thoroughly taught there; but, on the contrary, I wish to emphasize the fact that they are most perfectly taught.

John Bull there is the same characteristic John Bull as elsewhere. He does not take hold of some new theory or remedy because it is new until he thoroughly investigates its merits; and if it appeals to him as good, he adopts it with a firm and lasting grasp, and if not, he rejects it altogether.

The professors, in taking their classes through the wards, take very great pains to give them thorough clinical instruction in auscultation, percussion and the usual physical diagnostic methods of making diagnoses.

Nothing is gone over hurriedly, but a careful examination is made of each patient, and all points of any interest at all are gone over. Every vital organ of the body is examined. I have seen Sir Thomas Barlow, of the University Medical College, and ex-physician to Queen Victoria, spend a half hour around the bed of one patient in having the students examine him, and then interrogating them on all points of interest relative to the case.

\* Read before the Medical Society of the State of West Virginia during its annual session, held at Parkersburg, W. Va.

Each member of the class is thus taught to utilize his theoretical training in making microscopical and urinary examinations, and of pathological specimens in general, and in this way he is thoroughly trained and grounded in physical diagnosis. The result of this is that the English physician and surgeon is a good diagnostician, and its fruits are daily seen in the hospitals, as it is very rare indeed for an operator to fail to find his diagnosis verified when operating.

The *English surgeon* does not impress one as being a rapid operator, although I have seen some very rapid work done by such men as Bland, Sutton, W. H. Tate, and some others. However, he does impress one as being a conscientious worker delving after truth, and not to make a display or show of his work.

By having tickets of admission to several large hospitals, one sees work done by a great variety of different men; and he gathers ideas which may differ somewhat in detail, but which tend to give him a broader scope of thought and utility. Thus Prof. Barker, of the London University Medical College, uses linen thread for intestinal sutures and other abdominal work. Prof. Ballance and others, of St. Thomas' Hospital, use silk, while still others use silk worm gut. In operations for appendicitis, Prof. Morris, of Middlesex Hospital, sutures the peritoneum over the stump of the appendix after excision, while in the Royal College of Surgeons some of the operators apply carbolic acid instead of suturing. In mastoid operations, the grafting process is successfully performed at St. Thomas' Hospital, and can be witnessed almost daily.

The amount of surgery done in London daily is immense, and the student who has a ticket admitting him to several hospitals is often puzzled to make up his mind as to the best way to utilize his time to the greatest advantage.

After seeing the list of operations to be performed he has to select the ones he wishes to see, and let the others go for that day, and in his eagerness to see work done by different men, he is likely to overwork himself unless he is very careful. Some of the large hospitals have, on an average, about one dozen operations daily, and quite a number of these institutions are modern and up-to-date, being well provided with fine operating amphitheatres and with all the appliances necessary for doing aseptic surgery, among which may be mentioned St. Bartholo-

mew, St. Thomas, University College, and some others.

When a foreign student enters *Germany* for the purpose of post-graduate study, his best way is to call upon the most noted medical and surgical men in the universities, and they will take his address and send him invitations to their clinics, where they will treat him cordially. After matriculating and entering upon a course of work he will be impressed with the thoroughness and system with which the work is done. The German mind here, as in everything else, seeks to know the cause of all phenomena with which it comes in contact.

They are a people that are eminently suited to deep research in medicine and surgery, as well as any other line of work that requires untiring and protracted labor and toil; so it is no matter of astonishment that we find here so many deep investigators in professional work.

The German Government, recognizing the good to the State by encouraging original research, provides for this by appropriating money for this purpose. When a professor is once appointed for this line of work he has an enviable position indeed, and some of them live in royal style, having fine palaces and surrounded by all the comforts of life. He is highly esteemed and honored by his countrymen, and this is an incentive to others to improve their time and prepare themselves for similar honors. Thus the German ambition is to thoroughly prepare himself for his work, and to be held in high esteem by his people, and not so much for the purpose of wealth; this certainly is to be commended, and would be fortunate for our noble profession if it obtained everywhere.

The average German has too much self-pride to ask for charity, consequently there is not so much free treatment in the hospitals as in some other countries. He also prides himself in keeping his body, clothing and living apartments clean. I was told in Berlin that I might meet poor people there as elsewhere, but I would always find them a clean, happy and contented people, and I found this to be true.

It is in the field of bacteriology that Germany has made the greatest advance, and has gone deeper into the subject of pathology and clinical bacteriology than any other nation of people. I was told in a large pathological laboratory in Berlin by one of its teachers that we could not expect to have made much of a record in this line of work in our country, as we were too

young as a nation, and, of course, this is true; but I earnestly hope to see the day in the not distant future that our national progress will see the necessity of aiding our noble profession in like manner as does the German Government.

Some of the most eminent men in gynæcology operate entirely different from each other. For instance, Prof. Landaugh performs vaginal hysterectomy by the clamp method for controlling hemorrhage, and when he has finished an operation he will have a large handful of clamps hanging out of the pelvic canal. Professors Olshausen and Dührsen do away with the clamps and ligate each step of the operation, finally closing the vault of the vagina by suturing. The latter method would seem to be the better of the two, as the danger from infection would seem to be less than it would be to leave the vaginal vault open, containing a handful of clamps. However, Prof. Landaugh claims for his method as good per cent. of recoveries as do the operators by the other method, thus proving that either method is successful in competent hands.

Speaking from a scientific standpoint, the surgery done in Berlin is excellent, yet one often sees surgical work done in the large clinics by a few operators that seems to be heartless, if not brutal, and the fortitude and patience with which the inmates bear it is something to be wondered at. For instance, one will often see an abscess of the superior maxillary antrum opened and an opening made by chisel and forceps as large as a half inch in diameter into the cavity of the bone, requiring several minutes to complete the operation, and causing excruciating pain, yet all this would be borne without an anesthetic, and a great many other operations equally as painful are daily witnessed.

The only reason that I can give for the tolerance of so much pain by these people is the high esteem in which the profession is held in Germany, and that its opinion is respected.

Medical and surgical science here is built upon a true basis, and everything is done radically according to scientific methods, but my impression is that the profession does not use nearly so much medicine as is habitually done in America.

In conclusion, I would say that while an American student can gather many useful things from the profession on the other side of the Atlantic, at the same time I am confident that were some of the profession in Europe to

come to our shores to learn our methods, they would return home much benefited.

## CASE OF ENTEROLITH, WITH SPECIMEN.\*

WITH DISCUSSION.

By JAMES G. WILTSHIRE, M. D., Baltimore, Md.,

Lecturer on the Nervous System and Orthopedic Surgery, Baltimore Medical College, etc.

In the summer of 1901 I was requested by Dr. Christian, who expected to be out of the city for a few days, to see Mr. M. for him. I called at once, and found that the patient had been suffering severe pain in the right hypochondriac and lumbar regions for several days. Palpation revealed nothing to account for the pain, but a kidney in the lower part of the right lumbar and the upper part of the inguinal region of the same side. The displaced kidney was too firmly fixed in its new position to be a floating one. I addressed my remedies to the relief of the patient, and after a few daily visits I turned him over to the cook.

A few days afterwards I saw Dr. Christian, who told me he called Dr. McLane Tiffany in Mr. M.'s case to determine the cause of the displacement of the kidney, who, for the same reason I have assigned, decided that it was not a floating kidney, and to await future developments to show the cause of the depression.

On October 6th, I was summoned again to see Mr. M., whom I found this time suffering from marked indications of occlusion of the bowels, evidenced by stercoraceous vomiting, pain in the umbilical region, and obstipation. Palpation revealed two hard bodies, about the size of a small walnut, in the right side of the umbilical region. I saw at once that immediate surgical interference was imperative. But, before removing my patient to the hospital I thought it wise to have the concurrence of another physician in my opinion. Acting upon this thought, I called Dr. John D. Blake, who kindly responded at once, and after making our examination, he agreed with me that an operation was required.

The ambulance was called, and the patient taken to the Maryland Central Hospital. After preliminary aseptic preparation was made and

\*Read before the Baltimore Medical and Surgical Association, April 14, 1902—Dr. J. L. Ingle, President; Dr. Eugene Leigh Crutchfield, Secretary.

chloroform administered, a laparotomy was done by myself, with the valuable assistance of Dr. Blake. A digital search for the cause of the obstruction revealed two hard bodies, the size of a small walnut, located in the lower part of the ileum, completely occluding the lumen of the intestine. These were removed through a small opening over each, and the incision closed with Lembert's sutures.

In passing my hand over the field in search for the causes of obstruction, I paused a moment to learn the position of the right kidney and the condition of the gall-bladder. I found the former in situ, and the latter containing nothing but bile. The abdomen was now closed, the usual drainage applied and fixed by bandages. The patient was made comfortable in bed, and a quarter-grain morphia was hypodermically administered to prevent pain and shock. A comparatively comfortable night was passed, and the next day things went on smoothly and continued so until the fourth day, when indications of shock manifested themselves, increasing each hour in gravity until the fifth day, when death closed the scene.

There are several points of interest in this case that I would like to call the attention of the members to:

*First.* What was the source of the enteroliths and what is their composition?

*Second.* What was their pathway of entrance into the intestine?

*Third.* In the onset of the case, what force was employed to depress the right kidney?

The first question can easily be disposed of. Chemical tests showed very clearly that they were composed of cholesterine (a bit dissolved in ether and on evaporation the crystals were evident).

The second question is involved in slight mystery, though I think the overhanging clouds can be removed. The *via rationale* for gall-stones to pass from the gall-bladder to the duodenum is by the common duct, but I question if such large bodies could gain passage through such a narrow canal. If not by this route, what, then, was open to them?

Dr. John A. Wyeth, New York, in his admirable work on *Surgery*, says: "Biliary calculi may cause ulceration of the gall-bladder and duodenal walls, enter the canal in this manner, and cause intestinal occlusion." That my case is identical with opinion expressed by Wyeth can be proven by two symptoms that

were prominent in the initial attack. There was continuous acute pain under the liver, lasting for several days, accompanied with depression of the right kidney. Had the calculi gone by the rational way, the pain would have ceased when their passage was effected. Then, too, there would not have been any displacement of the kidney. Again, the passage of such large bodies through such a narrow canal would have caused more or less shock.

On the other hand, if the passage was effected by a process of ulceration, the pathological conditions would be very different. There would be a deposit of inflammatory product along the line of march, so to speak, and, followed, in all probability by abscess, either of which—more particularly the latter—would be a powerful factor in displacing the kidney.

I had some of these bodies subjected to ether to show the crystals of cholesterine, of which they are composed. I would like to know what is the best way to prevent the formation of these stones. We know that in the bile there exists two salts, glycocholate and taurocholate of sodium, to hold in solution this cholesterine. Now, why is it that it forms itself into these concrete bodies? Why are these two salts not there to do their work, and what will restore their presence in the bile?

#### DISCUSSION.

DR. WM. B. PERRY: The case is of unusual interest. Personally, I have not seen a case of this kind, and, in fact, there are very few on record. Dr. Wiltshire is to be congratulated on meeting with such a case. Several things connected with the case are mystifying: One, the marked depression of the kidney some time before, and that after the operation it had gone back to its normal site. One of the characteristics of movable kidney is the facility with which it is reduced, and the thought occurred to me that if the patient was placed in the Trendelenberg position at the operation, it might have gravitated back. The facts in the case are rather remarkable. It would seem as though it might have been adherent in some way to the liver.

DR. EDW. L. WHITNEY: Just from ordinary inspection, they look like mixed stones. The pure cholesterine stones very seldom show on cutting into them any such dark color as we find here all the way through these. They have something of the fatty feeling of cholesterine. It is possible that when they left the gall-blad-



der they were very much smaller, and that material eliminated by the intestines was precipitated upon them, giving them this special form. In that case, there would be found in the outer layers stercorine instead of cholesterine. That differs in its physical properties from cholesterine. The melting point is something like 100, while that of cholesterine is 145. It is soluble in cold alcohol, while cholesterine it not. If the outer layers contain this substance stercorine, it would show that the precipitate occurred in the intestinal canal, enlarging the stones in this way.

As to the formation of the stones, it has been more or less of a fight between the bacteriologists and chemists, one attributing the cause to bacteriological conditions, and the other to chemical. It is quite possible that there is a combination of these changes. If you have an infection of the gall-bladder, there is an inflammation set up, and the formation of a sort of nucleus, and then precipitation of cholesterine goes on rapidly. Then it is quite possible that in some of these cases the precipitation depends upon an excessive amount of cholesterine, or a deficiency of the salts. In some instances treatment with the bile salts has been productive of very good results. A friend of mine now has a patient under treatment where gall-stones have been found three times, and it will be interesting to see if this treatment will prevent the necessity for a fourth operation. I have seen a number of cases do well under the treatment with the bile salts, and it is certainly worthy of trial, especially where there is no urgent need for an operation.

DR. WILTSHIRE: I am glad Dr. Perry takes the view he does of the matter. I was of the opinion at the time I made my second examination, and was still further convinced on looking into the matter, that this displacement of the kidney was due to the fact that inflammatory products had been thrown out. I believe the displacement was brought about by inflammatory products. As to the formation of the stones, in these cases of gall-stones there is some interference with the metabolism of the body; its functions are not being carried on normally. I had another case last summer, where the patient had passed quite a number of these gall-stones, but who declined operation. I ordered her to take plenty of exercise, and placed her upon the usual diet, and later added to the treatment ox gall containing the two bile salts,

thinking that perhaps it would help to hold in solution the cholesterine. She has gotten along nicely under this treatment, and I have not seen her now for six months.

DR. WILMER BRINTON: Did I understand it to be Dr. Wiltshire's opinion that gall-stones were found in the intestine due to perforation of the gall-bladder? I think that most improbable, that gall-stones should pass through the gall-bladder into the duodenum by the process of ulceration.

DR. WILTSHIRE: As I stated, that thought was suggested to my mind by the statement of Dr. Wyeth, who is a recognized authority on surgery, and I believe it quite possible that in this instance it did ulcerate through the wall of the gall-bladder and through the wall of the duodenum into the intestinal tract. These stones, after passing into the intestinal tract, I believe, wandered backward and forward by the peristaltic action of the intestine, until they were much larger than when they passed out of the gall-bladder. They acquired size as they went just as a snow-ball will in rolling down hill. Of course, they must have been much smaller when they passed out through the wall of the gall-bladder.

THE PRESIDENT: Was any evidence of this seen at the time of operation?

DR. WILTSHIRE: No, we do not expose the gall-bladder at all.

DR. PERRY: Dr. Young reported a case last year that is quite as marvelous as this fact would be. A young woman swallowed a needle, which passed into the stomach, and later on into the abdominal cavity, and then was located by the cystoscope in the bladder, and was finally removed by section. It would seem that with such a large body a passage through the walls of the gall-bladder and duodenum would have set up a great deal of trouble.

DR. WILTSHIRE: We did not have time to push the investigation further, as the patient was too weak. We made out that the gall-bladder was empty of stones, and stopped there.

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In many vague and indefinite ailments due to latent rheumatic conditions, Tongaline will effect a cure promptly and thoroughly.

## CASE OF AFEBRILE PNEUMONIA.\*

By J. L. WINNER, M. D., Baltimore, Md.

Mr. T. G., age 48, by occupation scafarer, consulted me at my office March 17th, at which time he complained of deep pains in the region of the left nipple. As the patient entered my office I noticed that his respiration was accelerated, and that he was suffering from dyspnea. On examination I noticed that the respiratory movements were increased in frequency and restrained on the affected side. His respirations were 48 to the minute; pulse, 90. The left lung showed the physical signs of consolidation, yet, strange as it is to relate, there was absolutely no elevation of temperature. His cough was dry and hard and very painful, and there was no expectoration. He called at my office again the next day, contrary to my instructions, as I had ordered him to remain in bed the following day, when I would call and see him. At this time he presented the same symptoms as on the previous day. I ordered a continuation of the same treatment, and advised him to return home. On the following day I received a telephone message to call at his house. Expectoration was now present, but very scant. It was tough and tenacious and somewhat tinged with blood. Dyspnea was still very marked. On the fourth day of treatment the sputum assumed the characteristic rusty tinge, which became more marked as the disease developed. The next few days the symptoms remained unaltered, and still there was no elevation of temperature. On the sixth day the symptoms began to ameliorate. The cough, whilst still dry and hard, was not so painful; the dyspnea was considerably lessened, and the expectoration was much easier. Yet the left lung remained consolidated, but in a few days some crepitation began to return, expectoration was lessened, and the lung now began to show signs of repair. The cough, however, remained dry and hard, although less frequent. At no time did the disease show any signs of reaching its acme, and on the fourteenth day of the disease, practically two weeks after treatment, no crisis was reached, and the patient gradually assumed the appearance of convalescence. He remained in a well sunlit room during the whole course of the disease. On the fourteenth day the patient informed me that he intended to go out of the house the next day, which action

I sanctioned, as at no time had he been confined to bed. He was averse to the very point of obstinacy regarding my instructions as to remaining in bed. The next day the zenith was reached, and much to my astonishment I learned of his sudden demise; that he had died after visiting the Holy Cross cemetery, where he laid flowers on the grave of his child, to whom he was much endeared, and felt acutely the death of, and on returning home was attacked with hæmoptysis so profound as to cause collapse, with prompt termination of life. This journey I forbade, yet permitted him to go out of the house. The treatment during the course of the disease was mild expectorants and supportatives to heart and general constitutional tonics.

## DISCUSSION.

DR. WILTSHIRE: I would like to ask what the patient died of—the immediate cause of death?

DR. WINNER: The immediate cause was hæmoptysis—rupture of pulmonary blood vessels.

DR. WILTSHIRE: The case is a remarkable one, and if there had not been that characteristic sputum, I would be inclined to consider it a case of bronchitis. There are cases of pneumonia reported where there is no rise of temperature, but they are very rare. In regard to the treatment, I would say that I always use hot applications, especially hot cloths, over the site of inflammation.

DR. PERRY: I would like to ask if an examination of the sputum or blood counts were made?

DR. WINNER: No. Throughout the whole course of the disease expectoration was light. On the third day it was tinged with blood, and on the fourth had the characteristic rusty appearance. I excluded tuberculosis on account of the robust appearance of the patient, who was a seafaring man. The heart action was always good, and the death was due to pulmonary hemorrhage.

PRESIDENT: The case is very interesting to me, as five or six years ago I saw the first and only case of the kind I have ever seen. The signs of pneumonia were very marked, but owing to the absence of fever, and at times even subnormal temperature, I was in some doubt. Dr. Chew saw the case with me, and although the absence of fever was to him a peculiar feature of the case, said that there was no doubt in his mind that it was pneumonia. The physi-

\* Read before the Baltimore Medical and Surgical Association, April 14, 1902.

cal signs and characteristic sputum left no doubt as to the nature of the trouble.

### A CASE OF HEMATURIA.\*

By JOHN NEFF, M. D., Baltimore.

I would like to speak of a little experience that occurred to me recently. A gentleman of about fifty years of age came to me with the statement that his urine contained a large amount of blood at every passage. The condition continued for about three months. Occasionally there would be no blood, but at nearly every passage there was a large percentage of blood, and he became quite debilitated. I insisted on an examination, which he kept on postponing. One day he sent for me, and I found him suffering from uremic colic. He had been suffering for six or eight hours, and required a quarter grain of morphia repeated several times to quiet him. Examination of the urine showed no evidence of stone. Since that attack, which was three months ago, he has passed no bloody urine at all. He suffered violent pain on the left side during the attack. There must have been a stone, which accounted for the bloody urine. Since the attack he has regained his normal health and lost the pallor which had become so marked. Prior to this attack, he had had no pain in the kidneys or bladder. I consider the case a rather peculiar one, and think the man fortunate in not having submitted to a cystoscopic examination.

#### DISCUSSION.

DR. HILL: I don't think it very rare to have hæmaturia occur in this way. A very small calculus passing down through the ureter can readily produce such hæmaturia. Perhaps for a long time prior to that, when blood was not present in the urine, pus might have been found. I recall a case where a man during the intervals of passing calculi always had some pus in the urine, until finally some of the calculi seemed to have formed a nucleus for a large stone, which passed down through the urethra. Sounds had been frequently used, and the urethra was quite large, and the stone passed in this way was a very large one. I have seen cases frequently of slight hæmaturia associated

with calculi that seemed to take care of themselves. I believe they are often passed unnoticed through the urethra. An old man came to me recently who a couple of years ago had had uremia, and was in a state of coma for several days that was relieved by copious bleeding, supplemented by high enema of salt solution. This time he came to me to get some medicine, and said that in the morning he had had a terrible pain in his right side that doubled him up; that finally the pain suddenly ceased, and that since that time he had been passing bloody urine. It was evidently a calculus that had passed down, and that may account for his previous trouble.

DR. NEFF: In this case there was never any pus in the urine. There was considerable blood, but never any pus. Since the passage of the calculus, which must have been very small, there has been no hæmaturia. He never suffered a particle of pain except during the passage of the stone.

### MALARIA AND PREGNANCY.\*

By A. B. GREINER, M. D., Richmond, Va.

Malarial fever needs no introduction to you; nor, I dare say, do you care about meeting it when it persists in making itself known in a pernicious way. Malaria is essentially a pathologic condition, and one that proves sometimes to be a very stubborn one, if we are to consider and believe that the mortality attendant upon it, in some malarial regions, is quite appalling. Pregnancy, on the other hand, we may consider a physiologic process—one that needs no lengthy treatise to establish it as such; and when not complicated by some pathologic condition runs a well-defined physiological course, and terminates in a physiological way. We would, then, consider malaria and pregnancy antagonistic to each other; not only in a definite way, but also because they run an essentially different course, and end in a far different way. With the light of modern investigation into the cause, morbid anatomy, course of treatment of diseases shining in full force upon the result of our researches, we are compelled to dissent from an opinion

\* Read before the Baltimore Medical and Surgical Association, April 14, 1902.

\* Read before the Richmond Academy of Medicine and Surgery, May 27, 1902—Dr. Lewis C. Boshier, President; Dr. Mark W. Peyser, Secretary.

formerly expressed, that "the treatment of intermittent fever in pregnancy is the same, so far as antiperiodics are concerned, as if the patient were not pregnant; and there need be no hesitation in giving quinine, for example, and giving it freely, unless some idiosyncrasy forbids its use."

From the statistics of abortion in malarial countries, it is conclusively shown that abortion occurs more frequently than in non-malarial countries, and we have therefore to accept the fact that intermittent fever in pregnant women predisposes to abortion and premature labor, consequently these two processes have been referred to as antagonistic. This antagonism manifests itself on the part of the malaria by tending to abortion and premature labor; and on the part of pregnancy by conferring upon the woman a lessened tendency to contract malarial fever. How it is, if it is really the case, that pregnancy renders one less liable to malarial infection, may, perhaps, be explained by the fact that the pregnant woman is not so much exposed to those factors which, at one time or another, have been recognized as causes of intermittent fever. The woman, on account of her sedentary life indoors, is not exposed to so great an extent to the contaminating air, if we are to regard malaria as a true miasmatic disease; nor to the infecting anopheles, if it is the only true cause. The cases of malaria complicating pregnancy, which I have seen, ran about the same course as to the recurrence of the chill as do the cases of uncomplicated intermittent fever. Some observers claim that the fever comes to be of a remittent instead of an intermittent type in cases where these two conditions are associated. The specific anti-malarial remedy, which has been for so long a time administered, is practically of no antipyretic value in conditions of fever due to any other cause, unless given in exceedingly large doses; and as this drug is so satisfactory in the successful treatment of malaria, it is the one of which we first think when seeking a remedy to be given, even in cases complicated by pregnancy, for it does prevent the chills and abate the fever. Those who are in a position to speak authoritatively concerning the physiologic action of quinine, say that it is used for its stimulant effect on the uterus in cases of uterine inertia, because it does stimulate the uterus to more violent contractions. The opinion has been expressed that the drug does not initiate uterine contractions,

but stimulates after contraction has begun. I am inclined to the belief that quinine does, in some cases, initiate contractions in the pregnant uterus; and this conclusion I have reached after observing that in some cases of pregnancy abortion was very promptly produced in women who were only a few weeks pregnant, and in whom there was no other ascertainable cause for the beginning of such contraction.

The predisposition to abortion observed in some women we might regard as a probable cause of initiatory contraction, yet why should this factor become operative after the administration of quinine if the quinine had nothing to do with it? Some explanation other than mere coincidence must be given for this. A recent writer has advanced the theory that the malaria is the potent cause of the abortion. While I regard the disease as a predisposing cause, yet I cannot understand why abortion should be delayed until the dose of quinine has been administered. Just how this drug exercises such stimulant effect on the uterus, I am not prepared to explain, unless we are content to say it stimulates involuntary muscle fibre. The women who seem most prone to abort after an anti-malarial dose of quinine are those who have previously done so, and in whom the various causes of abortion are apt to be successful.

I have seen one case in which abortion followed within twenty-four hours the administration of a ten-grain dose of quinine. Some writers say that pregnancy predisposes to an outbreak of chills and fever in those who have previously had such, and in whom at the time of impregnation the malarial poison is quiescent. But, whatever be the cause of malarial fever and the tendency for pregnant women to contract it, it is quite often met with and must be treated—treated in a very cautious manner—if we are to leave undisturbed the pregnancy. It has been advised that one of the bromides be administered along with some salt of quinine in the treatment, the object of the bromide being clearly to depress the nerve centres that have to do with stimulation of the uterus. Others have advised black haw for the same effect. This plan of treatment is frequently carried out successfully, and with absolute quiet on the part of the patient, nothing more can be desired.

The object of this article is not so much the recounting of old methods of treatment in the management of such cases, but while offering

nothing new, to emphasize the efficiency of a comparatively new drug which has come forward prominently, and justly so, in the treatment of malaria when pregnancy complicates. A few people have an idiosyncrasy to quinine, and therefore cannot take it in quantity sufficient to combat the malarial toxins. Undoubtedly in some cases pregnancy is a known idiosyncrasy, and one that should be kept in mind. It has been the experience of some practitioners that quinine administered for its stimulant effect to the uterus during labor, predisposes to postpartum hemorrhage. This is a complication for which every one of us has a natural dread, and if it does cause such hemorrhage, it is our duty to discard it or give it cautiously, and be alive to the possible result. It is not my purpose to underestimate the value of quinine, which has an established reputation as a specific in intermittent fever. Some other drugs have been used for their antiperiodic effect, but none so successfully as quinine.

The desire, then, is for some agent that is sufficiently powerful as an antiperiodic, and one that will not disturb gestation. No physician would allow his patient to suffer unnecessarily from chills and fever, even though she were pregnant, without giving her some control or some curative remedy, although there would be danger of interruption of the pregnancy. The disease is in itself an evil, and abortion from the use of drugs is not a good thing, and we are often forced to decide which would prove to be most disastrous. As a curative agent for intermittent fever, methylene blue within the last few years, has been advised; and while not so powerful as quinine in an antiperiodic way, yet undoubtedly has been proved to be very useful. This drug destroys the plasmodium malarie, and seems to be about as efficient as quinine in this particular, judging from clinical results; but this I have not determined from blood examinations. It had better be administered several hours before the time for the paroxysm and continued some hours afterward, or until no organisms are to be found in the blood. The only objection to its use, so far as I have been able to judge, is its intense irritant effect on the stomach if given in doses exceeding three grains. Of course, we may look for prompt and complete evacuation of the stomach, but there is no disagreeable after-effect. We may consider the dose to be given from one to five grains, the maximum to be given to those who are not sus-

ceptible to stomachic irritants, or to be given after meals. Methylene blue is eliminated by the kidneys, and the urine is colored an intense blue. I have made use of this drug in cases of malaria not complicated by pregnancy, and in those people who do not seem to be greatly benefited by quinine, and while my experience in this particular has not been extensive, yet there were good results attending its use. Without entering into detail as to individual cases of malaria and pregnancy and the treatment thereof by this remedy, suffice it to say that in the few cases which I have treated, the drug has been a very satisfactory one, and it is recommended for your consideration.

506 Grace Street, East.

#### DISCUSSION.

DR. WM. S. GORDON said that quinine, in small doses, was certainly a cerebro-spinal tonic, an appetizer, stimulating the digestive organs; a bactericide and destroyer of the plasmodium of malaria. Taking advantage of its vaso-motor influence upon the brain and spinal cord, some persons dissipated with it. In large doses, it was depressant. Many patients while menstruating had their flow increased by its use. On the other hand, Playfair stated that quinine expedited labor in the second stage, often removing the necessity of employing forceps. Dr. Gordon said he did not fear hemorrhage from its use in labor. It stopped after-pains by stimulating the uterus to expel the clots. Stimulating the parturient centre on the one hand, as well as the menstrual or vaso-dilator centre on the other, one could easily understand how it increased contractions in labor and the flow in the non-gravid uterus. He believed that quinine could initiate labor pains, produce abortion, and prevent postpartum hemorrhage.

DR. H. H. LEVY said his experience tallied exactly with that of Dr. Gordon. He had seen quinine institute frequent and forcible contractions of the uterus after they had ceased, in the second stage of labor; and in no instance that he could recall, had he encountered postpartum hemorrhage as a result.

Dr. Levy reported the following case: A young, healthy married colored woman, several years ago, sent for him, threatened with premature labor at about seven and a half months. She informed him that she had been taken with chills, and that a physician attending her employer had prescribed quinine. The woman had

taken but twenty grains, but she proceeded to give birth to a dead and premature infant. A year later she had a similar experience as to chills and subsequent fever, but took no quinine, and again gave birth to a dead infant of about eight months. Dr. Levy, making an investigation as to the cause of these premature labors, found marked fatty degeneration of the placenta. His observations of the clinical aspects of the case made him disbelieve in a malarial basis. When the woman again became pregnant, she reported to him, and he prescribed her taking seven and a-half grains of potassium chlorate three times a day. This she did throughout her pregnancy, and was delivered of a healthy child at full term. She had no chills or fever at any time during this last pregnancy, though taking no anti-malarial remedies.

DR. GREINER, in concluding the discussion, said that once he had given to a patient (who he did not know was pregnant, and who had aborted before) suffering with malaria, ten grains of quinine. The next day she again aborted. Not being able to attribute it to anything else, he came to the conclusion that the quinine had done it. He did not know how methylene blue stimulated contractions in labor unless by acting on the unstriped muscular fibres. One practitioner who had given it had discontinued its use because he feared postpartum hemorrhage as a consequence. In small doses it was a tonic, and would cause uterine contractions, if these were previously initiated by other remedies. The dose necessary to originate contractions was so large that there was danger later that it might depress the vasomotor centre and produce postpartum hemorrhage. His experience with methylene blue in malaria with pregnancy had been satisfactory. In cases uncomplicated with pregnancy, it had also been satisfactory apparently. The dose should not exceed five grains, but when it produced irritation of the stomach, it was reduced and given immediately after meals. Several hours were to be allowed for absorption. It acted quickly, but not as powerfully, as quinine. He continued its use for five or six days only, because of its effect upon the stomach and the discoloration of the urine.

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Antigia Tablets contain five grains, and in this form is convenient for general use.

## Analyses, Selections, Etc.

### Somnos—The New Hypnotic and Sedative.

*Somnos*, chemical formula  $C_9, H_{11}, O_6, Cl_6$ , is a new synthetic product of the H. K. Mulford Co.'s laboratory. It is formed by the synthesis of chloroethanal, with a polyatomic alcohol radical. It is free from local irritation to mucous membranes, and is not changed by the gastric juice.

It is a safe and reliable *hypnotic and cerebral sedative*, free from depressing effects upon the heart, respiration or vasomotor centres.

*Physiological Action.*—In the human being *somnos* produces sound, dreamless sleep of several (average six to eight) hours' duration, from which the patient awakens refreshed and without the headache, languor, mental confusion and intoxication-like symptoms which commonly follow the usually employed hypnotics. The sleep produced by *somnos* differs in no perceptible essential from that of a normal healthy man; records of the frequency and volume of the pulse and respiration show no diminution from the same in normal sleep.

This nature-simulating sleep, induced by *somnos*, is due to the selective action of the product upon the psychic and motor functions of the brain; this has been indisputably proven by extensive experiments upon the lower animals.

*Comparative Animal Experiments.*—Before *somnos* was tried upon human beings, careful comparative tests were made upon the lower animals, under exactly similar conditions, with chloral hydrate and several of the well-known newer synthetic hypnotics.

The majority of these *comparative tests* were made between *somnos* and *chloral hydrate*, because preliminary animal experiments proved that, of all the hypnotics employed, chloral hydrate is the most reliable, and because this remedy is so widely employed that accurate knowledge of the relative merits of *somnos* and chloral hydrate was deemed desirable. All comparative tests showed that *somnos*, given in twice the *fatal dose* of chloral hydrate, merely produced natural sleep, from which the animals awakened in a normal condition. It is, therefore, self-evident that *somnos* is a much safer hypnotic than chloral.

*Furthermore*, careful comparative studies of the effects of *somnos* and chloral hydrate upon the heart, respiration, vasomotor and thermo-

taxic centres in the medulla show that while, as is well known, chloral hydrate depresses and ultimately paralyzes these, somnos, even in twice the sleep-producing dose, has no appreciable effects upon them; hence it is clear that the therapeutic dose of somnos can have no deleterious effects upon the heart, circulation, respiration or temperature of human beings. Somnos is free from effect upon digestion, the bowels and kidneys.

*Clinical Experiments.*—As the results of clinical trial in hospital and private practice, five very important facts have been established.

*First.* That somnos is a reliable, uniformly active hypnotic; this fact was noted even in those cases uninfluenced by chloral and the usually employed hypnotics.

*Second.* The sleep produced by somnos exactly simulates natural sleep. This fact corroborates the results of animal experiments, which show that the dominant action of somnos is upon the cerebral cortex (psychic and motor areas.)

*Third.* That somnos is a safe hypnotic, free from depressing influences upon the heart, circulation and respiration. This was proven by administering somnos to patients the subjects of organic heart disease (myocarditis, valvular affections) and pulmonary lesions (emphysema, pneumonia, etc.).

*Fourth.* Somnos does not induce unpleasant by or after effects. Langor, headache, vertigo, nausea, vomiting, giddiness, mental confusion and digestive disturbances, which are practically always present after the use of chloral hydrate, and most, if not all, hypnotics, are not induced by somnos.

*Fifth.* Somnos has a peculiar calmative influence upon the condition of nervous irritability usually present in neurotic, neurasthenic and hysterical patients; in other words, somnos is an effective general sedative.

*Indications.*—Somnos is indicated in sleeplessness and nervousness, from whatever cause; compared with chloral hydrate, it is safer, more reliable, and free from bad after effects.

1. In the insomnia of nervous affections, such as hysteria, neuralgia, nervous irritability, etc., somnos produces natural, refreshing sleep.

2. In the mental excitement of acute mania, delirium tremens, dementia and chronic insanity, somnos is preferable to all other hypnotics, because of its selective sedative action

upon the disturbed psychic and motor areas of the brain.

3. Sleeplessness occurring in the course of organic cardiac disease (valvular affections, myocarditis, fatty degeneration, etc.) may be safely overcome by the judicious use of somnos.

4. In acute infectious diseases, such as typhoid fever, pneumonia and influenza, accompanied by insomnia, somnos produces excellent results, because of its freedom from depressing effects upon the enfeebled cardiac and respiratory functions.

5. In insomnia due to pain, somnos produces sleep in the majority of cases; it is, therefore, of service after surgical operations.

6. Somnos yields satisfactory results in a large proportion of the cases in which chloral is without effect, and particularly in patients with wrecked nervous systems, for whom hypnotics are necessary, but are usually found of transitory or negative value.

7. Somnos is of especial value in the eruptive diseases of childhood.

*Directions.*—The average hypnotic dose of somnos is from one dessertspoonful to one tablespoonful in water or milk; repeat once or twice, if necessary. As a sedative, one to two teaspoonfuls, repeated at intervals of three or four hours. For children, one-half to one teaspoonful, according to age; repeat once if necessary.

The hypnotic effect of somnos is sometimes rather slow in developing; this is due to the gradual evolution in the system of its active hypnotic ingredient. Hence, it is advisable to administer somnos several hours before the desired advent of sleep; this may be in the afternoon, early evening, or according to circumstances.

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**Cholera in Manila.**—To prevent the spread of the cholera epidemic which prevails in Manila to the officers and men of the naval station at Cavite, authority has been given the ranking naval officer to take such steps as may be necessary. As far as can be learned, the epidemic is confined to the natives and Chinese in Manila, and the disease does not prevail among the whites.

## Editorial.

### Dr. M. D. Hoge, Jr., Richmond, Va.

It will be a pleasure to the wide circle of friends of this able urologist to learn that he has accepted the chair of Histology and Urology in the University College of Medicine, Richmond, Va. Heretofore this professorship has been included in the chair of Histology, Pathology, Bacteriology and Urology; but it is now divided—Dr. H. S. MacLean retaining professorship of Pathology and Bacteriology—including all questions of hematology, sputum examination and examination of gastric contents, etc. In other words, both of these professors will have much to do with laboratory work of clinical diagnosis—each in his respective department.

### Glycerinized Vaccine Glass Points.

As the season for vaccination of children for public schools, etc., as most State laws require, we wish to call attention to something new in the way of vaccine points. The H. K. Mulford Company, of Philadelphia, Pa., have introduced *glass points* charged with glycerinized vaccine lymph. The lymph is in a miniature glass test tube; the glass "point" dips down into it, leaving enough of the handle part of the glass out to catch on and draw the rods out of the tube; sterilized wax or paraffin forms the stopper, at the open end of the tube, through which the glass point is passed, and held in place—hermetically sealing the tube. We look upon this glass "point" as one of the greatest improvements that has been made in providing a means for insuring a pure vaccine virus. Of course, vaccine material is liable to deteriorate if subjected to sudden change of temperature; hence the early use of the "points" is essential, as also the advisability of keeping all vaccine material in a cool place during the summer months especially. These glycerinized vaccine "points" on sterilized glass seem to be ideal, and are always ready for use.

### Is Appendicitis Always a Surgical Disease?

That a more conservative era is dawning with reference to the surgical treatment of appendi-

citis is apparent to any one who is conversant with the literature of this subject. For at least a decade up to two or three years ago, such were the positive assertions of abdominal surgeons in almost universal favor of immediate operation for anything simulating appendicitis that the physician dared scarcely to express an opinion on the subject except to consent to an operation. How many times has it occurred in clinics and elsewhere that the surgeon who has cut down and found a suppurative appendix or a sloughed off appendix, has not gloatingly held up the mass or showed the pockets of pus, and sneeringly derided the idea of any person getting well without surgery for any such condition! Here and there, too, they report some fulminant case, and deplore the fact that some "good old family physician" had not years before that recognized the gravity of the case and submitted the patient to an up-to-date surgeon, when his life and health and happiness might have been saved to the community and to his family!

Now, we venture the assertion that there are but few persons in good health at fifty years of age or over, who at some time in their lives have not had "appendicial symptoms," who yet have never been operated on, nor really had the need of operation. We feel quite sure that had every case with "appendicial symptoms" that has come under our observation been turned over to the hands of the abdominal surgeon of to-day, some of those patients now living in the enjoyment of health would have been in their graves, or else dragging out miserable existences, with dragging pains about the scar wound, and a sense of physical "weakness of the parts" that make life uncomfortable. Far be it from us to decry the just claims of conscientious surgeons with reference to this matter. But the wise, discriminating surgeon will come to the conclusion after awhile that every case of appendicitis is not a case demanding operation. It was just here that the great Hunter McGuire became the able surgeon he was. Many people can tolerate the disease better than they can the one remedy of the day.

We are not writing an article for or against operative surgery in appendicitis. We only wish to point out the tendency of to-day, which is to record the results of observation and experience, and to draw the natural deductions.



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## Original Communications.

### TUBERCULAR PERITONITIS.\*

By T. E. POTTER, M. D., St. Joseph, Mo.,  
Professor of Surgery, Central Medical College, etc.

Tubercular peritonitis occurs most generally between the ages of 20 and 40 years, but no age is exempt. Females are much more liable than males. It may occur as a lesion in phthisis, tubercular inflammation of the genito-urinary tract, as a result of general tuberculosis, and as a local inflammation.

There are several forms. We prefer the classification given by Warren in his Surgical Pathology. "Acute miliary tuberculosis of the peritoneum, characterized by sudden onset, a rapid development, a serous, or sero-sanguineous exudation; second, chronic caseous and ulcerating tuberculosis, characterized by large tubercular growths, which tend to caseate and ulcerate, leading often to perforations between the intestinal coils, or by purulent or sero-purulent exudation often sacculated; third, chronic fibrous tuberculosis, in which the process may be subacute from the onset, or it may be the final result of the miliary form. Little or no exudation occurs in this variety, and the tubercles are hard and pigmented." (Osler.)

This disease may be entirely latent with no evidence of its existence whatever; and the first discovery is often made by the surgeon who has to trouble the abdominal cavity for some other trouble, and finds the tubercular masses. This I have observed several times myself, when operating upon the abdomen. To my surprise I have found both the visceral and parietal layers of the peritoneum infected with tubercles. In some the tubercular nodes were few, while in others they were numerous. Again, I have known several cases where the patient made no complaint of bad health until the abdominal cavity began to fill with fluid, and the swelling

showing that something was wrong, caused the advice of a physician to be sought. If the cases were not operated upon at once, the peritoneal cavity became extremely distended, and when the operation was made, numerous tubercles were found, which covered every square inch of the entire peritoneal surface, both visceral and parietal. In many instances there was extensive ulceration. Where the fluid is very bloody the ulceration is quite extensive, and sometimes hemorrhage into the cavity is free from these open surfaces. The accumulation of fluid is at times so circumscribed that it resembles a cystic tumor; and this mistake is no uncommon thing.

I remember very well, some fourteen years ago, being called to examine a colored woman for enlargement of the abdomen. Every appearance indicated an ovarian cyst, and from my examination I had no hesitation in pronouncing this to be the case. We prepared the patient for an ovariectomy, and started into the cavity, expecting to turn out a cyst weighing, with contents, twenty-five or thirty pounds. To our surprise the moment we opened the cavity out came, with the fluid, all the intestines. We replaced the bowels, and found our cyst closely adherent to the abdominal wall in the shape of a tubercular peritoneum. After emptying the cavity and cleaning it out well with dry sponges, we sewed up the wound. The woman made a complete recovery, and was a few years ago in the best health, doing washing, work she had formerly followed.

While we were mortified over what we first thought was a serious mistake, we were most gratified with the results. I feel to-day, after many years' experience in surgery upon the abdomen, that the case was one that would have deceived the best diagnostician; and the mistake should not have been so mortifying after all.

The first division of this subject, as given by Warren, is the most common, and the most favorable for treatment. How does the peritoneum become affected? Often as a result of

\* Read before the Medical Association of the State of Missouri, held at St. Joseph, Mo., May 20, 1902.

general tuberculosis, or it may occur in connection with pulmonary tuberculosis, or there may be tubercular glands. The mesentric glands are often infected and enlarged from tubercular deposits. There is no doubt but that food contaminated with tubercular germs may give rise to this form of inflammation. We know the lymphatic glands throughout the body are most susceptible to inoculation, and may remain for some time in an indurated condition, not showing any active symptoms. We not only have the cervical, inguinal and axillary glands, but we have the mesentric at times in a hardened state. This infection may last for months or years without active manifestation. The Fallopian tubes, as well as ovaries, are very common seats for tubercular masses; here we find, in most instances, their ravages severe; and from these points the spread is rapid. We have also in operating for appendicitis found the appendix extensively covered with tubercles.

In connection with our subject here, as to the sources by which the peritoneum may become affected, we would like to say that we believe tubercular bacilli may lie latent for years in some gland or portion of the body without any real manifestations until a favorable opportunity is presented, then their identity is clearly shown. Who is it that is not infected with tubercle? It does not follow that there is any definite time of incubation. We have had many cases of perirectal abscesses of a tubercular nature, and have operated upon them, corrected the fistula in ano, which so often follows, and have seen the patient live for years before showing symptoms of pulmonary disease, then finally a phthisis develop and the patient die. We all know that this is shown in families whose members gradually die off from tuberculosis, years intervening from period of inoculation until the disease shows itself in the lungs, joints, brain or peritoneum.

We are told in history that the celebrated Lennec, after a nick from a saw, while making a necropsy on a phthisical subject, thought that he discovered an example of inoculation in a small tubercle in his skin. Twenty years afterwards this great physician was living and in good health, but he finally died of consumption.

The point that we desire to impress is, that the infection may reach the peritoneum as indicated above, but that the bacilli are slow in developing; may lie latent for years without any active manifestations, but congestions or impairment of healthy action of the peritoneum, either

general or local, may cause the development of tubercular peritonitis. The periodical congestions that take place in the pelvic cavity of women, and the stasis that often take place in the genital organs, account for the frequent development of tubercular peritonitis in the neighborhood of the Fallopian tubes.

Severe constipation is, no doubt, also a source of tubercular development, and these two causes, just mentioned, may account for its frequency in women. If we want to benefit the patient, an early diagnosis of tubercular peritonitis is certainly a most necessary thing.

As to the diagnosis DaCosta says: "Tubercular peritonitis generally occurs in those who have tubercle of the lungs, or enlarged caseous glands, and, when such persons complain of abdominal pain and uneasiness, of soreness to the touch, of nausea and vomiting, of diarrhoea, alternating with constipation and of losing flesh and strength; when the tender abdomen is tense, resistant, much distended in part with liquid, but especially with wind, and exhibits on its exterior the tracings of the convolutions of the intestines; when, in addition, there is œdema of the lower limbs with fever, irregular, at times high, at times almost ceasing, and a growing cachexia, we can hardly be wrong in presuming the signs of peritoneal inflammation to be owing to the presence of tubercle. Even when disease of the lungs is absent, or is not well defined, we shall generally be correct, if the abdominal symptoms mentioned exist, and there are repeated attacks of acute and subacute peritonitis, in determining the peritoneal affection to be tubercular. Signs of great significance are the presence of nodules in the rectum, and in the sarco-uterine ligaments, and of inflammation around the Fallopian tubes. In some instances the disorder develops with rapidity, and has the aspect of an acute complaint. On the other hand, it may be so great as to simulate an abdominal tumor; the disease is often mistaken for ovarian disease."

The prognosis of tubercular peritonitis is not so unfavorable if of the miliary variety, and attended with ascites, providing the proper treatment is applied. From the advancement made in the treatment of tuberculosis of all kinds within the past two decades the death rate from this trouble is at least one-half less than it was formerly. The second and third forms of tubercular peritonitis are far more than the first.

The treatment of this disease is, without doubt, most unsatisfactory where there is any-

thing like advanced general tuberculosis. Where it is of the latent or local form, and is attended with an exudation of fluid, either serous, sa-neous, or semi-saneous, opening the abdomen, allowing the fluid to escape, the free entrance of the air, and then sewing up the wound again, has proven itself to be a most favorable procedure, and has surpassed all other methods in giving immediate relief. The question comes into the thinking mind, What are the benefits from allowing the fluid to escape, and not removing the tubercles, but in sewing them up in the cavity as they were found? The question is easily answered. It is an accepted fact that the riddance of the fluid eliminates the toxins that have been accumulating. These toxins are very poisonous. A minute dose of them has been known to produce marasmus. Another question that is more difficult to understand is, why does the entrance of air benefit? We all know that tubercular bacteria never attack a large open wound, such as is made by the amputation of a limb, etc., but are most likely to originate in connection with contused wounds or slight injuries, or where there is stasis in a simple form. A reason given for this is that in large wounds, and surfaces, the fresh blood is invited to the parts, stasis is readily relieved, and the lymph and leucocytes have the power of repairing the tissues and of absorbing or destroying the bacteria by phagocytosis. May not this be the "modus operandi" here? We think this is very probably true, and we further believe that the free entrance of air does temporarily, at least, suspend the power of these germs to propagate, and allow the leucocytes and tissue corpuscles to get in their work.

Morris, in a lecture on tubercular peritonitis, holds forth the idea that when the abdomen is open that saprophytic bacteria are permitted to enter the cavity, and they, acting upon the tissues, form a toxine that is fatal to the bacilli tuberculosis, and the surgeon should encourage the free entrance of air into the cavity when they make this operation. He had made several experiments in his laboratory that seem to favor this view. On the other hand, he says further in support of the phagocytotic theory we have given above and against the saprophytic idea. "In some cases the bacilli are not killed by the toxins, but their growth is probably inhibited for a sufficient length of time, so that nuclei brought by polynuclear leucocytes in the peritoneum can destroy them." He also states that if saprophytes could enter the abdominal

cavity through the Fallopiian tube that we would likely have spontaneous cures without operating.

The application of iodoform suspended in glycerine to the surfaces of the peritoneum is highly recommended by Sems and others, so is the administration of the carbonate of guaiacol internally a valuable antiseptic. Both of these remedies are not supposed to destroy the bacteria, but to neutralize the toxins generated by them. We believe in drainage with a rubber tube, and not with gauze. Keep a tube in the lower angle of the wound so long as there is a discharge and it benefits. We have tried it in several cases, and have never regretted it. We believe, on the other hand, if we had not taken this precaution, that our work would not have been successful.

After the fluid is evacuated salt solution should be poured gently into the cavity with a pitcher, and not with an irrigator, as the force from the latter will do damage. If a portion is allowed to remain, it will be absorbed, or will get through the tube.

In the last ten cases of tubercular peritonitis upon whom we have operated two died and eight recovered. The first one who died had what has been classified by Warren as the chronic fibrous variety. There were extensive adhesions, and the omentum was hardly recognizable. The woman died the second day. The second case was of military variety, extensive exudation of a bloody nature, and the omentum was one large mass that had to be entirely removed. This woman recovered from the operation, so that she could go about, but died six months afterward. The eight who recovered are well, and were in fairly good health when I last heard from them.

In tubercular peritonitis the peritoneum is sometimes very thick, the omentum and intestines are often adherent to the walls; and, in opening the abdomen, great care should be taken not to wound the bowel. Of the peritoneum it is often very dark, and instead of the healthy appearance shown by the normal bowel, it is not only dark, but looks almost gangrenous.

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HARD CASE.—De Kanter: Doctor wanted me to stop drinking between meals.

Soakley: Are you going to do it?

De Kanter: Well, I offered to compromise. Told him I'd be willing to stop eating between drinks.—*Exchange.*

## TREATMENT OF INTERNAL HEMORRHOIDS WITHOUT KNIFE.

By GEORGE ROSS, M. D., Richmond, Va.,

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Consulting Surgeon Southern Railway, District Surgeon  
Chesapeake and Ohio Railway, etc.

The necessary irregularity incident to the lives of trainmen subjects them to risks other than railway accidents, which, while rarely imperiling life, do, very surely, imperil physical comfort. Their enforced disregard of nature's admonition and the mechanical consequences of persistent upright posture, furnish the occasion for the occurrence of one of man's most common ailments. The simplicity of its treatment, and the certain relief promised in the vast majority of cases, must be my apology for consuming the time of the Association for a few moments, while I consider the subject of *Internal Hemorrhoids*.

An admirable paper, clean-cut and practical, appeared in the *Journal of the American Medical Association* for December, 1901. The author's discussion of the etiology of the disease was conclusive, and so condensed as to be easily grasped. His treatment, the most recent from a surgical standpoint, and so simple that a novice in the management of this ever-present rectal disturbance, may adopt it without trepidation. His results are all that a skilful surgeon could hope for, or a suffering patient ask for. But, while commending his paper as worthy of study, I take occasion to comment on his failure to make mention of *one* certainly, if not the most effective, method yet devised for the cure of all *internal* hemorrhoids, whether attended by bleeding or not.

That the treatment is permanent in results as to the tumors treated, there can be no question, because the action of the remedy is destructive; but, that a recurrence of hemorrhoids following any treatment is a possibility, is also without question, and for the simple reason that, constitutional conditions primarily producing them continuing, or, the subject of them failing to give needed attention to nature's functions, recurrence, not of the removed, but of other angio-mas, is the penalty to be paid. I speak as one having authority in that I am the beneficiary of this treatment, and for more than twenty-five years have had absolute "surcease of sorrow." I have employed it in my office, in hospital, and in homes on sufferers in all conditions of life during all those twenty-five years, and have yet

to record the first case of failure to cure, while a small book would hardly suffice to contain the benedictions that have been heaped on my head by the unshackled slaves to the disease.

The treatment, in some form, is doubtless familiar to many of my hearers, but some, of course, it has escaped, because it is hardly more than half surgical.

In simple words, I describe *the method of management*: Given a case of *internal* hemorrhoids, with or without bleeding, usually protruding at stool, and lifted into the rectum after stool, by manual effort or muscular action, I direct the administration of a heaping teaspoonful of compound senna powder the night before treatment, to be followed by a glass of bitter water or a tablespoonful of Epsom salts before breakfast the next morning. Supplement their action by a high and full saline enema before the operation, an antiseptic cleansing of the recto-genital region, and the patient is ready. Place him in the dorsal or left lateral posture, and examine the field. If not already protruding, a slight bearing down effort usually forces the tumors into view. If found eroded, with a granular or velvety surface, mop freely with strong nitric acid, and then inject into the centre of each tumor the whole or half the contents of a hypodermic syringe filled with this solution, beginning with the tumor highest up:

℞ Sol. Acid: Carbolic (95%) ʒ ij  
Glycerine, ʒ ss  
Aq. Distillat ad ʒ ij—M

When each tumor has been thus treated, coat the mass with carbolized vaseline, and gently push them well up into the bowel.

To prevent excessive and painful sphincteric action, make thorough and forcible dilatation of the sphincter muscles, after which apply an antiseptic pad and "T" bandage, and put the patient to bed. Pain may or may not be intense enough to demand an opiate. If it does, 25 drops of elixir opii will usually suffice for relief. Quiet, a light diet and unmoved bowels is enjoined for two days. Then return to the compound senna powder at night, and salts or bitter water in the morning to secure regular stools (at which time straining must be carefully guarded against). After evacuation of the bowels and a bath, the following ointment should be sent well into the rectum by means of an applicator, night and morning:

℞ Nosophen,	3 j
Cocaine Hydrochl.,	grs. vj
Ext. Belladon.,	grs. iv
Unguent. Hebra.,	ʒ vij—M

The time needed for the sloughing process varies, of course, but it is very unusual that more than one treatment is demanded. In a recently treated case, in which the projecting mass of tumors and prolapsed rectum measured seven and a half inches in circumference, I subjected the patient to three treatments, all applied in my office, and without anæsthesia, and in neither instance was the patient confined to his house more than two days.

Except in magnitude of output duplicate cases might be multiplied, but it is needless. Very simple, surely, very certain and well worth remembering by the youngest of us! Multitudes of people shrink with horror from the surgeon's knife, even though anæsthesia be assured, and rush into the hands of either irregular practitioners or positive "quacks." Specially is this true of the class of cases under consideration. Why permit it when we can confidently promise a certain, and, in the vast majority of cases, a practically painless cure?

101 E. Franklin St.

## TWO UNUSUAL CASES IN MEDICINE.

By LUCIEN LOFTON, A. B., Ph. G., M. D., Emporia, Va.,

Ex-President Seaboard Medical Association of Virginia and North Carolina.

Not infrequently members of the profession encounter idiosyncrasies in patients which justify recording, and, as something out of the general run, I submit the following:

### CASE I. Nearly Half an Ounce of Quinia Required in One Day for Malaria.

T. Dewitt S., age 24, Emporia, Va., who has recently recovered from an attack of malarial fever, was taken sick early in December of last year. The malarial symptoms were verified by a blood examination. Routine medication was observed from the first, beginning with a mercurial purge every second day, followed by twenty-five grains of quinia sulphate every twenty-four hours. Temperature varied from 103 to 105° F. Patient practically unchanged for seven days under this regime, when both arsenic and iron were added, with water baths every five hours. No change for the better was noted. A second blood examination was made,

when a few straggling malarial parasites were found. Hypodermic injections of 10 grains of the hydrobromate of quinine every three hours was next tried, for forty-eight hours, seemingly without any good result. The best manufacture of the alkaloid was used from the first dose.

The dermal injections were discarded, owing to the violent pain induced thereby, notwithstanding the fact that cocaine anæsthesia was used. I began to give larger doses of quinine daily, and no beneficial results followed this procedure, until I had given in twenty-four hours 231 grains, after which the patient began to rally.

No tinnitus aurium of any consequence, even with this large amount, was complained of, nor were there any nervous symptoms manifested. It might be added that almost all of the quinine was given in an acid solution.

In this section you occasionally have to resort to "veterinary" doses of quinine, but this is the largest amount I have ever given to one patient in so short a time. I feel confident the medicine was absorbed, for, since his recovery, the same preparation in ten-grain doses respond very promptly, physiologically.

### CASE II. Semi-Monthly Evacuations.

John W. R., age 60, Belfield, Va. Robust and hearty, presents a very peculiar condition in that he only has two evacuations in thirty days, although he eats regularly three square meals a day. No physical or mental derangement exists. He has been afflicted this way for the past seven years, and has never suffered any inconvenience whatever, not even a headache. No enlargement of the abdomen or liver was found, and he has never been jaundiced. He reports the semi-monthly evacuations, not unusual in amount, and without any offensiveness. The man is not particular regarding his diet. From two to five grains of calomel and soda will move him two or three times, while Epsom salts taken in large quantities produce little effect. There is present no indication of Glenard's disease. A rectal examination recorded no abdominal condition of the lower intestine or sphincter ani.

Repeated examinations of his urine showed no bile pigment present.

Repeated restrictions in the man's diet, together with large and frequent draughts of water, does not appear to improve his condition in the least.

Belfield.

## INDICATIONS FOR, AND TECHNIQUE OF, OPERATION FOR NEPHROPTOSIS.\*

By AUGUSTIN H. GOELET, M. D., New York, N. Y.

The importance of nephroptosis as a factor in producing renal disease, and also disease of the female pelvic organs, was emphasized by the author, who thinks this result not generally appreciated; else the utility of nephropexy would be more universally recognized.

Nephropexy may be regarded as a fad of the surgeon by those who have not investigated the subject carefully; but the surgeon is the better judge of the necessity for operation, because he sees these kidneys exposed on the operating table, and can observe the structural changes that have resulted in consequence of prolonged congestion or obstruction of the ureter, due to prolapse.

In a contribution to the Gynecological Section of the American Medical Association, the author had shown that nephroptosis causes disease of the female pelvic organs by compressing the ovarian vein and interfering with the return circulation from the pelvis. In this alone he thought was to be found justification for considering this a grave condition, entitled to be placed beyond the pale of palliative treatment.

Such diseases of the kidney as would result from prolonged congestion of the organ or obstruction of the ureter, were to be found in prolapse of the third or fourth degree. Hence, in nephroptosis, when long neglected, the kidney may be affected by nephritis, perinephritis, pyelo-nephritis, hydro-nephrosis, pyo-nephrosis, and atrophy. Extravasations under the fibrous capsule and between it and the fatty capsule are also met with in cases of long standing.

Operation was not advised for prolapse of the first or second degree, except when the left kidney was found to be in the second degree of prolapse at the time of operation on the right kidney; then the left kidney should be fixed at the same time to obviate the necessity for a second operation later, which would surely be required, because prolapse of that degree is inevitably progressive.

For nephroptosis of the third degree or beyond, operation is necessary because of liability to disease of the kidney resulting at any time, and because of its influence upon the female pelvic organs.

Experience and observation have taught that it is unnecessary and unwise to deprive the kidney of its protecting fibrous capsule, or to transfix its structure with sutures or muscular bands. Firm adhesion of the kidney with its fibrous capsule intact could be secured, if it is held for a sufficient length of time immovably in contact with the exposed muscles of the back. This can be accomplished by inserting the sustaining sutures *under* the fibrous capsule only in such manner that its resisting power is utilized to the best advantage.

Two sutures of silk-worm gut are employed, one having three insertions under the fibrous capsule of a half inch in length each, and the other two insertions of the same length. They are brought out through the structures of the back at the upper angle of the wound just below the last rib, and are tied over a small flat pad of gauze to prevent cutting and loosening of the suture loop, which would permit the kidney to sag and destroy the chance of adhesion. These sutures are not removed until just as the patient is ready to get out of bed, three weeks after operation.

The author has operated upon 109 cases by this method, in 27 of which both kidneys were fixed at the same time, making a total of 136 nephropexies without a death, and without any complication following. So far as he has been able to ascertain, there have been no relapses in any of his cases.

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## RED DRESSINGS TO PREVENT SUPPURATION IN WOUNDS.

By ALEXANDER IRVINE, M. D., Welch, W. Va.,  
Superintendent Miners' Hospital No. 1.

I wish to suggest the use of red dressings to prevent suppuration in wounds after surgical operations, etc. This is simply a new way of applying the phototherapy of Finsen.

Finsen's red light treatment of small-pox has proven a great success, as it prevents all suppuration, pitting, etc.

The following are the *directions* for use: The exclusion of the actinic rays (the blue and ultra violet rays) must be complete; the windows must be covered with heavy red curtains, or,

\*Original abstract of a paper read at the first annual meeting of the American Urological Association, at Saratoga, N. Y., June 13, 1902.

better still, window panes of deep-red glass may be used. Instead of the red curtains or red window panes, use red dressings, as suggested above. In small-pox, the patient must remain in the red light until the vesicles are dried up—even the slightest exposure to day light occasionally bringing about suppuration and its sequelæ.

All the light passing through red dressings will be red. The gauze and bandages can be dyed with some harmless red. The red dressings must be made at night by a red light. Red globes can be gotten cheaply for electric lights and ordinary oil lamps.

The prevention of suppuration of wounds is one of the chief aims of the surgeon. I have seen no mention of red dressings, or red light, in the application of Finsen's Phototherapy in Surgery—I mean, in the prevention of suppuration in wounds and after surgical operations.

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## SELECTIONS FROM THE MATERIA MEDICA OF OUR ENGLISH ANCESTORS SEVERAL CENTURIES AGO.\*

By EDWIN L. MORGAN, M. D., Washington, D. C.

I have thought it would interest the Society to listen to a short but hasty review of some historical researches I have been recently making in regard to our English medical ancestors in the practice of their noble profession some three or four or more hundred years ago. I shall first give an exceedingly short resume of the earliest dawn of historic medicine.

It is human nature to pay more attention to *what says a thing than to what is actually said*. But let me urge upon you to take no man's say-so; judge medically for yourself. It was the bold assumptions of some of the ancients that so long kept a mystery about medicine and that shrouded certain of the "fathers" in wonderful healing powers. We are told, for instance, that Aesculapius was "represented as a bearded old man, leaning on his jointed cane, adorned with a crown of laurel, and encompassed with dogs." "He wears a crown of lau-

rel because that tree is powerful in curing diseases. By the knots in his staff is signified the difficulty of the study of physic. He has dogs painted about him and in his temple because many believe that he was born of uncertain parents, and exposed and afterwards nourished by a bitch." Others say it was a goat "which was pursued by a dog that gave suck to the forsaken infant; and that the shepherds saw a lambent flame playing about his head, which was a prognostication of his future divinity." Cyrenians sacrificed goats to him because he was nourished by a goat; or "because a goat is always in a fever; therefore a goat's constitution is very contrary to health." "Aesculapius was apparently a son or descendant of *Patheon*, the healer, as described by Homer; or, as commonly received, a son of *Apollo* and the nymph, *Cronis*, a daughter of *Phegyas*." "Apollo shot the nymph—his mother—when she was pregnant, because she admitted the addresses of another young man after he had become enamoured of her. But he repented after he had killed her, took out the child alive," and delivered him to *Chiron*, a physician, to be educated as a doctor. Aesculapius "improved the art of medicine, which was very little understood." This god of medicine gained a world-wide fame and love as a healer of pain and sickness. But his power of raising the dead roused the wrath of *Hades*, who complained to *Zeus* that his kingdom would soon be unpeopled if Aesculapius went on restoring them to the upper world. *Hades* induced *Zeus* to kill him; so Aesculapius died from "a stroke of thunder."

He had two sons, both famous physicians—*Machaon* and *Podalirius*—who followed *Agamemnon*, the Greek general, to the Trojan war. *Plato* says dunghill cocks were sacrificed to the God of Medicine, which are deemed the most vigilant of all birds; for of all virtues, watchfulness is chiefly necessary to a physician. Was Aesculapius a deified physician? You can answer the question for yourselves. How times have changed!

The ancient *Hindoos* said that a man who could point with pride to a fair sized graveyard must have had experience, and therefore was a good physician; for otherwise he could not have had patients to experiment upon. If a doctor could point to only one grave, he was not eminent in his profession. Success in medical reputation has too often meant death to the patient in the earlier ages. Alas! this bugbear of antiquity can yet be traced in the prac-

\* Read at a meeting of the Medical and Surgical Society of the District of Columbia, April 3, 1902.

tice of surgery of to-day with too many. The patient has one view of success, and the surgeon two points of view. From a surgical point of view, an operation on a corpse or on a living patient, if novelty and "daring"—better called recklessness—is displayed, is termed a marked success, so far as the operation is concerned, but "unfortunately this or that occurred," and the undertaker is financially benefited. Or, it may be that the result is never reported; but if perchance the patient recovers so as to get out on crutches, or is able to be wheeled about, the case is reported as an illustration of numerous successes of grave operations—an enticement to the credulous to come in and be operated on—to share a like or worse fate than death itself! Oh, for an honest report of cases as they occur—something that may serve as a guide to ascertain facts! But the dawn is breaking. The sun of truth is rising to dispel the mists of such "antiquity"! Success should mean restored to health and comfortable health, and nothing less.

You will pardon this digression. Lessons can be learned from the past.

Time compels me to pass by the history of medical civilization—if I may use such a phrase—in Greece and Rome.

I come now to the real intent of this paper—to give some extracts from old medical works to show to a limited extent the general character of medical practice several centuries ago.

In those days, as in our times, a few medical men were advanced intellectually way ahead of the era in which they lived. There was a good deal of human nature in their logic and views in regard to the starchy ointments of Paracelsus, as compared with modern quacks, etc., in regard to the value of certain medicinal preparations.

It seems incredible, but the following remedies were used for *colic, digestive troubles, and other diseases of children*: Crabs' eyes and claws, oyster and cockle shells, cuttle-fish, eggshells, chall, coral, coralline, pearls, mother of pearl, both kinds of bezoar—oriental and occidental: burnt hartshorn, burnt ivory, bone of stag, bone of stag's heart, "shavings of hartshorn," that also of the unicorn, bole armeniack, "fealed earth," and blood stone. Beside bezoar pearls, other precious stones were used as medicine. One author says that "oyster shells that had long been exposed to the sun, as found upon the sea shore, are to be preferred instead of those changed by the 'chymist'—blue or yellow."

This same author states: "Nor can I commend magisteries of precious stones, which are so much celebrated by a great many practitioners."

TREATMENT OF EPILEPSY.—Willis says: First, vomit, purge, bleed, use alteratives and cauterics. "The second intention is answered by specifics which are said of themselves, though not always, to reach the cause of the disease, and quite overcome it, such as male peony, mistletoe of the oaks, rue, castor, elk's hoof, preparations of the human skull, amber, coral, and a great many others." The following prescription may be of interest:

"Take Prepared Human Skull, Mistletoe of the Oaks, Fractitious, Cinnabar, Elks hoof, of each, half an ounce. Dose, from ten grains to a scruple." Of this preparation, pills may be made, electuaries, troches, spirits and elixirs.

Here is a formula for a plaster:

"Take the root and seed of Peony, Castor, Mistletoe of the Oaks, Human Skull—finely powdered; of each, a *drachm*. Plaister of Betony, Crarana, Tacamahac, of each *two drachms*. Balsam of Copaivy, a sufficient quantity. Mix them, and make a plaister to be spread upon soft leather, and applied over the sutures of the head."

"The temples and nostrils may be annointed frequently with the oil of amber by itself, or mixed with oil of copaivy."

Another writer says: A girl eleven years old, suffering from Epilepsy, the following prescription was used:

℞ "Earth worms, prepared . . . one ounce.  
Human Skull, prepared . . . two ounces.  
Ceffer Cardamons . . . . . two scruples.

"Reduce them all together into a fine powder, and divide it into twelve papers."

Use as follows: "One powder twice a day in a spoonful of cephalic julep, taking a spoonful of the same after every dose."

The author further says: "If the stomach rebels against the powder, change treatment."

Dr. Willis says: "For a man's children, all of whom died from convulsions in the early months of infancy, he ordered the following: "Take prepared Human Skull and the Root of Male Peony, of each *one drachm*; pearls in powder, half a drachm; white sugar, a drachm. Mix them all together, and make a very fine powder.

"Take of the Black Cherry Water, three ounces; the Antileptic Water of Languis, an



ounce; Syrup of the Flowers of Male Peony, six drachms.'

"I likewise ordered the Nurse to take a draught of whey, in which the Roots and Seeds of Male Peony and the leaves of the Lilly of the Valley had been boiled, twice every day at the same hours."

"Untzerus commends the Gall of a Suckling Whelp very much, and orders the whole bile contained in the gall bladder to be given to the child, with a little of the water distilled from the flowers of the Linne-Tree."

Another physician of this era adds: "And afterwards anointing the spine and limbs with a nervous liniment, such, for instance, as the following: Take of human fat and oil of Mace, of each, half an ounce; Balsam of Peru, one dram; the Chymical oils of Cloves, Lavender and Rue, each, thirty drops. Mix them together."

Harris, on *Epilepsy*, recommends: "Take prepared earth worms, one ounce; human skull prepared, two scruples. Mix them together, and make a fine powder, to be divided into twelve papers." Stress is laid on the fact that they must be taken always before the changes of the moon.

In regard to the frequency of the attacks of epilepsy, one of the profession states: "Sometimes at stated times of the day, month or year, but for the most part they are worst about the changes of the seasons, or the conjunctions or opposite aspects of the sun and moon."

TREATMENT OF VARIOLA.—Sydenham gives an old prescription: "Take Armenian Bole, an ounce; Comfrey Root in powder, two drachms; Sealed Earth, Blood Stone, Dragon's Blood, of each one drachm; white sugar, an ounce and five drachms. Mix them, and make a subtile powder, of which a drachm may be taken every morning, at 5 in the afternoon, and at night," etc.

SURGERY OF WOUNDS.—The surgical treatment of wounds of adults of this era is applied likewise to children. "Daniel Sennertus, Doctor, 1637," discusses what he terms: The "Weapon Salve Maladie," etc., in which he is an unbeliever. This was evidently a well informed man for the era in which he lived. "Most men attribute this unguent to Paracelsus himself. *Archidox. Magica*, lib. I giveth this description of it: Take scull-mosse, two ounces; mummy, half an ounce; man's fat, two ounces; man's blood, half ounce; linseed oyle, two drachms; oil of roses and bole armoniack, of each one

ounce. Mix them together and make an oyntment; into the which he puts a stick, dipped in the blood of the wounded person, and dried, bindeth up the wound with a rowler dipt every day in the hot urine of the wounded person. For the anointing of the weapon, he adds, moreover: Honey, one ounce; bull's fat, one dram; take mosse or scurife (that groweth thick on a man's scull, left to the open ayre) and man's fat, of each, two ounces; mummy and man's blood, of each, halfe an ounce; linseed oyle, turpentine and bole armoniack, of each, one ounce. Let all these things be brayed together in a mortar, and kept in a long narrow pot. Dip the weapon into the unguent, and there let it lye. Let the person hurt, in the morning, cleanse his wound with his own water; and so bind it up, without anything else put to it, and the wounded person shall be cured without any paine."

"Crollius himself also attributed it (this treatment of wounds) to Paracelsus, and calleth it the sympathetical or starry oyntment of Paracelsus, and describeth it thus: Take wild boare's grease and bear's grease, of each foure ounces. The elder the beasts are, the better is their fat; and first, let the fat of eyther beast boyle softly in red wine over a gentle fire for the space of halfe an houre; and then poure it out upon cold water; and let all the fat that swims at the top bee gathered up with a spoon; and whatsoever sinks to the bottom, let it be caste away. Then take two sextarios ('a measure conteyning eighteen ounces') of earth wormes, with'd cyther in wine or in water; parch them in some baker's oven, in a cover'd pot, yet take heed they burne not. And then let them be beaten to powder. Take of this powder: The dried brains of a wilde boare, sweet red sandders, mummy and blood stone, of each one ounce. Then take the mosse of a skull of a man killed by some violent death, seraped off in the increase of the moone—shee being in a good house, as of Venus, if it may be—not of Mars or Saturne—in quantity about the weight of two filberds; and of these, broken, mixt together with the fat, let the oyntmente be made according to art, and kept safely in a close glasse or gally pot for use. If perchance in time this oyntmente shold wax dry, it may be made supple and moyste againe with foresaid fat, virgin honey. Let this oyntment be made—the sun being in libra."

## Correspondence.

### Perfection in Puerperal Poisoning—Can It Be Attained?

Mr. Editor.—Dr. Emory Lanphear's paper on "Puerperal Fever" (p. 77, May 23d issue of "Virginia Medical Semi-Monthly") is one which merits a continual abiding place upon the table of every general practitioner. And the more often the general practitioner "reads, marks and learns" therefrom, the better for the army of parturient women helplessly dependent upon his fitness to act as accoucheur.

Having for years past preached these same truths, beside practicing them so far as is possible, I thoroughly realize the meaning of Dr. Lanphear's statement: "The high death rate is due (among other things) to: 1, Gross carelessness; 2, inappreciation of the true meaning of the term 'aseptic.'"

This is a bold though unpalatable truth, but it is unhappily also a truth that the average M. D., whether practicing in city or country, could no more carry out, in its entirety, Dr. Lanphear's technique than he could operate a flying machine.

Therefore, without attempting any systematic criticism of said technique, and urging strongly the careful perusal of the article from beginning to end, I do desire to make one or two suggestions, which, if followed, will tend to simplify matters and relieve the accoucheur from the liability of being charged with gross carelessness.

First and foremost, Dr. Lanphear, speaking doubtless as "the surgeon," says in speaking of the technique to be followed in cases of saprophytic infection: "Internal medication is of little value; the course of the disease is too swift toward either recovery or death." True, this follows a column of most explicit instruction as to the surgical treatment necessary; yet I cannot let such a dangerous misstatement pass without registering a protest. Proper internal medication—combined with rapid and thorough cleansing of the uterus—is essential, almost as essential, indeed, as is the strict adherence to asepsis insisted upon by Dr. Lanphear. And, believe me, the one is more easily carried out than the other. The instant the condition is suspected even, push calcium sulphide to saturation. To "saturate" quickly, give one-half grain half hourly—this may be doubled—and every three hours give,

hypodermically, gr. x of nuclein. This medication in no way prevents the exhibition of strychnine or other heart stimulants. The one thing to be sure of is the quality of the calcium salt. In the past two years I have used pounds of the Abbott alkaloidal preparation, and have yet to be disappointed. I have used other makers' tablets, and have failed to attain results. Now, having started to render the field untenable for these saprophytes, you can cheerfully begin the more violent dispersion proceedings.

I fully agree with the statement that anesthesia is a *sine qua non*, but, in nine cases out of ten of general practice, I would deplore the introduction "of the whole hand into the uterus." Some of us have the "obstetric hand," and some of us have "paws!" Moreover, the "strict asepsis" necessary in this manipulation of matter is often simply impossible. The Volkman spoon will do—if you have it; if not, you must 'e'en do as the devil did—use what you have, but use it in a workmanlike and thorough manner, and satisfy yourself that things are clean before you quit.

As an irrigating agent, after trying one thing after another, I believe nothing will equal a 1-10 solution of sanitas fluid; the next best thing being a 1-50 or 1-100 creolin solution.

The danger of perforation must not be overlooked, and every man who undertakes to deliver a child is not competent to "clean up" and "scrape out" a putrefying uterus, by a long way. Take it as a whole, those of us who can follow Dr. Lanphear's advice entire should do so, and those who can't—and about nine men out of twelve can't!—should follow that part of it which deals with "unnecessary manipulation." Clean your hands, brother accoucheur, even if you cannot always "energetically scrub them for five minutes with soap and water, then dried, and nails trimmed 'to quick,' then washed in turpentine for half a minute or more, then freely rinsed in alcohol, and finally immerse for two or three minutes in 1-1000 bichloride sol." Even suppose, I say, that you cannot do all this, do the best you can; and then, being as near "surgically clean" as circumstances will allow, use your hands just as little and as seldom as may be. The "mischievous meddling" and "meddlesome interference" clauses of Dr. Lanphear's article are particularly to be marked.

A word as to pads. For some time I have found nothing to equal wood-wool tissue for

this purpose. It's cheap, it is aseptic, and it is easily carried, and as easily cut to fit conditions. A thickness of wood wool tissue placed between the folds of plain sterile or carbolized gauze will ensure a proper scaling of the external genitals. Discharges are absorbed and the receiving napkin can never, by any chance, be used again.

In conclusion, I would again suggest that Dr. Lanphear's advice be kept in mind always, but don't forget that calcium sulphide and nuclein, as "internal medication," are powerful allies, and in these cases of uterine infection no ally should be despised, no agent neglected. Some of us, alas! are "so busy that we cannot practice in a thoroughly scientific manner," while others are in the same box from lack of business, or the *quid pro quo* for efforts expended.

The "ideal method of delivery" upon the "portable surgical table (costing but \$20) on a sterilized Kelly pad, covered by freshly boiled sheet," is *ideal* indeed, but if we all attained to that there would be no saprophytic infections, and Dr. Lanphear—and myself—would lack the subject matter for a good article—and a portion of our bank account, maybe!

GEO. H. CANDLER, M. D., M. R. C. S., Lond.

4553 Evans Ave, Chicago, Ill. (formerly of New York city).

## Proceedings of Societies, Etc.

### NEW YORK ACADEMY OF MEDICINE.

#### SECTION ON ORTHOPEDIC SURGERY.

Meeting of April 18, 1902—George R. Elliott, M. D., Chairman.

#### Congenital Elevation of Left Scapula.

Dr. J. H. Waterman presented the case of a child with congenital elevation of the left scapula. The X-ray revealed the condition of elevation, and also a bony plate running from the spine of the scapula to the seventh cervical or first dorsal vertebra. The advice of the section was asked as to treatment. It was stated that Wilson, of Philadelphia, had reported two cases treated by operation. In standing, the elevation of the shoulder was marked and the head slightly inclined to the left side.

Dr. Russell A. Hibbs said he had observed a similar case in a subject 25 years old, showing also a plate of bone connecting the scapula and the seventh cervical or first dorsal vertebra. He advised operation in the case presented by dividing the bony attachment.

The Chairman wished to know what was done in the cases referred to, after division of the bony plate of attachment to prevent reunion.

Dr. S. A. Twinch stated that he had witnessed the operations of Dr. Wilson referred to, and that no steps had been taken to prevent reunion.

#### Congenital Dislocation of the Hip.

Dr. Royal Whitman presented a series of ten cases illustrating the treatment of congenital dislocation of the hip. The cases were of interest as demonstrating the curability of the affection.

In the entire number there had not been a relapse since treatment had been discontinued. With one exception the patients had been operated upon by the bloodless method of Lorenz, slightly modified in certain instances. At the present time, as would be evident upon inspection, it was impossible to say which limb had been treated.

The record of the cases is as follows:

1. C. P., female; dislocation of the left hip; operated upon at the age of nineteen months, April 19, 1897. The plaster bandage was removed on October 12, 1897.
2. O. H., female; dislocation of the left hip; operated upon at the age of five years, May 20, 1897. Plaster bandage removed March 15, 1898.
3. L. S., female; dislocation of the left hip; operated upon at the age of nineteen months, November 15, 1897. Plaster bandage removed June 15, 1898.
4. C. F., female; dislocation of the left hip; operated upon at the age of two and a half years, October 11, 1899. Plaster bandage removed June 2, 1900.
5. A. C., female; dislocation of the right hip; operated upon at the age of two and a half years, January 28, 1900. Plaster bandage removed August 9, 1900.
6. V. R., female; congenital dislocation of the left hip; operated upon at the age of four and a half years, January 31, 1900. Plaster bandage removed August 22, 1900.
7. E. R., female; dislocation of the left hip;

operated upon at the age of two years, May 22, 1901. Plaster bandage removed September 13, 1901.

8. F. C., female; dislocation of the left hip; operated upon at the age of four years, July 2, 1901. Bandage removed January 7, 1902.

9. M. L., female; dislocation of both hips; operated upon at the age of two years, May 10, 1899. Plaster bandage removed November 10, 1899. A perfect cure on the right side, not perfect on the left.

10. M. A., female; dislocation of the left hip; operated upon at the age of five years, October 30, 1900, by arthrotomy, without excava- tion of the acetabulum. Plaster removed October 10, 1901. Perfect cure.

*Dr. Williams* said that Case No. 5 had been of much interest. On removal of the spica bandage a limp had persisted for many months, accompanied by slight outward rotation of the foot. If the limb were rotated slightly inward the X-ray picture showed an apparently normal joint. The persistence of the limp was due apparently to laxity of the capsule and to slight anterior twist of the upper extremity of the femur. To his surprise the child had steadily improved, and at the present time, more than a year and a half after the discontinuance of treatment, there was practically no trace of disability.

In Case No. 9, the bilateral displacement, the left hip was originally recorded as a transposition, but after a lapse of nearly two and a half years there was no shortening, and but a very slight limp. The head of the bone was apparently secure in a position slightly anterior and external to the normal. This result was far better than after the ordinary transposition, in which there was always a certain amount of shortening and a characteristic limp.

The case in which arthrotomy was performed was not only of interest as showing the perfection of the cure obtained by this method, but also in that the patient is one of three children of one mother, each having congenital dislocation of the left hip. The eldest child, now about eighteen years of age, was untreated, and presents a shortening of the limb of three inches. The second child, after three unsuccessful attempts by the bloodless method, was operated upon by the Hoffa-Lorenz method with excavation of the acetabulum on October 25, 1898, at the age of five years. The final result was very satisfactory.

*Dr. R. H. Sayre* considered that the result of the cases presented a great advance in the treatment of congenital dislocation, and that a few years ago such a collection of successful cases would have been impossible.

*Dr. George R. Elliott* said the remarkable showing of good results by *Dr. Whitman* ought to fully answer those still skeptical about the non-cutting operation. He noticed that the patients were all apparently under four years of age at time of operation. A very large percentage could be cured at that age.

The Lorenz method, even if it did no good, certainly did no harm, and in older cases warranted its use before cutting was resorted to.

He further said that it could usually be determined at time of operation what the final results would be; at least such was his experience.

He asked *Dr. Whitman* what percentage of his operations showed failure, and if he reduced both hips at time of operation in double congenital hip dislocation.

*Dr. Whitman* stated that in the case of bilateral displacement both hips were treated at one sitting. He said that he had modified the Lorenz method somewhat, in that he usually extended the plaster bandage below the knee, the leg being flexed upon the thigh at a right angle, with the object of fixing the part more securely. At the end of two months the leg portion of the bandage was removed. In certain instances the femur was rotated slightly inward, in order to fix the head of the bone directly beneath, or slightly internal to, the femoral artery. He had on other occasions stated that not more than twenty-five per cent. of the cases were cured by this method, but the indications in his later operations were much more favorable. He did not agree with the statement of the last speaker that the result of treatment could be foretold at the time of operation. In many instances an anterior twist of the upper extremity of the femur made failure inevitable, and in many instances arthrotomy and osteotomy would be essential, excavation of the acetabulum being reserved for exceptional cases.

#### Coxa Vara.

*Dr. Whitman* presented a boy about seven and a half years of age, illustrating the cure of coxa vara by cuneiform osteotomy at the base of the trochanter. The patient had been presented to the section at a previous meeting by *Dr. Taylor*. According to the mother's account, he had limped ever since he began to walk. Although the

operation was performed but five months ago, the functional cure was perfect.

### Alcoholic Arthritis.

*Dr. Elliott* presented the case of a boy aged 12 years, who some three years ago began to have swelling of the joints of the fingers and wrist. The right wrist, the distal joints of the fingers of both hands, and the distal joints of the first and second toes were involved. The liver was enlarged, projecting below the umbilicus, the spleen was enormously enlarged, and there was only a slight enlargement of the lymphatic glands.

The mother stated that the boy having been badly nourished she had given him whiskey daily for about one and one-half years. He regarded this as the etiological factor of what he thought could rightly be designated alcoholic arthritis.

Arthritis deformans was excluded, since that grows progressively worse, and is not accompanied by enlarged spleen. Under proper nourishment and little general medication the symptoms had nearly all disappeared—Heberden nodes still persisted, something very rare in children.

### Destruction of Lower Epiphysis of Tibia.

*Dr. Hibbs* presented the case of a boy aged 11 years, first seen October, 1900, with deformity of right tibia, following a severe fall supposedly resulting in fracture. The deformity was corrected by osteotomy. He suspected that the lower epiphysis of the tibia had been injured, and this was corroborated by the recurrence of the deformity after operation.

At time of operation the right tibia was 12½ inches long, and the left thirteen. If left untreated the deformity would progress. Members of the section were asked if they had had any experience in the treatment of such cases by destruction of the epiphysis of the fibula.

*Dr. Whitman* said that a member of the American Orthopædic Association had made the statement at its last meeting that he suffered from a disability similar to the case reported; that his fibula was two inches longer than the tibia, yet the disability and deformity were so slight that from his personal experience he had advised against operation on such as had been suggested.

*Dr. Sayre* said he thought destroying the epiphysis of the fibula, as suggested by *Dr. Hibbs*, would not result in as useful an extremity as by

leaving the limb untreated, since it would produce considerable shortening. He suggested slitting the tibia lengthwise, sliding the pieces past each other, and so lengthening the tibia sufficiently to bring the articular surfaces parallel with the ground.

*Dr. Hibbs* also presented a child aged 3 years when first seen by him in October, 1900. One month previously it had been operated upon in a general hospital for osteo-myelitis of the lower end of the right femur. This was followed by complete paralysis of the quadriceps extensor. This paralysis persisted with no response to either electrical current. No other muscle was affected, and it was believed to be due to division of the tendon or muscle, with failure to unite.

### Fractured Vertebral Column.

*Dr. Elliott* presented a specimen of a fractured vertebral column removed from a man aged 29 years, first seen in 1897. One year prior to that he attempted to hold a quarter of beef, which had slipped from its pin, and immediately felt a severe pain in his back. He remained in bed one week. He then attempted to go about, and did so for one year, with gradually increasing motor and sensory paralysis of both lower extremities, and there developed a marked kyphosis at 10° dorsal vertebra. Plaster jacket did not improve matters. The paraplegia became complete.

He was subsequently operated upon by *Dr. Gerster* at the Mount Sinai Hospital, and evidence of fracture was found, with bony fragments pressing upon the cord. These were removed, but *Dr. Gerster* expected no benefit to result. Patient finally died, and the cord was found completely severed. Deep reflexes lost.

The progressive nature of the paralysis, and the absence of involvement of the bodies of the vertebrae, with a well-marked kyphosis, were interesting features, and also the faulty diagnosis of caries, which at one time had been made. The angular prominence simulated the "Bos" of Pott's disease very closely.

*Dr. W. M. Leszynsky* considered the history of the case very interesting, and thought that it was hardly probable that any one, from the history, would have made a diagnosis of fracture. He thought there was a slight injury to the cord and dura, which set up a myelitis secondarily, becoming finally complete, with ultimate destruction of the cord. It was well established now that complete division of the cord produced

loss of all reflexes below the site of section. He cited a case of his own of a patient who had fallen from a height of twenty feet, fracturing the tenth, eleventh and twelfth dorsal vertebra with immediate paralysis and complete loss of reflex action, sensory and motor power. The diagnosis was readily made in that case, and confirmed at autopsy.

### Early Treatment of Disability Following Infantile Paralysis.

Dr. A. B. Judson reported a case of varus of the left foot in a boy of five years. Leverage by braces cured the varus, but could not remove paralysis of calf muscles and calcaneus. The riser was omitted from the inner side, where it had given leverage against the varus and the upright was made of one piece with the tread, which was shaped to the instep and could readily be bent down or up, as the boy required more or less "toe" in walking. With this brace (exhibited) walking was without a trace of lameness. Deformity had been prevented and fibres developed, which, without early locomotor activity, would have disappeared.

Dr. Charles H. Jaeger presented specially made gonge devised by a French surgeon for purpose of scooping out the acetabulum in operation for congenital dislocation of the hip.

Among the former, he emphasizes the need of exhaustive detail in technique, which, he says, entails an enthusiasm for genito-urinary work, without which that detail is impossible. He denies the novelty of irrigation of the bladder without a catheter, but attributes the origination thereof to the late Hunter McGuire, of Richmond. He denies also that urethral and vesical irrigations are uncleanly, but emphasizes that with the proper technique, neither the patient, the operator or the office, are soiled by the solutions used. He deprecates the idea that potassium permanganate should be considered a panacea for gonorrhœa, and holds that the different manifestations of the gonococcus are to be met with different remedies.

The author then cites the *failures attributable to the patient*. Among these he mentions the rebellious patient, who will not obey orders, and urges that it is our duty to treat these cases, and endeavor, to the best of our ability, to prevent him from becoming a disseminator and perpetrator of gonorrhœa. The author then mentions the manner of treating the patients whose occupations prevent their coming for treatment as often as is necessary. For these he recommends the use of the auto-irrigator, but deprecates relegating to patients so dangerous a disease as is gonorrhœa.

He then quotes the congenital and acquired defects which may prevent success with irrigations, and briefly outlines the manner of overcoming the defects. Among these, he mentions a tight preputial orifice, for which he advises slitting the foreskin; a stenotic meatus, for which he presents a special, blunt nozzle, through which the urethra and bladder can be irrigated; excessively large meatus, which requires a dome-shaped nozzle; under intra-urethral abnormalities he dilates upon the apparently double urethra. Of true double urethra he has never seen a case, although he acknowledges having met with four in literature. He suggests simply dividing the septum that makes the false double urethra and so reducing the two channel to one. For epispadias he advocates Beck's forward dislocation of the urethra. In peri- and para-urethral fistule, he expects no prompt results from irrigations until the fistule are obliterated. If they are near the urethra, he advises opening them into the canal; if distant from it, their obliteration by Kollmann's electrolytic needle. In aggravated balanitis and balano-posthitis he decries slit-

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## Analyses, Selections, Etc.

### Failures in the Irrigation Treatment of Gonorrhœa.

During the annual meeting of the American Urological Association, held at Saratoga Springs, N. Y., June 13, 1902, Dr. Ferd. C. Valentine, of New York, read a paper on this subject, of which the following is an original synopsis:

The title of this paper is somewhat disappointing, for the author does not show that irrigations fail in gonorrhœa. On the contrary, he recites the causes of failure in the special treatment of which he has been an ardent advocate for many years, and to which consequently his name is attached.

He divides the causes of failure into those attributable (1) to the physician, and (2) those in which the patient is at fault.

ting the prepuce along the dorsum, but urges instead free incisions midway between the dorsum and the frenum. He advises covering chancres or chancroids with absorbent cotton while irrigations for gonorrhœa are performed. Condylomata, which interferes with irrigations, require removal, and like herpes progenitalis, dry dressings. To infiltrations of the urethral crypts, glands and follicles and stroma, residua of previous gonorrhœas, Valentine attributes the most frequent failures in the treatment of new gonorrhœas or recurrences of old ones. He says that a cure is never effected until these residua are cured. Paraphimosis and phimosis, according to the author, if not reducible by manipulation, call for prompt surgical intervention. To gonorrhœal prostatitis and inflammation of the seminal vesicles Valentine attaches transcendental importance as the causes of failure in the irrigation treatment; for these he advises systematic massage and stripping as a condition precedent to successful irrigation. Stricture he deems a permanent barrier to the cure of gonorrhœa, until the stricture is relieved. Among the urinary abnormalities which may maintain urethritis, Valentine quotes phosphaturia and oxaluria as the most frequent ones.

### Cascara Evacuant

Is an aromatic laxative derived from the *bitterless* glucoside of cascara sagrada, which latter was introduced to the notice of the profession just a quarter of a century ago by that progressive and reliable house, Messrs. Parke, Davis & Co., of Detroit, Mich. Experimentations by the chemists of this house with the idea of removing the disagreeable bitter taste of cascara without impairing its laxative action, developed the fact that this laxative effect is due not alone to the presence of the bitter glucoside, but also to the action of a bitterless glucoside. Their new process in producing *Cascara Evacuant* obviates the necessity of using alkalies or other powerful chemicals. This preparation contains absolutely no other medicinal substance than the well-seasoned bark of true *Rhamnus Purshiana*--with the exception, of course, of the necessary aromatics and flavoring materials. The bark is stored in crude drug lofts before a particle of it is used in any of the pharmaceutical operations. Without modification of its laxative effects, the improved process of Messrs. Parke, Davis & Co., separates the laxative *bitterless* glucoside from

the laxative bitter glucoside, naturally present. From 5 to 20 minims of *Cascara Evacuant* is a sufficient dose for an adult, while one to five minims is the dose for children under ten years of age. *Cascara Evacuant* meets an earnest desire of practitioners for a pleasant tasting preparation of cascara in a most positive and satisfactory manner.

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## Book Notices.

*Quain's Dictionary of Medicine.* By VARIOUS WRITERS. *Third Edition; Largely Rewritten and Revised Throughout. With 14 Colored Plates and Numerous Other Illustrations.* Edited by H. MONTAGUE MURRAY, M. D., F. R. C. P., Joint Lecturer on Medicine, Charing Cross Medical School, etc. Assisted by JOHN HAROLD, M. B., B. Ch., B. A. O., Physician to St. John's and St. Elizabeth Hospital, etc., and W. CECIL BOSANQUET, M. A., M. D., M. R. C. P., Physician to Out-Patients, Victoria Hospital for Children, Chelsea, etc. New York: D. Appleton & Co. 1902. Large 8vo. Pp. 1,892—xviii. Cloth.

The first edition of *Quain's Dictionary of Medicine* was published in 1882, and its popularity grew rapidly all over the English-speaking world. The second edition was divided into two volumes, and contained about 1,300 pages each; but there was a great deal of repetition of statements from so many authors. The list of *contributors* to the present edition numbers about 285, and is brought thoroughly up to date. But, with so many contributors, it is but natural that the large majority of them should make statements in their manuscripts which are but repetitions of what has been said by others. Hence, the present editors of this *Third Edition* have gone carefully over all the contributions, and where repetitions occur, space has been saved by simply making a cross reference to the articles where the matter was originally stated. Sentences have been reconstructed, and irrelevant or obsolete matter has been entirely cut out or only referred to in the briefest manner possible--thus saving many hundred pages of text, while yet adding in reality many articles never before published. Purely personal views may be stated, but the full reasons for them are not given, but references made to the books, articles, or journals in which they are discussed.

This *Dictionary* consists in short articles—not simply the definition of the word. So that if one chooses to look at it in that sense, this may be said to be a thoroughly up-to-date book on all that pertains to the practice of medicine, surgery, obstetrics, etc. We know of no medical book that contains so much of the practitioner's book of knowledge as this. No doubt it will long remain both a reference and a reading book written by the most eminent of authors in their several departments.

**Minor Surgery and Bandaging.** Including the Treatment of Fractures and Dislocations, the Ligation of Arteries, Amputations, Excisions and Resections, Intestinal Anastomosis, Operations Upon Nerves and Tendons, Tracheotomy, Intubation of Larynx, etc. 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, and the Bryn Mawr Hospital; Fellow of the American Surgical Association. Fifth Edition, Enlarged and thoroughly Revised, with 509 Illustrations. LEA BROTHERS & CO., Philadelphia and New York. 1902. Cloth. 12mo. Pp. 621. Price, \$3, net.

This splendid little book has just been issued in its fifth edition. The more we examine it, the more pleased are we with it. Everything surgical seems included in its scope, with the gist of the subject put clearly before you—all unnecessary matter being left for larger volumes. The odds and ends of every-day surgery as dealt with leaves little else to be desired on the subject. The section on bandaging is excellent, and is fully illustrated with cuts, chiefly photographic. The work contains short articles on various subjects, such as Tracheotomy, Intubation of the Larynx, Amputations, Special Abdominal Operations, etc., which are included so as to render the book more serviceable to the student.

**Manual of Surgical Treatment.** By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc., and F. F. BURGHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc. In Seven Volumes. VOLUME VI, Treatment of Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Oesophagus, Stomach, and Intestines. LEA BROTHERS & CO., Philadelphia and New York.

1902. With 124 Illustrations. Cloth. 8mo. Pp. xix—479.

Although originally intended that this Manual should be completed in six volumes, it was later on decided to be impractical, and the last part was divided into two sections. The work is intended especially for the practitioner, who wishes detailed information in books of convenient size as to the best methods of treatment—including after-treatment. "It assumes that the reader is familiar with the nature and diagnosis of the disease, and only refers to the pathology and symptoms in so far as it is necessary to render intelligible the principles on which the treatment is based, and the various stages of the disease to which each particular method is applicable."

The authors describe especially those plans of treatment with which they themselves have experienced best results, while other methods are referred to but briefly.

Section 1 of Volume VI has three grand subdivisions. Division I deals with Surgical Affections of the Tongue and Floor of the Mouth; Division II, with Surgical Affections of the Pharynx, Oesophagus and Neck; while Division III treats of the Surgical Affections of the Abdomen.

We find the subject matter pleasant reading, the descriptions clear, and a plenty of big black type, which impress important points, and serve to rest the eyes.

**Diseases of the Eye.** (Eclectic Manual, No. 4.) A Hand-Book of Ophthalmic Practice for Students and Practitioners, in which Particular Attention is Given the Treatment of Diseases of the Eye by Eclectic Medication. By KENT O. FOLTZ, M. D., Professor of Ophthalmology, Rhinology and Laryngology in the Eclectic Medical Institute, Cincinnati; Editor of the Department of the Eye, Ear, Nose, and Throat in the Eclectic Medical Journal, Cincinnati; Ex-President of the Ohio State Eclectic Medical Association, etc. With 193 Plates and Four Illustrations in Color and Chromo-Lithographic Frontispiece. Cincinnati: THE SCUDDER BROTHERS CO. 1900. Cloth. 12mo. Pp. 566. Price, \$2.50.

Our attention has been called to the fact that we neglected to review this hand-book on *Diseases of the Eye*—received quite a while ago.

The book was written, so the author states, because—almost without exception—little attention has been given in the various works on the subject to internal medication in the treatment of eye diseases, the beginner commonly



gaining the impression that restoratives, tonics, anti-syphilitics, and anti-rheumatics constitute nearly the entire range of constitutional treatment in such troubles. "The generally accepted plan of treating the eye as an independent and isolated organ should be abandoned," especially because of the influence exerted by remote structures.

The book strikes us as being very practical—not too technical for the busy general doctor—and one whose purchase will scarcely be regretted. The order in which the subjects are discussed is well arranged, the plates, etc., are good, and withal we have a book of convenient size.

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## Editorial.

### American Medical Association.

The fifty-third annual session was held at Saratoga Springs, N. Y., June 10th-13th, 1902. A number of other national societies or associations held sessions at the same place and during the same week. The registration of doctors attending the American Medical Association was about 2,000, and it is stated that some 1,000 or so other doctors were present, who, for one cause or another, did not register, or care to register. The hospitalities of the local doctors were unbounded.

The papers read before the twelve sections of the Association, and the discussions of the same, are said to have been generally of a high order of merit. Each section had its own stenographer, and reports of the papers read and the discussions thereon will appear in order in *The Journal of the American Medical Association*. The address of the President, Dr. John A. Wyeth, of New York, and the orations in medicine by Dr. Frank Billings, of Chicago; in surgery by Dr. Harry M. Sherman, of San Francisco; and in State medicine by Dr. J. M. Emmet, of Atlantic, Iowa, are published in *The Journal* of June 14, 1902. Other papers followed in the issue of *The Journal* of June 21st.

During the session at St. Paul, Minn., 1901, the reorganization of the American Medical Association took away the right of the county or city, or district, or other minor organizations to send *delegates* to the Association. Now only affiliated *State* organizations have the right to

send *delegates*; and these are only entitled to one delegate for each five hundred active members or fraction of this number. Such delegates form the *House of Delegates*, which is further reinforced by one or two members from each of the twelve or more *scientific sections* of the Association, and one each from the U. S. Army, Navy, and Marine Hospital Service.

Unless a doctor is a member of his State Medical Society or Association, he cannot be a member of the American Medical Association. Nor can he then be a member of the national body unless he is also a member, in good standing, of his local Medical Society, recognized by the State Society or Association—provided such local society exists in his city, town or county. All qualified doctors are *members of the Association*, however.

To the *House of Delegates*, composed in reality of about 125 members, is relegated all the business affairs of the Association. There is no appeal to the general meetings of the Association for anything. The President of the Association is the presiding officer of the House of Delegates, and the Secretary of the Association is the Secretary of the House. According to the autocratic or courteous bearing of the presiding officer are discussions allowed or cut short. We confess, with our experience in the House of Delegates, that we are disappointed. On subjects of vital importance to the profession at large we did not hear a single discussion.

Perhaps the matter of chief interest to the general profession was the proposed *Revision of the Code of Ethics*. For more than a year some of the Council of the New York State Medical Association have been engaged in a critical examination of the ethical part of the laws of the American Medical Association, resulting in the preparation of the Revision of the Code of Medical Ethics. This revision has been approved by the Council of the New York State Medical Association, and Dr. E. Eliot Harris, of New York, presented it to the House of Delegates of the American Medical Association, when it was

"Resolved, That the President appoint a committee of five to examine and report for final action at the annual session in 1903 the proposed revised Code of Medical Ethics, which is herewith submitted in writing:

"Resolved, That the *Proposed Revised Code of Medical Ethics* be published in *The Journal* three times before the meeting in 1903."

The following is a copy of the Proposed Re-

vised Code of Ethics, which was referred to a special committee—Drs. E. Eliot Harris, of New York; William H. Welch, Maryland; T. J. Happel, Tennessee; Nicholas Senn, Illinois, and Joseph D. Bryant, New York:

### CODE OF ETHICS.

#### CHAPTER I.—OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

##### *Article I.—Duties of Physicians to Their Patients.*

Section 1.—Physicians should not only be ever ready to obey the calls of the sick, but should be mindful of the high character of their mission and of the responsibility they must incur in the discharge of momentous duties. In their ministrations they should never forget that the ease, the health, and the lives of those entrusted to their care depend on skill, attention, and fidelity. In their deportment they should unite tenderness, cheerfulness and firmness, and thus inspire all sufferers with gratitude, respect and confidence. These observances are the more sacred because, generally, the only tribunal to adjudge penalties for carelessness or neglect is their own conscience.

Sec. 2.—Every case committed to the charge of a physician should be treated with attention and humanity, and reasonable indulgence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted, in their professional visits, should be guarded with the most scrupulous fidelity and honor.

Sec. 3.—The obligation of secrecy extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance should ever be divulged by physicians, except when imperatively required to do so by the laws of the State. The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice.

Sec. 4.—Frequent visits to the sick are generally requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, and to meet promptly every change which may occur. But unnecessary visits are to be avoided, as they give undue anxiety to the patient.

Sec. 5.—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really exists; and even to the patient, if absolutely necessary. This notice, however, is often so peculiarly alarming when given by the physician, that its delivrance ought to be declined whenever it can be assigned to any other person of good judgment.

Sec. 6.—The physician should be the minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts, but by the words or manner of the physician whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

Sec. 7.—The medical attendant ought not to abandon a patient because deemed incurable; for, continued attention may be highly useful to the sufferer, and comforting to the relatives, even in the last period of the fatal malady, by allevating pain, and by soothing mental anguish.

Sec. 8.—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of vicious conduct ought never to be neglected. Good counsels, or even remonstrances, will give satisfaction, not offence, if they be tactfully proffered and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

##### *Article II.—Obligations of Patients to Their Physicians.*

Section 1.—The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease, and health for the welfare of those who avail themselves of their services, are surely entitled to the highest private and public recognition.

Sec. 2.—The first duty of a patient is to select as medical adviser one who has received a sound general and special education, whose habits are good, and who is not devoted to any pursuit incompatible with professional obligations.

Sec. 3.—The sick should always apply for advice in what may appear to be a trivial case, for the slightest accident may result gravely. It is

also important that the patient seek assistance in the forming stage of a violent disease and communicate unreservedly to the physician its supposed cause.

Sec. 4.—The patient should be on friendly terms with the medical adviser, and bear in mind that physicians are under the strongest obligations of secrecy.

Sec. 5.—Women should never allow feelings of delicacy to prevent their disclosing the seat of their peculiar complaints. Howsoever commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with serious consequences, and a patient may sink under a painful disease which might have been prevented had timely intimation been given to the physician.

Sec. 6.—The obedience of a patient to the directions of the physician should be prompt and implicit. Failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to the unauthorized renewal of prescriptions, and to diet, drink, raiment, and exercise.

Sec. 7.—As patients become convalescent they are apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse of the disease.

Sec. 8.—Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors who are so frequently met with, and who pretend to possess infallible remedies for every disease. However simple some of their prescriptions may appear to be, it often happens that, besides being in themselves injurious, they are productive of much mischief by contravening the plan of treatment adopted by the physician in attendance.

Sec. 9.—Whenever possible the patient should avoid even friendly visits of a physician who is not the regular attendant. But when such visits are received, there should be no conversation on the subject of the patient's disease, as a word may be spoken, without any intention of interference, which may destroy confidence in the course pursued, and induce the patient to neglect the prescribed directions.

Sec. 10.—The patient or relatives should never send for a consulting physician without the express consent of the medical attendant.

Sec. 11.—Patients should, whenever practicable, send for their physicians in the morning, before the usual hour for going out, and this gives them the opportunity to so apportion their time as to prevent interference of engagements.

Sec. 12.—Except in emergencies patients should avoid calling on their medical advisers during the hours devoted to meals or sleep.

Sec. 13.—The sick should be always in readiness to receive the visits of the physician, as detention, even for a very short time, is often of serious import to some other sufferer.

## CHAPTER II.—OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

### *Article I.—Duties for the Support of Professional Character.*

Section 1.—Every individual on entering the profession, and thereby becoming entitled to all its privileges and immunities, incurs an obligation to maintain its dignity and honor, to exalt its standing and to extend the bounds of its usefulness.

Sec. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; and, by unwearied diligence, should resort to every honorable means of enriching the science, and, at the same time, entertain a due respect for those seniors who, by their labors, have contributed to its advancement.

Sec. 3.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to these, as without it their respect and confidence cannot be commanded; and to the profession because no scientific attainments can compensate for the want of correct moral principles.

Sec. 4.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye, and an unclouded mind are essential to the welfare, and even to the life, of a human being.

Sec. 5.—It is derogatory to the dignity of the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases, offering ad-

vice and medicine gratis and promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success; or to employ any of the other methods of charlatans.

Sec. 6.—Equally derogatory to professional character it is for a physician to hold a patent for any surgical instrument or medicine; or to dispense, or promote the use of, a secret medicine, whether it be composed by this physician or the exclusive property of others, for if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality, and if mystery alone give it public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or of any of the other substances that may be used medicinally.

*Article II.—Professional Services of Physicians to Each Other.*

Section 1.—All practicing physicians and their immediate dependents are entitled to the gratuitous services of any one or more of the physicians residing near them.

Sec. 2.—Physicians afflicted with disease should not, as a general rule, undertake the treatment of their own sickness, nor of that of members of their family, for obvious reasons. In such circumstances they are peculiarly dependent upon each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such civility may give rise to embarrassment or interfere with that choice on which confidence depends.

Sec. 3.—When a physician is summoned, from a distance, to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to travelling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives.

*Article III.—Of the Duties of Physicians as Respects Vicarious Offices.*

Section 1.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed

sometimes require the temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time.

Sec. 2.—The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period half of the pecuniary obligations for such services should be awarded to the acting physician.

*Article IV.—Of the Duties of Physicians in Regard to Consultations.*

Section 1.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet emergencies occasioned by disease or accident.

Sec. 2.—The good of the patient being the sole object in view, any physician having a license to practice medicine conferred by a medical board authorized by the State may be aided in consultation.

Sec. 3.—No physician who indicates to the public that his practice is based on a sectarian system of medicine shall be entitled to professional fellowship or to recognition in medical bodies.

Sec. 4.—Consultations should be promoted in difficult cases, as they give rise to confidence and more enlarged views in practice.

Sec. 5.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea of a professional engagement to take precedence over all others and to be a good reason for the relinquishment of any present occupation.

Sec. 6.—As professional engagements may sometimes interfere and delay one of the parties, the physician who first arrived should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

Sec. 7.—In consultation no rivalry or jealousy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

Sec. 8.—The attending physician should be the first to question the sick, after which the consultant should have the opportunity to make such further inquiries as may be necessary.

Sec. 9.—After due examination of the patient, both physicians should retire to a private place for deliberation; and the one first in attendance should communicate the directions, agreed upon, to the patient or friends, as well as any opinion which it may be thought proper to express.

Sec. 10.—No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, and by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberations and concurrence.

Sec. 11.—The opinion of the physician in attendance should be delivered first to the patient or friends; and when there are several consultants they should deliver their opinions in the order in which they have been called.

Sec. 12.—No decision should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

Sec. 13.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In case of emergency the consultant should do what is needed, and in the other case should do no more than make an examination of the patient and leave a written opinion, under seal, to be delivered to the attending physician.

Sec. 14.—In consultations theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded not on hypothesis, but on experience and observation.

Sec. 15.—All discussions in consultation should be held as confidential. Neither by words nor manner should any of the parties to a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

Sec. 16.—Should an irreconcilable diversity of opinion occur when several physicians are called upon in consultation, the opinion of the majority should be considered as decisive; but

if the numbers be equal on each side, then the decision should rest with the attending physician.

Sec. 17.—It may happen that two physicians cannot agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in, and, if circumstances prevent the adoption of this course, the patient or friends should make the selection. The physician so designated should take charge of the case, and the other should then gracefully retire from any further deliberation in the consultation, or participation in the management of the case.

Sec. 18.—As circumstances sometimes arise to render a special consultation desirable, when the continued attendance of two physicians might be objectionable to the patient, the physician whose assistance is required in such cases should sedulously guard against all future, unsolicited attendance. Such consultations requiring an extraordinary portion of time and attention, at least a double fee should be expected.

Sec. 19.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified as far as can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in the attending physician.

#### *Article V.—Duties of Physicians in Cases of Interference.*

Section 1.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice entirely on the extent of their medical education.

Sec. 2.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of this physician directly or indirectly tend to diminish the trust reposed in the attending physician.

Sec. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided, except under peculiar circumstances; and

when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

Sec. 4.—A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another physician in the same illness, except in case of a sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

Sec. 5.—Placed in the position stated in the preceding section, the physician should never throw out damaging insinuations on the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of knowledge or skill.

Sec. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, this physician should resign the care of the patient immediately on the arrival of the family physician.

Sec. 7.—It often happens, in cases of sudden illness, or of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives and who, if necessary, may invoke the aid of some of those present. In such a case, however, the acting physician should cause the family physician to be called, and should withdraw unless requested to continue in attendance.

Sec. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician the case should be surrendered on the return of the absentee.

Sec. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient in consequence of a sudden aggravation of the disease. On such an occasion the immediate needs of the patient should be attended to, and the case relinquished on the arrival of the attending physician.

Sec. 10.—When a physician who has been engaged to attend an obstetric case is absent and

another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to half the fee, but must resign the patient on the arrival of the physician first engaged.

#### *Article VI.—Of Differences Between Physicians.*

Section 1.—Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a court-medical.

Sec. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which cannot be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.

#### *Article VII.—Of Pecuniary Acknowledgment.*

Section 1.—There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to their performance.

Sec. 2.—Poverty, mutual professional obligations, and certain of the public duties named in sections 1 and 2 of Article I, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, or any profession or occupation, can be admitted to possess such privilege.

Sec. 3.—It cannot be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without pecuniary acknowledgment. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

Sec. 4.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and it should be deem-

ed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

Sec. 5.—It is derogatory to professional character for physicians to pay or to offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to demand or to receive such commissions.

CHAPTER III.—OF THE DUTIES OF THE PROFESSION TO THE PUBLIC AND OF THE OBLIGATION OF THE PUBLIC TO THE PROFESSION.

Article I.—*Duties of the Profession to the Public.*

Section 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary police, public hygiene and legal medicine.

Sec. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement, and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the sanitary police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

Sec. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

Sec. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sus-

tained by the unwary from the devices and pretensions of these artful impostors.

Sec. 5.—Physicians ought to use all the influence which they possess to discourage pharmacists from vending the secret or other medicines of charlatans, or from being in any way engaged in their manufacture.

Article II.—*Obligations of the Public to Physicians.*

Section 1.—The benefits accruing to the public, directly and indirectly, from the unwearied labors of the profession are so numerous and important that physicians are entitled to the utmost consideration and respect from the community.

Sec. 2.—The public ought to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and charlatanism; and to afford every encouragement and facility for the acquisition of thorough medical education.

The Medical Examining Board of Virginia

Was in session at Richmond, Va., during the week beginning June 16, 1902. We understand there were over a hundred and seventy applicants for examination, although most of the applications were for a partial examination—that is, on studies regarding which the applicant had his certificates of proficiency from some reputable medical college. This is the first session of the Virginia Board where those graduates of reputable colleges who had their certificates from other State Boards were submitted only to an oral examination. We learn unofficially that there was suspicion of cheating by several of the applicants, who had taken the pledge; but in only one instance was the proof of cheating so unmistakable that the party was advised to discontinue the examination and leave the room. The Board, in its effort to remove the opportunity of cheating, as far as possible, has determined hereafter on holding partial oral and partial written examinations—the details of which plan will be set forth in the official report of the Board, which will appear in an early issue of this journal.

International-Clinics. Corrections as to Price, etc.

In the notice of *Volume I, Twelfth Series, of International Clinics*, in our issue of May 9;

1902, two errors occur, which we regret have gone so long uncorrected. In the first place, this *Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles* is abundantly worth the annual subscription price of eight (\$8) dollars—not ten dollars, as stated in the notice referred to—or two (\$2) dollars per quarterly volume. In the second place, the reviewer of this book used language that is misleading in speaking of it as “an excellent advertising number,” when he intended only to refer to this number of 1902 as a “fair sample” of the quarterly series of *International Clinics*, for it would be hard to improve on any of the recent series—either in the selection of subjects discussed, the ability of the authors in dealing with their subjects, or in the practical value of their writings. As much as we regret the errors referred to—due to hasty writing or to overlooking the proofs of the notice—we take great pleasure in bearing this testimony as to the value of the *Series of International Clinics* to every practitioner of medicine, surgery, etc. The J. B. Lippincott Company, of Philadelphia, Pa., are the publishers.

### American Congress of Tuberculosis.

At a meeting of the American Congress of Tuberculosis, held in New York, June 3d, 4th, and 5th, a reorganization was effected, and the following officers elected for the ensuing year: *Honorary President*, Dr. Henry D. Holton, Battleboro, Vt.; *President*, Dr. Daniel Lewis, New York, N. Y.; *Vice-Presidents*, Drs. J. A. Egan, Illinois; Frank Paschal, San Antonio, Texas; E. J. Barrack, Toronto, Canada; J. A. Watson, Concord, N. H., and Romola, Gautemala; *Secretary*, Dr. George Brown, Atlanta, Ga.; *Treasurer*, Dr. P. H. Bryce, Toronto, Canada.

The suggestion to hold a World's Congress of Tuberculosis in St. Louis in 1904 met with approval, and steps are being taken to advertise this fact and secure the aid of medical journals, societies, physicians and scientists in making this movement a grand success.

### Changes in the Medical Faculty of the University of Maryland.

Dr. McLane Tiffany having resigned the chair of Surgery in the University of Maryland, Faculty of Physic, Dr. Randolph Winslow was elected Professor of Surgery; Dr. John Holmes Smith, Professor of Anatomy; Dr. D.

M. R. Culbreth, Professor of Materia Medica; Dr. Frank Martin and Dr. St. Clair Spruill, Clinical Professors of Surgery, and Dr. Joseph W. Holland, Demonstrator of Anatomy.

### Dr. Edwin Ricketts, of Cincinnati, Ohio,

Has been elected Professor of Abdominal and Gynecological Surgery in the Cincinnati College of Medicine and Surgery.

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## Obituary Record.

### Dr. Frederick Horner,

Retired Surgeon U. S. Navy, residing near Marshall, Fauquier county, Va., was thrown from his buggy June 14, 1902, and was rendered unconscious and died in a few hours as a result of the injuries received. His wife, who was with him, escaped any serious hurt beyond being badly bruised. Dr. Horner was born in Frederick county, Va., June 26, 1828. He received his academic education from the University of Virginia, and graduated Doctor of Medicine from the University of Pennsylvania 1851. He soon afterwards became assistant surgeon U. S. Navy, being promoted to rank of surgeon. In a few years his health became impaired, and he was placed on the retired list, with the rank of Surgeon. He was a Charter Fellow of the Medical Society of Virginia in 1870. He resigned in 1874, but rejoined in 1876. He attended a number of the sessions, and was a liberal contributor to the Society's *Transactions*, as also to various medical journals. He sought earnestly to establish a medical benevolent fund in connection with the Society, but the effort did not succeed. He was an excellent biographical writer. He was the author of the “Blair, Bannister and Braxton Families,” and for years preceding his death he was preparing “Biographies of the Deceased Physicians of Virginia.” He was also engaged in biographical sketches of a number of the living men of mark in the same States, illustrated with a number of photographs, etc. He was a member of a number of the national medical and other organizations, which had a scientific or a benevolent purpose. He lived a pure, honest, upright life, and died with the respect of all who knew him.



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## Original Communications.

### PRACTICAL NOTES ON SOME OF THE MORE COMMON DISEASES OF THE SKIN.\*

By L. DUNCAN BULKLEY, A. M., M. D., New York, N. Y.,  
Physician to the New York Skin and Cancer Hospital, Consulting  
Physician to the New York Hospital, etc.

When your esteemed President kindly honored me with the invitation to address you this evening, I was at a loss to know as to what topic would best serve the purpose, and I sought his advice. He promptly replied that he thought that the subject most likely to interest my hearers would be "The Common Skin Diseases."

I take it that the purpose of meetings of medical men is for mutual aid. We do not come together to be amused or simply interested, nor in order to while away an evening. We are all deeply interested in the serious battle of life, in which we are the real combatants of disease. We come together to learn or gain something which shall aid us in that struggle. If we only realized it, every one present could help some one else by the results of his knowledge, experience, and observation. Some of us may have had greater opportunities than others, but it is the duty of each to contribute his quota to the general stock of knowledge.

When your President made his sensible suggestion as to a subject, I was at once relieved and pleased. It would not be difficult to present to you some of the newer or more obscure points in dermatology, and one could readily discourse upon one or more of the rarer affections of the skin, or report unusual or curious cases; or treat of some of the more obtruse pathological questions, which often vex and trouble those engaged in this branch. But I have never been much inclined to this class of work, preferring as a rule to give the profession such practical aid as I could in the management of the diseases which they are called on to treat.

\*Read before the Harrisburg Academy of Medicine, March 28, 1902.

It is in this spirit that I ask your attention briefly this evening to some practical notes on some of the more common diseases of the skin.

In looking over a recent analysis of 20,000 cases of miscellaneous skin diseases, 10,000 in private and 10,000 in public practice, I find that there are on the list no less than 120 different names of affections of the skin, which have come under my observation and treatment; many of these are very rare diseases, sometimes represented by a single case, while a few stand out prominent, representing a large share of the cases ordinarily applying for treatment. As the purpose is to speak of the common diseases of the skin, I have chosen the five which come first in the list, in point of frequency, as the basis of my remarks.

It may surprise some, perhaps, to learn that these five diseases formed together not less than 69 per cent., or nearly seven-tenths of all the cases occurring in private practice. Among the poorer classes in public practice certain other conditions are relatively more common, and the figures are somewhat different.

The five affections which thus stand prominent in private practice are as follows, with their percentages: Eczema, 32.01; Aene, 21.96; Syphilis, 6.58 (in public practice, 17.53 per cent.); Alopecia, 4.67, and Psoriasis, 3.82 per cent.; total, 69.04 per cent. If one masters well the diagnosis and treatment of these five he will be prepared to properly care for nearly three-quarters of the cases of diseases of the skin which may seek relief—which is, perhaps, quite as much as one expects to do in any branch of medicine.

*Eczema*, like the poor, we have always with us, and, as already mentioned, it formed nearly one-third of the 10,000 cases in private practice; in ordinary family practice it probably forms a much larger proportion, for multitudes of cases of infantile eczema never reach the specialist, and the same is true of large numbers of mild instances of the eruption, which

yield to the treatment of the family physician—for it is largely the more chronic and difficult cases that seek special treatment.

In the short limits proposed for this paper it will not be possible to consider at all fully this protean disease, eczema, upon which a whole evening might be profitably spent, and I will only endeavor to bring out certain practical points, which I hope may be of service.

I must first give a caution in regard to the diagnosis of this trouble—for upon a correct diagnosis depends success in dermatology more than in some other lines of practice. While eczema represented 32.01 per cent. of all cases, there are many conditions resembling eczema which should be clearly differentiated from it, if we would be successful in treatment. This leads me to the practical remark that more study should be given to individual cases, and to the close examination of the lesions present, even with a lens; a cursory glance at an eruption will often give a very erroneous idea, both of its true nature and also of the actual state of the skin. It is well always to examine all of the eruption, stripping the patient, if necessary, both to grasp fully the nature and extent of the disease, and to acquire a knowledge of the particular skin which is to be treated. I have often remarked that if the general practitioner would spend as much time, thought, and care on a case as a specialist does, he would have much better success in treatment.

Eczema has been called "the keystone of dermatology," and time is well spent in studying cases of it; for the principles governing its treatment, in acute and chronic forms apply to many other conditions of the skin.

Here I may remark, however, it is often a mistake to expend all the energy, thought, and study on the local conditions present, and that frequently the study of the *individual* is of equal or even greater importance. For I wish to emphasize most strongly that true eczema is not a purely local disease of the skin, but has constitutional relations which are most important. Time and space forbid my elaborating this and many other points of interest; but I cannot too strongly insist on this statement: The eczematous habit, which has manifested itself for years, by continuous or recurrent manifestations on the skin, can, by continued proper diet, hygiene, and internal medication, be arrested, and the patient remain free from erup-

tion; whereas, by local treatment alone, or by occasional, spasmodic, and ineffective medication, the eruption may persist or recur indefinitely.

One is often asked, "What is good for eczema?" The only single reply to this is, "Brains." There is no specific for eczema; arsenic alone will not cure it, though in many cases it is more or less serviceable as an adjuvant. Eczema can be radically cured only by a thorough and careful study of the individual in all his relations, and by a persistent watching of the same, and guidance into health. Eczema is always a disease of debility, accompanied with faulty assimilation and disassimilation. I may say, in passing, that I believe the liver to be often at fault, and that the evidence of the systematic errors are often found in the urinary secretion. This is not in the form of albumen or sugar, but in derangement of its normal ingredients, and often in the abnormal presence of uric acid, urates, phosphates, or oxalates, with disturbance of the urea proportion.

The local treatment of eczema is also a very large field, which it is practically impossible to do more than touch upon within the limits of such an address as this. I may remark, however, that as eczema is essentially a dermatitis, or inflammation of the skin, great care must often be exercised to avoid irritating an already inflamed and sensitive skin. Infinite harm is often done by strong applications, which are often made stronger and stronger in the hopes of arresting itching, which is dependent upon this very irritated condition of the skin.

On the other hand, in more chronic conditions, milder measures are well-nigh useless, and, when properly employed, quite severe applications are often of the greatest service.

Much has been written of late years in regard to the parasitic nature of eczema, but it may be stated that the theory finds little acceptance among those who know most about the disease. The so-called *seborrhœic eczema* of Unna, or more properly *dermatitis seborrhœica*, does often seem to have a parasitic element which is of importance in treatment; for many of these cases yield marvellously to resorcin and sulphur. But if this eruption has any real connection with eczema, which many question, its causative parasite has not been satisfactorily demonstrated, and it is not known to be actively contagious. In all discussions of the influence of microbes in producing lesions on the skin, it must be re-

membered that the healthy skin is the habitation of a large variety of micro-organisms, some of which may be aroused into activity of action when the conditions of the soil are favorable, without being necessarily the actual producers of the pathological lesions. Thus, the immediate cause of pustular inflammation is now accredited to the presence of staphylococci, and although the pus cocci are recognized to be almost omnipresent, how rarely do they occasion syccosis, impetigo, boils, carbuncles, etc.? If they were the effective and only cause of suppurative lesions in the skin, these would be vastly more frequent than they actually are—for we are all constantly exposed to the action of these parasitic elements; and the same may be said of eczema and any possible parasitic cause.

The next most common eruption which appeals for treatment is *acne* in its various varieties. This formed 21.96 per cent. in the statistics referred to, or nearly one-quarter of all cases of skin disease.

Much that has been said in regard to eczema applies with equal force to *acne*. He will but poorly serve his patient who regards the disease wholly from the local aspect. While many of the causes which produce the eruption are different from those operating in eczema, there is a very close relationship between the two affections, and the two often occur in the same individual in early and middle life.

In *acne*, fully as much as in eczema, it is necessary to study the individual quite as strongly as the local lesion. While many cases of *acne* seem to occur in those in perfect health, this is not really the case, and very close study will always detect errors which should be corrected, both in diet and hygiene.

It would be out of place here to enter at large into a study of this eruption, its etiology, pathology, and treatment, but long experience leads me to say unqualifiedly that *acne* is a disease of debility. The lowered vitality is often manifested by poor and deranged circulation, cold and clammy hands and feet, irregular flushings, disordered sleep, and with a sluggish discharge of many of the functions of the body. Constipation and indigestion, whether it be gastric or intestinal, are constantly met with, and auto-intoxication may be put down as one of the prime causes of the eruption.

Cases certainly differ very greatly in their character, course, and treatment, but in my experience they all relate to faulty assimilation

and disassimilation, which must be corrected in order to obtain the best results. The congested and inflamed cases of *acne rosacea*, in high livers and free drinkers, require a radically different course of treatment from the indolent and sluggish lesions of *acne simplex* in overgrown and wrongly nourished young people, or again from the large, torpid masses of *acne indurata*. But all alike are evidences of something wrong elsewhere than in the skin, and all show a lowered vital action somewhere, which must be sought for, found, and rectified in order to obtain satisfactory results. With sufficient thought and care, and strict obedience on the part of the patient, *acne* is curable—but not by local treatment alone.

It will be understood, then, that there is and can be no specific for *acne*, any more than for eczema. Each case requires special study, and widely different treatment may be required to accomplish the same end in different individuals.

*Acne* is often thought to be more or less connected with, or dependent upon, sexual disorders; but in my experiences, relating now to 2,774 cases of its different forms in private practice, I have rarely found this to be the case. It is quite true that the eruption commonly develops at about the time of puberty, and that in fore or during each menstrual epoch, and not infrequently *acne rosacea* appears about the time of the menopause; but in my judgment there are other causes operating at those times which induce the eruption. Suffice to say that in treatment I have rarely had occasion to pay attention to this supposed connection, although, on the other hand, I constantly see improvement in sexual disturbances from measures directed primarily against the *acne*. I may also state that I have rarely seen *acne* greatly influenced for good by local treatment directed against sexual disorders.

Local causes have been claimed for *acne*, and of late there has been considerable said in regard to the action of the micro-organisms which have been found in the expressed contents. But the same arguments apply here which have been already mentioned in connection with eczema: Pus organisms can undoubtedly cause suppuration, but they operate on the skin only when they find a suitable soil, and the best results can certainly be achieved by rendering the soil unsuitable.

It would be out of place here to enter upon

special lines of treatment, internal and external, for acne, which are well detailed in certain of the books—although I must state that in few of them is there sufficient and proper attention paid to the general measures which are indicated by the foregoing remarks.

Next on the list in point of frequency of occurrence in my statistics comes *syphilis*, but with a very much smaller percentage—namely, 6.58, in private practice. In public practice it was much more frequent, so that in the combined 20,000 cases it formed over 12 per cent. of the whole.

This disease is undoubtedly much more frequent in the larger cities, especially in seaports, than in smaller places and in the country at large. But in a practice of over thirty years, with records of 836 cases of syphilis in private practice, coming from all over the country, I am convinced that the disease is far more frequent and widespread than many imagine.

This subject of syphilis is also a very large one, upon which even many evenings could be spent with profit, and it is difficult to decide just what aspects to consider on the present occasion.

Perhaps I cannot commence better than by calling your attention to that aspect of it to which I have devoted much time and thought—namely, syphilis in the innocent. It is a great mistake to regard syphilis as necessarily a venereal disease. The fact of its being most frequently acquired in impure contact is a pure accident, owing to the delicacy of structure of the genital organs, the readiness with which solutions of continuity occur there, and the consequent presence upon them of the early, inoculable lesions of the disease. The mucous membrane of the lips and buccal cavity is also very delicate and prone to abrasions, and there we find relatively large numbers of primary sores, most of which are non-venereal. On any portion of the body where the skin is abraded the poison of syphilis will find entrance, if it is properly presented, without a thought of its being a venereal disease.

The vast and increasing numbers of cases which have been reported where the disease was acquired in a thoroughly innocent manner, together with our knowledge of the innumerable instances of marital and hereditary syphilis, which are known to have occurred, should lend an interest to the study of the disease greater than that which might possibly be given to it

if it was regarded solely as an unfortunate accident following illicit intercourse. Syphilis is a great disease, capable of infinite harm, and well worthy of the closest study, even if it may not be of frequent occurrence in the practice of some. However, as remarked before, I believe it to occur more frequently than many think, and cases of unrecognized syphilis in general practice are sometimes very sad in their later results.

I shall take the liberty of quoting the conclusions of a recent article of my own on this subject, as I do not think that I could put it more clearly or tersely:

“First. Syphilis is certainly not a venereal disease in all cases, and the absence of any history of sexual exposure should never throw one off the guard when there is reasonable evidence of the existence of the disease. In addition to the large number of instances of innocent marital and hereditary syphilis, there are a certain number of cases of extra-genital chancre, which must always be reckoned on when confronted with possible syphilis. Among a large number of cases of chancre which I collected from the clinics of Europe, extra-genital chancre was found to make nearly 6 per cent. among the males and almost 12 per cent. among the females. Fournier, of Paris, found that in his private practice about 25 per cent. of the females had acquired the disease in a perfect innocent manner, while in my own private practice a careful study of the notes of cases shows that in fully 50 per cent. of females syphilis was innocently acquired. In my experience extra-genital chancre is more common in males than in females. The question, therefore, of venereal exposure need not always be of importance in acquiring syphilis, and often those of the purest character may require careful and prolonged anti-syphilitic treatment.

“Second. Syphilis is often a very erratic disease, and it is sometimes difficult to get a satisfactorily corroborative history. Not only may previous symptoms have been prevented or held in check by treatment; but even if left to itself some of the early manifestations may be very slight and escape notice, yet be followed by serious lesions. This is particularly the case in women.

“Third. Many cases of unrecognized syphilis have very severe later symptoms, involving great destruction of tissue and severe lesions of internal organs. This is due to the absence of

previous controlling treatment. It has been a common remark that syphilis acquired by means of an extra-genital chancre was apt to be of a very severe character. It is, furthermore, these cases which are often overlooked.

"Fourth. Syphilis is such an imitator of other diseases that its presence may often be suspected when there are present unusual or peculiar features. In such cases, careful study and analysis will often serve to determine the true nature of the trouble, but it may be difficult to obtain a perfectly satisfactory corroborative history. In many instances of late syphilis from innocent infection the sufferers do not at all suspect the nature of their disease.

"Fifth. As many of the late, often unrecognized, lesions of syphilis are the result of imperfectly treated early syphilis, it is desirable that the general profession and the laity be thoroughly convinced of the necessity of careful and prolonged treatment to cure the disease. Too often syphilis is treated in a superficial and hasty manner, which is neglected as soon as the symptoms disappear. According to all modern experience and opinion, this is wrong, and physicians should see to it that patients receive proper treatment for at least two years, in the manner now accepted and fully described in writings on the subject.

"Syphilis is a great, a very great, disease, much more common than is supposed by many, and is worthy of the most careful study and consideration. While its manifestations are sometimes difficult to determine, there is no reason why with sufficient care and patience in its study and treatment there should not be fewer cases of unrecognized syphilis in general practice."

The next most frequent disease or condition which appears on our list is *alopecia*, with a percentage of 4.67. It may seem a descent from the sublime to the ridiculous to spend time on this, after treating of syphilis, but justice to our subject demands attention to the complaint, which comes fourth on the list in point of frequency.

Moreover, loss of hair is no trifling matter to many, and among the 710 patients who have consulted me for this cause, there are many in whom there has been more distress than was occasioned by very many apparently more serious complaints. Many cases of alopecia are, of course, light, and cause relatively little trouble, and are frequently neglected after brief treatment; while others prove a serious detriment to the individual.

I have under alopecia included also *alopecia areata*, in which the hair begins to fall out in perfectly smooth, bald patches, which may increase until every hair has been shed not only from the scalp and face, but also from every portion of the body. There were 155 cases of alopecia areata, of greater or less extent—96 in males, and 59 in females. I will briefly consider this first, and afterwards the more common form of baldness.

There has been much discussion of late in regard to the recently-revived theory of the parasitic nature of this condition. Saboureaud, of Paris, has been the principal advocate of this theory, and has given much proof that there is a micro-organism often, if not always, found in connection with these cases. But there are so many conflicting facts and observations in connection with alopecia areata that I do not think that the theory has found much acceptance, and I am still convinced that the quite opposite theory—namely, that of a nervous origin of the complaint, which has long been held, is the correct one. The disease is a most interesting and often intractable one, and may occasion serious disfigurement.

Ordinary falling of the hair may seem a trivial affair, but as it occasions annoyance and distress, it is certainly not unworthy of the serious attention of the physician, who is often called upon to minister to very slight ailments of other portions of the body—that is, if he can be of any assistance. Unfortunately, this subject has been relatively neglected, in scientific study, and it must be confessed that we know comparatively little in regard to either the growth of the hair or the true causes of its fall; the whole condition has been relegated too much to ignorant barbers, hairdressers, masseurs, and quacks generally.

It would not be possible to do justice to the subject in the short time which remains, but I must say a few words of protest, caution, and advice.

In the first place, I protest against the neglect of this subject by scientific medicine and its relegation to quacks.

In the second place, the caution is thrown out that falling of hair may sometimes have very serious relations. Occasionally cases come to me on this account where it is wholly due to a previously unrecognized syphilis—strange as it may seem. Again, falling of the hair is sometimes the sign of a very serious break-down, nervous or other, and by

means of attention to the hair, which may occasion more worry than the physical condition, and by a thoroughly proper line of treatment, dietary, hygienic, and medicinal, the patient may receive the greatest benefit to the general health. This is often seen in connection with alopecia after illness, where it will indicate an imperfect convalescence. There are many more points which could be brought up, but these suffice to show that not only for its own sake, but also for the sake of the patient, it is always well to pay serious attention to cases where there is loss of hair. Even in the milder cases, very much can be done by patient attention and skill, both to check the falling and to restore, in a measure at least, that which has been lost.

A word of advice in regard to so-called hair restoratives, with which the market is flooded, with all their lying advertisements: A very slight knowledge of anatomy and physiology will convince any one of the futility of the preposterous claims which are often made for this or that hair restorative. The nourishment of the hair comes from the papilla, situated at its base, and experiments with such an agent as iodine show that it is impossible for the stain to reach much beyond the neck of the follicle, hardly half way to the bottom, and that neither it nor any hair growing remedies can ever reach to the source of nutrition. What, then, is the basis of testimonials in regard to their efficacy? If they are true, and if hair has regrown after the use of this or that hair restorer, it is most likely owing to a coincidence. In many instances the causes of the falling of the hair have passed away spontaneously, or under the use of proper general measures, and the hair has regrown spontaneously, as we constantly see to be the case when it has fallen after syphilis, erysipelas, or febrile diseases.

But there is still undoubtedly some value in the use of stimulants to the scalp, which may act advantageously in several ways. Seborrhoeic eczema is known to be a fertile cause of baldness, and by checking or removing this the hair will grow naturally under proper conditions of general health. Or, again, proper hair lotions may act favorably by stimulating the circulation of the scalp, and so promoting nutrition, or, by the oil they contain they may relieve a certain abnormal dryness of the hair, due to faulty action of the sebaceous glands, and so facilitate its growth. But is it futile to expect too much from any special hair tonic, however

much it may be praised in type, whether commercially or professionally. But with the proper addition of constitutional treatment, including diet, hygiene, and internal tonic or alterative medication, very much may be done for a large share of those who are losing hair in early life.

It would be impossible here to give even a brief outline of the treatment which might be required, for individual cases vary so greatly in their requirements. In the dietary line I may throw out the single hint that those nations which live simply and partake largely of the fats and fish, have generally abundance of strong hair, as the Esquimaux, Alaskans, Swedes, and others; also, that those who eat coarse bread and cereals, as the Germans and Scotch, have fine hair and abundant; while those who, like the French and Italians, eat fine white bread and macaroni, which is only fine wheat flour, have poorer hair, teeth, and nails.

The last of the five most common affections of the skin is *psoriasis*, which gives a percentage of 3.82, and is seen not to be one-eighth as frequent as eczema. This is always an interesting disease, both from the great variety of its manifestations and from its exceeding obstinacy to treatment. Continually, when it is thought that a case is doing well, and the eruption is disappearing under treatment, it will burst out again with renewed vigor, and from no apparent cause, and it will constantly be found refractory to measures which have proved satisfactory in previous cases.

In a large proportion of the cases of psoriasis the patient will seem to be in perfect health, and it will be difficult to determine a basis on which constitutional treatment shall be based. But the experience of every one shows that local treatment alone cannot prevent the recurrence of the eruption, although it often succeeds in removing that present in a very satisfactory manner. Some writers, therefore, have declared that as a disease it is incurable, and that it is impossible to prevent relapses. I do not share this opinion, although I agree that the eruption will often recur in a most provoking manner. If one looks at what has been written on the subject carefully, it will be seen that those who give the most unfavorable prognosis are those who dwell most strongly upon local treatment; while those who are more hopeful will be found to have broader views of medicine and dermatology.

Some years ago syphilis was regarded as incurable, and it was only attempted to treat the various manifestations as they arose in succession. Consequently, twenty-five years ago we continually saw cases exhibiting the most distressing signs of late syphilis, in the way of destructive ulcerations of the nose, and about the mouth and throat; lesions of the eye, diseases of the brain, gummy tumors of internal organs, etc. Happily, these are now met with much less commonly than heretofore, thanks to the more intelligent and persistent treatment which has been everywhere adopted. We all know, now, that a course of at least two years' faithful treatment, with abstinence from alcohol and proper hygiene is necessary to cure the disease, and in many cases a much longer time is necessary. These facts patients have learned to accept, and most of us believe that with efficient treatment syphilis can be cured, so that there shall not be later manifestations.

An experience of over twenty-five years, relating to 478 cases of psoriasis in private practice, 276 males and 202 females, of which I have more or less complete notes, some of them extending over many years, has convinced me that with proper care a considerable portion of the cases can be cured; but I must also acknowledge that there have been some patients who, although they seemed to comply fairly well with the rules laid down, failed to get the full relief which was hoped for.

There is, of course, a vast difference between the results of treatment in the intelligent and generally obedient patients seen in private practice, and the more or less ignorant, careless, and irresponsible patients in the public clinics of hospitals and dispensaries. These latter seldom get cured, although it often happens that when the eruption has been removed by local treatment it will remain absent for a greater or less length of time, sometimes permanently, owing to advantageous changes in the mode of life, etc.

But for the radical cure of psoriasis, much more than local treatment is necessary, and as in the case of syphilis, treatment not only during the periods when eruption is present, but also in the interval, and that for a very considerable length of time, even measured by years instead of months. It may not be necessary to take medicine the entire time, but with proper diet and hygiene and sufficient medication to keep the disease under control. It is true, that relatively few patients can be induced to be

thus faithful, but from notes of certain cases which I have observed over a long period of time, I believe that sufficiently prolonged medical supervision can overcome the tendency to the eruption.

It would be impossible within the allotted time to detail the treatment necessary for different cases, for they vary so greatly in their character. While some cases of psoriasis are found in strumous subjects, and require a certain line of treatment, including cod liver oil, the large majority are arthritic in nature, and there is constant need to overcome the rheumatic or gony diathesis, which is at the bottom of the eruption. But, as with so many diseases of the skin, I believe that there is an essential debility or lowered vital tone, which must be met in order to achieve the best results in controlling the eruption.

In regard to special remedies, there is really no one which will always control psoriasis. Arsenic in full and efficient doses is certainly of value in very many cases, but where there is much cutaneous congestion, or where the eruption is rapidly developing, it quite as often does harm.

In drawing these rather rambling remarks to a close, I am fully conscious of their many imperfections, and trust that my shortcomings may be excused, owing to the great difficulty of covering satisfactorily such a field as your president suggested—the common diseases of the skin. It would have been much easier to write at length on some particular subject, or concerning some one disease; but having undertaken this work, I have endeavored to give practical thoughts and suggestions, some of which I hope may be serviceable to some one in actual practice.

Dermatology is an inviting field, if only one will give some time and thought to it, and as these five diseased conditions which have been alluded to form almost three quarters of the cases actually seeking relief, it is well worth while to become thoroughly acquainted with them. It may be interesting to know which are the next five most frequent diseases on our list in private practice; they are as follows, with the percentages: Ringworm, 2.29; epithelioma, 2.25; pruritus, 1.82; urticaria, 1.64, and dermatitis, 1.59; giving a total of 9.59 per cent. of all cases, as against 69.04 represented by the first five.

I quite appreciate that diseases of the skin do not always offer great attractions to the general practitioner, and I may have been rash in venturing to seek to interest you in them. But I can assure you that they are of deep interest to the patient, and I feel confident that all possible care and attention to them are highly appreciated by those thus affected. If I shall have succeeded in arousing any interest in this branch of medicine, and in making any matter more clear, I shall feel that my time and effort have not been wasted.

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## DANGERS FROM INDISCRIMINATE USE OF MORPHIA.\*

By T. D. CROTHERS, M. D., Hartford, Conn.,

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Morphinism and other morbo-maniacs resulting from brain exhaustion, toxic conditions, failures of nutrition, with lowered vitality and general debility, are on the increase in this country. The nerve centres lose their vigor, become highly sensitive, and approach a condition of degeneration, which is transmitted to the future offspring—as is shown by the increase of neurotics in every community.

It is this class that seek relief from morphia, alcohol, and other drugs, and manifest symptoms of low vitality and poisoning; make ready and develop the soil for the production of abnormal nerve tissue. There are reasons for believing that physicians are responsible for much indiscriminate use of narcotics. Relief of pain is the highest ambition of a class who lack a proper conception of the dangers of careless prescribing of morphia, due, very likely, to faulty training or teaching. Authorities laud morphia as a most valuable agent, but say little of its dangers and contraindications. As a result the young, inexperienced physician goes forth with a clouded and limited understanding of the proper use of morphia, and doubtless is responsible for many *habitués* who have given way through the impulse to obtain relief. One prominent physician writes: "The mania for morphia by the needle is more of a

moral lapse than a physiological one." Another writer lays stress on moral treatment. It is urged by some writers that in all conditions of pain it is justifiable to use morphia by the needle. Some physicians prescribe it in obscure cases as an aid to diagnosis, believing it creates confidence, and is followed by more successful results. Often in chronic cases a physician will instruct the patient in the use of the needle. Instances are not uncommon where the physician has administered the drug daily for several consecutive weeks; finally the patient, realizing his condition, discharges his physician, but continues the drug. An effort to conceal the use of morphia is usually discovered by the succeeding physician. Many excellent physicians have thoughtlessly given morphia until the patient was unable to bear its withdrawal. One class of medical men who promote the use of narcotics are spirit and drug takers. They believe in the moderate use of alcohol as a food for domestic and social purposes, and as an invigorator for the over-worked. To them there is no thought of evil effects; addictions are ascribed to other causes.

In one instance, a physician of this class was known to have caused morphinism in six different persons. Another class who are active in promoting narco-maniacs are druggists and manufacturers of proprietary medicines. The former discover the magic effect of the drug, and profits accruing from its sale, while the latter teach the use of the needle.

In some cases, inebriates are changed to morbo-maniacs by this counter-prescribing of morphia. A terrible evil and menace stands upon the threshold of society and community through the regardless consequences of the use of morphia and opium. In a widely-advertised remedy one-eighth of a grain of morphia was found in every teaspoonful. Many of the brain and nerve remedies contain cocaine. The popularity of many preparations depends upon the narcotics they contain.

Not infrequently the history of an addiction begins with the use of a proprietary medicine, or a combination with aromatics prescribed by the druggist.

When first taken, morphia produces a degree of happiness and peace with all things that is difficult to overcome. Cases experiencing its pleasurable effect are sure to become fiends upon the slightest provocation. In one instance a physician found two members of one family

\* Original abstract of a paper read before the Connecticut State Medical Society, May 27, 1902.



peculiarly susceptible to the effect of morphia when administered by the needle. Apo-morphia was given, producing such intense nausea that a feeling of disgust resulted in breaking up the mental fascination.

Needle-mania is a reality; its peculiar intoxicating effect is beyond comprehension. Hence the importance of appreciating the responsibility in hypodermic medication.

Super-sensitive men and women usually seek this form of treatment, and though the moral effect of yielding to their appeals is full of danger, the physiological effect is quite as important through the irritant and narcotic action upon the nerve centres. It falls most heavily upon the sensory centres, depressing functional activities, disturbs elimination, reacts upon nutrient centres and metabolic processes, increasing cell growths, which still further depress and disturb the various functions.

Morphia first causes irritation, increases the heart's action, and is followed by loss of nerve activity and consciousness to the degree of coma.

The use of morphia after operations has been recently condemned by several eminent surgeons, claiming that it increases the shock by depressing nerve centres and lowering vitality. English surgeons have also protested against its use on the ground of its diminishing secretions.

In abdominal operations, Dr. Price, of Philadelphia, believes that it increases the mortality. As to the use of the needle, many authorities condemn the sudden introduction of toxic material into the blood.

Regarding the internal use, Dr. Cowles concludes that morphia favors the growth of intestinal toxins, absorption of which still further poisons and deranges the vital processes.

Morphia given during la grippe in small doses for several days may be followed by pains that indicate morphin poisoning, such as disturbance of stomach and bowels, with periods of depression, irritability, and emotional sensitiveness. The appetite is variable, and the brain becomes exhausted upon slight exertion; and while these symptoms are often attributed to influenza, they resemble the withdrawal symptoms of morphia.

Malarious affections in which morphia is given are frequently followed by significant pathognomonic symptoms. Neurangias, depressions and obscure psychopathic symptoms develop as sequellæ to the use of morphia.

Narcotism of the pain centres leaves a degree

of susceptibility and feebleness to control that may continue sometime. Sudden pneumonias and tuberculosis, often noticed, are frequently traced to narcotism from alcohol or opium.

The routine practice of our forefathers in the use of calomel and venesection was infinitely more scientific and superior than the promiscuous use of morphia by the hypodermic needle. Morphia is valuable, and, I may say, indispensable; but it is equally dangerous, and should never be used except for special reasons and under special conditions.

In cases of carcinoma and fulminating disease—conditions that are incurable—it is invaluable, but when given to neurotics and psychopaths it is almost certain to increase brain and nerve degeneration.

Finally, this fact should be kept before the profession, that proprietary drugs given for pain always contain narcotics, and their use should be condemned; likewise reckless prescribing of morphia by druggists as well as physicians.

Physicians should be more cautious and considerate in prescribing narcotics, and should remember that many lives have been wrecked in consequence of lax, unscrupulous, unprofessional hypodermic medication.

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## PERMANENT RESULTS, FAILURES AND RELAPSES FOLLOWING BOTTINI'S OPERATION.\*

By F. KREISSL, M. D., Chicago, Ill.

Perusing the clinical record of ten cases selected from sixty-nine cases operated by Bottini's method, the following conclusions are drawn:

1. In properly selected cases of prostatic obstruction the Bottini operation, when correctly performed, will relieve the patient from urine retention, irrespective of the duration and degree of retention.

2. The cases to be selected are those in which vesical protrusions elongating the posterior urethra not more than about three inches and a half block urination. Nodules encroaching upon the caliber of the prostatic urethra are not suited

\*Original abstract of a paper read before the American Urological Association during its annual session, held at Saratoga Springs, N. Y., June 13, 1902.

for the Bottini operation, but for perineal emulcation.

3. Collar and horseshoe-shaped vesical protrusions will not give a satisfactory result, because they require multiple incisions, the consequence of which will be extensive cicatrization or the formation of pedunculated nodules. These driven toward the vesical outlet by the concentric pressure of the urine will block the latter. The same applies more or less to the enormous, often grotesque, protrusions filling the greater part of the viscus.

4. Pedunculated vesical protrusions should be removed through the perineal route, Young's new method of oblique or semi-circular incisions being considered unsafe and sometimes dangerous, for obvious reasons.

5. Penetrating incisions in the respective lobes are not essential for a good result, and, in many cases, not feasible for mechanical reasons.

6. The principal requirement is to establish a groove deep enough to give the obstructed portion an approximately normal caliber.

7. The value of the cystoscope as an aid in measuring the thickness of projections, in establishing penetrating incisions and in preventing "unskilled operators" from cutting through a swollen ligamentum interurethericum or vesical fold are considered fanciful exaggerations and overrating of the possibilities of cystoscopy.

8. The control of the position of the beak of the incisor by the forefinger in the rectum is not available in many cases, and also dangerous.

9. To prevent slipping of the beak into the urethra or up into the viscus after being placed on the convexity of the lobe, the author uses an especially constructed operating table and a wrist support placed between the patient's legs.

10. The almost regular presence of strictures and mixed infection found in the prostatic fluid, and the frequently admitted preceding gonorrhœa, taken together with the statements of Albarran, Halle, and Cienanowsky, make it more than probable that chronic posterior urethritis and prostatitis constitutes in the majority of these cases the original cause of so-called prostate hypertrophy.

11. It is also evident that a galvanocautic incision in a hypertrophic organ will not remove its tendency to hypertrophy, and consequently, we will see relapse after the Bottini

operation sooner or later, depending on the age of the patient and the character of the process in the prostate.

12. The Bottini operation will be indicated in individuals whose general condition does not permit the administration of an anæsthetic and for the cases of fibrous prostatic bar. All the other cases ought to be subjected to partial or total prostatectomy.

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## A CASE OF COCA-COLA POISONING.

By J. W. PRESTON, M. D., Keystone, W. Va.

Having been called to attend a robust colored woman, whose sudden and peculiar illness had greatly alarmed her friends, I found what was to me a most interesting group of symptoms, which I was at a loss to account for, until I had elicited the fact that just before her noonday meal she had drank in rather quick succession five glasses of coca-cola.

Her first symptom was a consciousness of "feeling foolish about the head," as she expressed it. On sitting down to the dinner-table, she could not eat, and on attempting to reach her bed, found she could not walk. On reaching her, some five hours later, she was in bed in the sitting posture. Her face betokened great mental anxiety and distress, though she complained of no pain. She was evidently unable either to move without assistance, or to control her muscular or nervous system, the larger muscles being in a state of constant unrest—something between a choreic movement and a tremor. Pupils were normal; pulse about eighty beats to the minute, full and strong; respiration but little affected. Eructations were frequent, but no vomiting. A most noticeable symptom was her frequent desire to urinate and the increased quantity of urine. There was no perceptible effect upon the skin secretion.

After administering one-fourth grain of morphine hypodermically, together with twenty grains of bromide of potash, followed with ten grains of chloral hourly, the symptoms gradually yielded to sleep in about three hours, though through the week following her sleep was broken and unsatisfactory, and her nervous system somewhat out of gear.

(CONCLUDED FROM LAST ISSUE.)

## SELECTIONS FROM THE MATERIA MEDICA OF OUR ENGLISH ANCESTORS SEVERAL CENTURIES AGO.\*

By EDWIN L. MORGAN, M. D., Washington, D. C.

The supposed virtues of this ointment were: "There be three things which by this ointment doe worke this wonderful effect,—*First*, sympathy of nature. *Second*, the influence of the celestial bodies, perfecting its operations by the elements. *Third*, a balsome which hath a power of healing and is naturally given to every man."

"*First*, let the weapon with which the man is wounded, be anointed every day once if necessity require, and the wound be greate; otherwise, every second or third daye will serve. Let it bee kept in a clean linnen cloathe, in a warm place, not too hot, lest there accrue any hurt to the patient; and beware that the weapon fall not downe, nor the winde blown on it in a cold place, for it will force the patient to madness.

"*Secondly*, before you annoynteth the wound, consider whether the wound be made by a thrust or point-wise; which if it bee, then let the weapon be annoynted above (and not below), descending downe; otherwise, it will hurt the patient.

"*Thirdly*, but if you cannot know how deepe or in what manner the weapon went into the flesh, you may annoynt it all; otherwise it sufficeth to annoynt the very place with which the hurt was made.

"*Fourthly*, it is needless to sow up the wounds as barber-surgeons doe; but only to binde it up every day with a cleane cloath dipped in the urine of the patient.

"*Fifthly*, that day wherein any one doth annoynt the weapon, let him abstain from venery.

"*Sixthly*, before the annoynting of the weapon, let the blood of the wounded person be speedily stanchd.

"*Seventhly*, in fractures or breaking of bones, you may adde some of the powder of great wallwort, the roots of black hellebore to the onyment."

"Having the weapon with which anyone hath bin hurt, and desireth to know whether the patient will live or dye, you shall thus trye it: If you sprinkle the powder of red saunders and blood stone upon the weapon, warmed over a few

coales, so as one may well hold his hand upon it, if it sweat drops of blood, the patient shall dye; if not, he shall escape."

"But if you would know whether your patient be temperate in his drink or other necessaries, it is known if there appears spots of blood in the weapon; if there be none, he carryeth himself well."

The doctor goes on to say: If you have not the weapon, "if a little sallow sticke be dipped in the bloody cut, the blood sticking on it being dried (not at the heat of the sun or fire, but of itself) be put into the foresayed oyntment, kept in a close boxe or glasse, and there left in it." "But if the wound will not bleed," scarify the same and dip stick or weapon into it. New wound requires new stick.

**TOOTHACHE.**—In regard to toothache, this doctor relates: "So also in curing the toothache, the tooth acheth is to be scarified with a penknife till it bleeds, and then annoint the penknife with this oyntment, after the blood is dried into it, and the paine will presently cease."

*Germanic formula of ointment:* "Take bore's grease and bear's grease, of each a pound. They must be dissolved, and have red wine poured into them. Then be addeth, powder of bloodstones, one ounce; red saunders, six drammes; prepared wormes, two drammes; mosse of a dead man's skull, as much as can be had."

I find some authorities use powdered earth worms in making this ointment. Johannes Wittelhius omits skull, mosse, nummy, fat and blood in his recipe. Crollins has the ointment prepared when the sun is "in libra"; others confine the time to narrow limits—10th or 11th of September. White wine as well as urine were used to cleanse wounds. Persons may be miles away from the anointed weapon without affecting the virtue of the ointment, etc.

Some doctors of this era are of the following opinion: "The mosse of a man hang'd, mummy, warme blood, and fat of men—and doe think the whole power and efficacie of this thing to be in man's fat and blood."

There were skeptics in professional ranks at that day: for one of the doctors learned in ointment formulas, and their success in healing wounds crushingly, says to all unbelievers: "But lest any man should doubt of the effect of this ointment, first of all they produce experience: and Rudolphus Gloenius, Junior, writeth that he is able to nominate emperors, kings, princes, earls, nobles, whose authority and

\* Read at a meeting of the Medical and Surgical Society of the District of Columbia, April 3, 1902.

truth are not to be doubted, of which give testimony of the efficacy of this ointment."

The above compares very favorably with testimonials given in our own era, in regard to patent and other proprietary medicines in the lay press and medical periodicals.

Quite elaborate statements are made in regard to *young girls in works on diseases of children and other old medical books*. "And of this thing they bring other examples also. The zenith (as they call it) or first menstruous blood of young maidens being cast upon the fire, as they report, is very offensive unto the virgin from whom it flowed." *After the confinement of a woman*: "The secundines or after-births, if they be ill handled, are very dangerous to the woman from whom they came." Mothers who are superstitious are easily frightened, and this fact might cause some change in the quality of her milk; and should she nurse her infant after she was excited or scared, the child might be thrown into convulsions, owing to digestive disturbances caused by the nourishment taken.

TREATMENT OF RICKETS—Glisson: "Take of new cow's milk, warmed, three or five ounces; anise seed in powder, ten grains; common sugar, an ounce and a half or two ounces. Mix with them the yolk of one egg, and make a clyster, to which may be added: Half ounce fresh butter." The above treatment is supplemented by additional medicines, etc.

TREATMENT OF SCROFULA.—Wiseman, on *King's Evil*, gives six leaves of gold in one prescription, etc.

"Take of the best sarsaparilla, cut and bruised a pound; shavings of hartshorn, six ounces; leaves of agrimony, both kinds of fluelline, of each, two handfuls; white and red saunders, of each two drachms; Englis Liquorice, a pound; garden snails, one hundred; Earth Worms, a pound; New Cow's milk, two gallons. Distill the above according to art; and to three pounds of the distilled liquor, add two ounces of prepared crab's eyes. Let him take of this to the quantity of four ounces at a time, adding to each dose some quantity of barley, cinnamon water."

"*King's Evil* is a tumor arising from peculiar acidity of the serum of the blood, which, whenever it lights upon a gland, muscle, or membrane, coagulates and hardens. When it mixes with marrow, it always dissolves it, and renders the bone carious. If this acrid humor be simple, the disease in that case is a simple struma; but if joined with a malignity or any other

humor, it produces a compound tumor, as struma, maligna, phlegmonodes, scirrhomodes, ademadoes, etc. The remote causes of this acidity, or the remote ones of the struma are not easily enumerated, but may be referred to the following heads—viz.: Air, diet, exercise, natural complexion, hereditary affections, etc." "Children who are born of strumous parents, or who have sucked strumous nurses are usually troubled with this disease." "The whole blood inclines to acidity, and the serum is apt to coagulate; as also children that are very ricketty are very obnoxious to it." "So also are those that live in an air thin and sharp, or very thick and foggy; as also such as live on salt, sour or viscid diet." "Want of exercise is often the cause of this acidity. And external accidents, such as blows, bruises, compressions, etc., are frequently the remote causes of scrophula. But they always suppose a predisposition in the habit towards that disease. Strains also of joints, such as the knee, ankle, etc., often produce visible symptoms of the struma—viz., either glandular tumors in the neck, or tumors in the bones, which terminate in caries or spina ventosa."

"A remarkable instance of scrophula produced from compression. I had occasion once to observe in a cook's servant in the *Old Bailey*, who by sleeping one night on 'a form' with his head reclined over it. His neck was so compressed with the end of the bench that when he awaked, it was full of strumæ on both sides, some of which were as large as walnuts; and though all means were used which could be thought of by the ablest physicians and surgeons for his relief, yet in a few days they opostemated and became virulent ulcers, and he died tabid within half a year."

One writer says: "The Devonians believe that this disease (*King's Evil*) may be cured by kissing seven virgins, the daughters of the same mother, for seven days successively."

Sydenham quotes the following: "*The apothecaries' shops* were formerly burthened with a vast number of *volatile salts and spirits*, drawn not only from different animals, but likewise from different parts of the same animal. These were supposed capable of producing different effects upon the human body. Thus, the volatile salt and spirit extracted from the human skull were whimsically enough looked upon as medicines peculiarly adapted to remove diseases of the head. And thus the salt obtained from vipers was accounted the only one to be depend-

ed upon for the cure of the bite of that animal, while the spirit from human blood, carefully prepared, was esteemed the most sovereign remedy in all disorders—a medicine never enough to be extolled, to which all other preparations of this kind must give way—since this was drawn from the most perfectly elaborated juice of the noblest animal, and therefore consequently must be endowed with virtues superior to any other.”

Berdol, in his work, *The Origin and Growth of the Healing Art*, says: “Medicine, in mediæval Christian history, is simply the history of miracles of healing wrought by saints or their relics. Bede’s *Ecclesiastical History*, for example, is full of saintly cures and marvels of healing. The study of medical science under such circumstances could have had but little encouragement. Doctors were of but secondary importance where holy relics and saintly personages were everywhere present to cure.”

“In the Catholic Church there are special saints, who are invoked for almost every sort of disease. Thus:

- “St. Agatha, against sore breast.
- “St. Agnan and St. Tignan, against scald head.
- “St. Anthony, against inflammations.
- “St. Apollonia, against toothache.
- “St. Avertin, against lunacy.
- “St. Benedict, against the stone, and also for poisons.
- “St. Blaise, against the quinsy, bones sticking the throat, etc.
- “St. Christopher and St. Mark, against sudden death.
- “St. Clara, against sore eyes.
- “St. Erasmus, against the colic.
- “St. Genon and St. Maur, against the gout.
- “St. Entrope, against dropsy.
- “St. Germans, against children’s diseases.
- “St. Genevieve, against fevers.
- “St. Giles and St. Hyacinth, against sterility.
- “St. Hubert, against hydrophobia.
- “St. Job and St. Fiage, against syphilis.
- “St. John, against epilepsy and poison.
- “St. Lawrence, against diseases of the back and shoulders.
- “St. Liberius, against the stone and fistula.
- “St. Maine, against the scab.
- “St. Margaret and St. Edine, against danger in childbed.
- “St. Martin, against the itch.
- “St. Marus, against palsy and convulsions.
- “St. Pernel, against the ague.

“St. Otilia and St. Julianna, against sore eyes and the headache.

“St. Petronilla, St. Apollonia and St. Lucy, against the toothache.

“St. Plaire, against hemorrhoids.

“St. Quintan, against coughs.

“St. Rochus and St. Sebastian, against the plague.

“St. Romanus, against demoniacal possession.

“St. Ruffin, against madness.

“St. Sigismund, against fever and agues.

“St. Valentine, against epilepsy.

“St. Venise, against chlorosis.

“St. Vitus, against madness and poisons.

“St. Wallia and Wallery, against stone.

“St. Wolfgang, against lameness.

“Pettigrew gives the above list, but probably it might be considerably extended.”

“St. Stephen’s Day, December 26th. Many singular customs and superstitions used to belong to this day, but which, for the most part, have now become well-nigh obsolete. At one time, it was usual to gallop horses up and down till they were bathed in sweat, and then bleed them under the notion of keeping them in health throughout the new year—as if, says Thomas Naageorgus, St. Stephen ever took care of horses.’ ‘I don’t see why he should not. St. Eulogius protected grooms.’ This day was also called ‘Boxing Day,’ a kind of ‘Christmas box, to be opened December 26th.’”

*The Use of Starry Ointment in Veterinary Practice.*—“If a horse be pricked in the hoof with a nayle, draw out the nayle and annoint it, and the horse’s foot will be forthwith cured without suppuration.” “After the same manner may any creature that hath flesh and bones be cured.”

I could have described the dear old family doctor, of whose methods of treating his patients 200 or 300 or more years ago, we have been investigating. He carried his case, which contained drugs, which he smelt on visiting patients with contagious diseases; or else he wore special clothes, and also a mask or head dress, somewhat like a crow’s head, in the interior of which he placed odorous drugs, to keep off contagious diseases. Mental darkness and superstition possessed his soul. We may criticize the habits and beliefs of these earnest old practitioners; but they represent the sacred memories of the earlier medical education and progress.

“Gently scan your brother man!”

2315 Pennsylvania Ave.

## EXPERIMENT WITH LIGHT IN THE TREATMENT OF PULMONARY TUBERCULOSIS.\*

By ROBERT F. WILLIAMS, M. A., M. D., Richmond, Va.,  
Professor of Materia Medica and Therapeutics, Medical College of Virginia.

My interest in light as a therapeutic agent was first stimulated eighteen months ago by the excellent results that I witnessed from the use of the arc-light bath, with electricity, in a case of locomotor ataxia of several years' standing, and in a case of chronic articular rheumatism, where locomotion was almost lost.

In the beginning of my experiments with light my apparatus consisted of an arc-light bath. This was a cabinet lined with reflectors, in which the patient sat with the head out. In front and behind the patient were placed arc lamps of ordinary power, adjusted with a long arc, so as to develop the violet ray. The temperature of this cabinet in a direct line between the lights was about 105° F. In other parts of the cabinet the temperature was about 97°. Here the patient (nude) was exposed to the rays from one-half an hour to one hour.

The immediate result of the bath was an increase of body temperature from one to two and a half degrees, in spite of profuse sweating, which occurred usually in five to fifteen minutes. The pulse rate was increased and the tension softened. Though sweating was profuse, patients on lying down in a cooling-room invariably expressed themselves as feeling refreshed, though often tired when entering the bath. Other evidence of increased combustion than the rise of temperature was an increase of urica. In all of the early cases treated by this method I had a blood count made, and in all cases in which the count was less than normal a second count was made after two weeks' treatment, which showed in the different cases from twenty-five to forty per cent. increase in the red blood cells. The white blood cells were also increased, though not by so great a percentage.

In connection with the arc-light bath I used ozone, generated by fine electrical sparks from a high-tension coil. This was arranged in a small cabinet, in which the patient sat from five to fifteen minutes. I also used the high-tension current directly on the body. These cases were mostly neurasthenia and anemia, though I also treated two cases of locomotor ataxia. My results with the ataxia were negative, but

in the nervous and anemic cases quite satisfactory. The case which I especially wish to report is that of a young man, who gave the following history:

Age, 22 years; occupation for several years past, attendant at a soda-water fountain. He was sent to me in April, 1901, for treatment for gastric catarrh. He gave a history of mild neurasthenia for the previous several years. He also had several times trouble of the middle ear. He responded well to the treatment, and in a couple of months his stomach was in good condition, and his nervous symptoms showed improvement.

About the middle of September he began to feel bad and have a little continuing fever. On September 16th he consulted Dr. Frank M. Reade, who made a diagnosis of pulmonary tuberculosis, and attended him until my return to the city, on September 25th last. His fever was continuous, running as high as 103°. He had some night sweats, some cough, and lost a good deal of flesh. Physical examination showed only a thickening of the pleura at the base of the left lung. On September 29th, we had the sputum examined, and the bacilli were found. There was, however, no history of tuberculosis in the family. He was put on increasing doses of cod liver oil and sent to the country, where he stayed for a month. On his return, the sweats had ceased, and he had gained seventeen pounds; but the cough had increased, and, though morning temperature had disappeared, he was running an evening temperature of 100° to 101°.

Physical examination made November 18th, on his return, showed the following: At the apex of the left lung and in the interscapular region dullness, fremitus equal to right lung, increased vocal resonance, whispered speech, broncho-vesicular breathing, prolonged expiratory sound, click at the end of forced inspiration, or, in other words, typical signs of consolidation of an area nearly the size of one's hand. The base of the left lung showed dullness to the level of the ninth rib in the scapular line, extending to the front. Sounds of auscultation were diminished over this area. Deep breathing, commanded in the course of examination, invariably caused paroxysms of coughing, which lasted several minutes. These findings were verified by Dr. E. G. Williams and Dr. Frank M. Reade.

Treatment was then begun, consisting of arc-

\* Read before the Richmond Academy of Medicine and Surgery, June 25, 1902.

light baths of thirty to forty minutes' duration; ozone inhalations, which at first could be given only five or six minutes, as in that time it produced severe coughing, but which was increased until at the end of a month he could take it twenty minutes or longer without causing paroxysms. For the local stimulating effect I passed a current from the high-tension coil directly through the diseased area for twenty minutes.

This treatment was daily. All medication was stopped, his occupation was changed, and he became a collector, under orders to walk at least five miles a day in all kinds of weather. He was also directed to sleep with his windows wide open.

After two days' treatment his temperature became normal and remained so continually. At the end of a month physical examination was again made by Dr. Reade and myself. We thought there was some diminution in the dullness and fremitus over the affected area, but of this we could not be sure. The click on forced inspiration had disappeared, and coughing was not excited at all by this effort. His appetite was excellent.

Dr. H. H. Levy examined him for me at this time, and found dullness, prolonged expiratory note, subcrepitant rales, broncho-vesicular breathing at the apex and upper interseapular region, and friction sounds at the base. I did not have a blood count made at the beginning of his treatment, though from clinical evidence he was unmistakably very anemic. On December 23d a blood count was made on coming to my office by Dr. E. G. Williams, which showed 5,160,000 red corpuscles, 8,700 white corpuscles, and hemoglobin ninety-three to ninety-five per cent. The count was again made immediately after he left the cabinet, when the red blood corpuscles numbered 6,310,000, while the white blood corpuscles showed 9,250. At this time he was leading an active life, and expressed himself as feeling better than he had in several years.

Physical examinations were made again on January 13th and February 12th, at which the signs previously noted were found, though evidently less marked.

On February 15th this course of treatment was stopped, and treatment by Finsen light inaugurated.

My apparatus, called an actinolyte, manufactured by a New York firm, consists essentially of an enormous arc light, in which the carbons

are set at right angles, so as to save loss, the light from which is concentrated by a series of large lenses, giving, when reduced to a small focus, a light approximated at seventy to eighty thousand candle power. The heat from this, which is so great that a cigarette can be lighted in the focus, is cut out by a water-bath, in which I have used methylene blue with best results.

The patient was stripped to the waist and placed about eight feet from the machine, with his back to the light, and the light focussed to a circle that would cover the consolidated area, including the apex and upper half of the scapula. The sittings were thirty minutes daily. Ozone and electricity were stopped. Later the patient was reversed, the light being directed on the front of the affected area.

That this light penetrated the lung I demonstrated by an experiment previously made. A negative was placed over the pectoral muscles, and in front of that a sensitive plate, all of which was then covered with material impervious to light. The light was then turned on over the scapula for twenty minutes, when the plate, on development, showed clearly a positive, which could only have been produced by rays passing through the negative after penetrating the body.

On March 19th physical examination showed a practically normal lung, with an occasional friction sound near the apex. In this finding Dr. Levy agreed.

On March 23d bacilli were still present, but the patient coughed only in the morning on arising, while taking deep breathing exercises.

Treatment was continued with gradual lessening of the cough, until the last week in April, when he told me that he had ceased to cough entirely.

About April 25th the sputum was examined, and no bacilli were found. This demonstrated clearly the greater efficiency of the concentrated light in deep-seated organs as compared with the diffused light of the arc-light bath.

About May 17th, after great exposure to the sun during the hot spell then on us, the patient complained of malaise, aching in the back, dull headache, etc. Thinking that he had taken cold, I gave him some simple remedy, which relieved the symptoms, except the headache.

On Tuesday, the 20th, he sent for me, and I found him suffering with nausea and intense headache through the temples and cheek bones. His temperature was 100° F. He vomited once

that day and once the next day. After that continued intense pain through the temples and face, which resisted all forms of treatment, but anodyne and counter-irritant, was the only symptom except earache. On examining the ear, without a speculum, I saw what seemed to be a large piece of wax, which was removed by hydrogen dioxide, but the earache continued two or three days longer.

Dr. H. H. Levy saw him with me about May 26th, and while, of course, suspecting meningitis, we concluded that it was a case of cerebral congestion. His temperature by this time was normal. He continued with no other symptoms in this condition until June 3d. Treatment consisted of cathartics, potassium iodide, atropine, ergot, ice-bag to the head, blisters to the back of the head and neck, and leeches to the temples and behind the ears. He then developed symptoms of meningitis, spasm of groups of muscles, sluggish iris reflexes, stiffness and tenderness at the back of the neck, intense agonizing pain through the temples, difficulty or inability to speak. During this time Dr. Reade attended him with me. This condition lasted until June 6th, when he died.

Whether the meningitis was of tubercular origin or a simple meningitis from his nasal catarrh, ear trouble, or exposure to the sun, can never be known, as an autopsy was not procurable.

In view of the patient's death, nothing can be claimed as demonstrated, for, if he had lived, I should have considered an interval of many months without return of his pulmonary symptoms as necessary to a demonstration of cure, but from the observations recorded in this case and the reports of other observers, I think the conclusion can at least be reached that it offers great hope in this affliction, perhaps more than any other single line of treatment, and that if perhaps associated with wise medication, as well as hygiene, its development may soon rob tuberculosis of its terror, as antitoxin has done for diphtheria.

508 E. Grace Street.

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Dr. George Tucker Harrison, of New York, has been invited to read a paper before the Medical Association at Manchester, England, on July 15th.

## KELOIDS.

By THOS. W. MURRELL, M. D., Richmond, Va.,  
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In choosing this for my subject, I am actuated more by the desire to prevent dangerous meddling than with the hope of presenting a cure. A keloid, to be brief, is a growth of dense connective tissue of unknown etiology, and resting on the border land between the benign and the malignant. The name is derived from the Greek "Kelos," a crab—the prolongations it sends out bearing a fancied resemblance to a crab. As a rule, the growth is superficial, though not invariably so, and the integument covering the tumor is very thin and glistening. Its site of selection is about the neck and chest, though it may appear on any part of the body. There is no direct cause that can be named, but there are several distinct predisposing causes. First, there is—

1. *Race*.—The negro is undoubtedly more prone to keloids than the white, but this, I think, is due mainly to the prevalence in this race of the second predisposing cause—namely,

2. *A High Lymphatic Development*.—It seems that, starting with the highest type of the Caucasian, and working down to the negro, that the lymphatic tendency increases in direct ratio, and therefore the keloid tendency increases also. Then, there seems to be in certain individuals what might be called a—

3. *Keloid Skin*.—This skin heals in a peculiar manner. If cut, the wound, instead of healing by direct apposition of the lips, seems to heal from the bottom, and the scar fills in the gap. This scar may not be a true keloid, but is the first step in that direction. A keloid skin bruises easily. Most, and, as Piffard suggests, perhaps all keloids date from some—

4. *Traumatism*.—This may be ever so slight, as a small lancet stab—any severing of the integument being sufficient to produce a keloid. Such a thing as a spontaneous keloid is so rare that some authorities deny its existence; keloid acne being only another form of traumatism keloids, the inflammatory process in this case acting as the destructive agent.

*Treatment*.—It seems strange, considering the positive statements of all literature on the subject, that there should be so much error in the treatment of keloids. Constantly do you see young surgeons, and sometimes the old ones as well, look at a keloid and argue for its re-



removal by incision, claiming that failures of such operations in the past have been due to faulty technique in matter of cleanliness. As to this we cannot say, since no operation is perfectly aseptic; but the fact still remains that under incision they *invariably recur*.

But this is not new; it is the repeated statements of men who are authorities on the subject, men whose names are mile-stones in the progress of dermatology—such men as Hyde, Piffard, Van Harlington, and many others.

If a keloid, on returning, remained in its former state, perhaps there would be some advantage in chancing excision, but such is not the case. It is extremely probable that by excising a benign scar which had no other evil than a cosmetic defect, you have produced a rapidly-growing tumor, with a decided malignant tendency. This may even endanger the life of the patient, and the man will become a bugbear that you will shrink from meeting.

The reason that neither knife nor cautery succeed is this: No matter how sharp the knife or how skillfully applied the cautery, yet it is a traumatism, and will leave scar tissue. A keloid is simply a growing scar, and you have only made the irritated base of another growth. How shall we overcome this difficulty? How cut the Gordian knot?

The thing desired is a disintegrating effect—something that will strike a blow at the cell life of the part, and yet not leave a scar. The only thing that approaches the fulfilling of this requirement is electricity—electrolysis with the electric needle so far being the only thing that has given what could be called results. Even this has to be handled very carefully, and it should always be borne in mind that what we want is an electrolyzing, and not a cauterizing effect.

To do this, we must have a battery of more than ordinary strength. To this, connect the positive pole to a wire netting, which is folded in a towel. Direct the patient to remove the clothing and sit on this pad. Both hands may be placed on the pad instead, but better results are obtained the larger the surface in contact with it.

Then insert a needle that is connected with the negative pole of the battery into the keloid, avoiding the line where it joins the true skin. Sometimes these growths are painful, and cocaine will have to be used. This can be driven in by cataphoresis, but is not usually necessary.

Now turn on, say, three cells of the battery, galvanic current. The pain may vary in intensity, and is of a stinging, drawing kind, but turn the switch slowly, as the shocks to a nervous patient are really more dreaded than the pain.

Now notice the keloid. You may have to increase the current strength to a greater or less degree, but soon there will appear a white zone around the needle. As soon as this spreads to about one-eighth of an inch, you had better stop and insert the needle elsewhere, when the same process is repeated.

Usually this area will blacken and finally fall out, leaving a pit. Less frequently, but greatly to be desired, the keloid becomes slightly inflamed and finally breaks down and discharges. This discharge is pus-colored, but is not true pus, being epithelial debris, and is the end towards which we are working.

Even if you do not entirely remove the growth, by judicious use of the electric needle you may stop it from spreading and change it from a malign to a benignant tumor. The X-ray has been suggested as a curative measure; as to this I cannot say, having had no experience in that line; but the knife, *per se*, in the treatment of keloids, is both meddlesome and dangerous.

621 East Franklin.

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## OBSSESSIONS.

By WILLIAM S. STOKLEY, M. D., Cheriton, Va.

Some of the medical journals abroad are discussing this neuropathic or psychopathic condition, and it does seem at this day not without reason.

The word comes from the Latin, *obsideo*—to environ, to beset, to surround, to besiege, to keep out; with other meanings.

Seemingly strange impulses overcome persons and influence conduct to such a degree of abnormality in nerve force that physicians note the condition as a potent cause of disease. A defective will-power, the result of morbid brain—the latter comes about from brooding over some idea—and the *aboulia*—defective will-power—follows.

It is not a new disease. We might go back to Archaic days and catch ideas along this line. The "medical horizon" is wonderfully expansive, and, like the "end of the rain-bow," evasive when we pursue material etiology alone in disease.

Not enough stress is laid upon mental hygiene. Ethics, called "the science of duty," we do not pay sufficient attention. It may be, too much attention is given to physical development to accord with normal mental hygiene. "*Animi partis, quae princeps est, quaeque mens nominatur, plures sunt virtutes.*"—(Cic.)

The continual brooding over this, that, or the other matter, whether pleasant or otherwise, will cause loss of mental balance, and thus disease, (natural as the night the day) will follow.

There never was a time in our day when there was such urgent need of normal mental training as now. The spirit of advance in knowledge so shakes up the physical machinery that it has not time to gather up its natural forces for normal energy. Like the car-axle snaps by reason of constant heat—lack of rest to cool off; and thus adjust atomically to normal morphological condition.

The *Literary Digest*, June 14, 1902, has an interesting extract from the *Archives de Neurologie*, by Dr. F. L. Arnaud, on this subject. Dr. Arnaud says: "In man, emotional reactions may be aroused by visual, auditory, tactile, and other stimuli, as also by memories of bygone experiences. In some persons such emotional responses may be provoked in great intensity and with unusual facility; whereas other individuals exhibit but little emotion even under the most exciting circumstances." The author points out that individuals who are most prone to obsessions belong usually to the former class, and he adopts as his basis of subdivision the theory of emotion advocated by Lange and James, and now widely accepted, that the somatic and visceral disturbances which form the basis of the emotion secondarily arouse in the mind the consciousness or experience of the emotion in question. Some people react more than others in this respect. Obsessions may often take the form of theological and metaphysical scruples, doubts, and perpetual questionings on the creation, on angels, on free will, predestination, etc. An interesting case, reported by Seglas, is quoted of a patient with recurrent obsessions of suicide, in whom each attack was preceded by a period of vague unrest and mental distress. Dr.

Arnaud concludes that obsessions are not purely intellectual, or purely emotional in origin, but complex phenomena. Among patients with obsessions, whatever may be the intensity of the malady, a lesion or defect of volition (*aboulia*) is always met with. It pre-exists, and, in fact, predisposes to obsession. If these observations are correct, it will be seen that a field exists for early diagnosis, and for education and training, so that obsessions and impulses of a dangerous or objectionable nature may be selected and dealt with in their incipient stages, so as to be nipped in the bud, as it were.

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## Correspondence.

### Question About Water-Drinkers and Eye Diseases.

567 Park Avenue, New York City,  
June 13, 1902.

Dear Dr. Edwards,—During the past few years my attention has been called to the value of water-drinking, for the benefit of eye diseases. All my eye cases dislike to take water. Particularly have I noted those persons fond of water have not needed treatment. I should be pleased to learn your experience.

Sincerely yours, W. H. BATES, M. D.

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## Analyses, Selections, Etc.

### The Operative Treatment of Hypertrophied Prostate.

In a paper on the above subject by Dr. Bransford Lewis, of St. Louis, read before the meeting of the American Association of Genito-Urinary Surgeons, at Atlantic City, the author said that, while claiming for prostatic surgery the merit of wonderful progress in the last fifteen years, he thought that the profession was not above criticism in certain respects, and that operators were much inclined to follow beaten tracks and routine procedures, rather than base their operative treatment on the especial condi-

tions found in each individual case. He mentioned some points in the histories of some of his cases which had a bearing on the subject. The first was one in which he himself had failed to cure. It was a case of prostatic retention, treated by means of the Bottini electro-incision. He then had desired to open suprapubically, but the patient objected. Later the patient consulted another physician, and had consented to the suprapubic operation, at which time an intravesical projection was removed, with the result of giving complete relief to the patient. The second case was one in which perineal prostatectomy had been done a year before by another surgeon, and yet no benefit accrued. The patient was compelled to depend on the catheter for evacuating his bladder for six months thereafter. In January of the present year Dr. Lewis made a suprapubic incision, and removed an intravesical collar that surrounded the urethral opening, and which had been causing the complete retention, notwithstanding that prostatectomy had been performed. A cure followed the second operation. The third case was that of a man sixty-five years old, very infirm, whose urine was albumin-uric, and who has twenty-eight ounces of residual urine, and who urinated thirty-five times in twenty-four hours. Upon this patient he made one posterior incision, with the Bottini-Freudenburg incisor, affording, practically, a prompt and complete relief from his various symptoms, with reduction of the residual urine from twenty-eight down to two ounces, and of the frequency from thirty-five to seven or eight times in twenty-four hours, with removal of the albuminuria and a rapid improvement in his general health. Later, the patient had been operated upon for inguinal hernia by another surgeon, became infected, suffered from erysipelas and gangrene of the lungs, intestines, and of the wound, from which he died, permitting of the exhibition of the *post-mortem* specimen, which the author presented. It showed the groove made by the cauterizer, through which free urination had been accomplished. The form of obstruction had been a prostatic bar. The fourth case mentioned was one of a gentleman who, four years ago, had been advised by a genito-urinary surgeon to undergo some operation for hypertrophied prostate, but, on consulting the reader of this paper, was advised by him not to accept of any operation—he did not need any. Only anti-septic and dietary regimen had been prescribed

for this case, and yet, during the past four years, he had had no indication of any trouble with his prostate or bladder. There had been no residual urine in the first place, and no reason for an operation had ever existed. The practical lessons to be derived from these cases were: That the proper selection of the operative procedure is of the greatest importance in attaining successful results; this was satisfactorily explained by the dozen or more specimens and models of hypertrophied prostates exhibited by the reader. In these the various forms of prostatic enlargement and obstruction were clear, including intravesical tumors and projections, the prostatic bar, the bilateral hypertrophy, sessile and pedunculated tumors, the nodular valves, and the median outgrowths, adenomata, etc. From all of these it was plainly evident that no one operative procedure could possibly fit all cases, and that the operation should be selected according to the cases at hand, rather than the personal inclination of the operator. The condition favorable for the several operations in vogue were summed up as follows:

*Favorable for the Suprapubic Route.*—(1) General enlargement of the prostate, with extreme intravesical projection of the median or lateral lobes, diminishing their accessibility from the perineum. (2) Marker pedunculation of the intravesical tumors, with absence of obstruction from other sources.

*Favorable for the Perineal Route.*—(1) General hypertrophy, involving the lateral lobes, without extreme intravesical projection. (2) Large or very thick bar formation. (3) Severe compression of the urethra between massive lateral lobes. (4) Excessive development of the prostate in the direction of the rectum. (5) In most cases where the patient is in good general condition, is not too aged, and there is not a special indication favoring one of the other procedures.

*Favorable for the Bottini.*—(1) Cases of extreme debility or of extreme age, unable to stand one of the severe operations. (2) Cases of bar or median sessile obstruction, if not too great dimensions. (3) Howitz says it should be employed as a prophylactic against further obstructive tendency, at the beginning of catheter life. (4) In complete collar formation.

### Progress of Medicine.

Dr. R. T. Sloan, of Kansas City, Mo., read a paper before the session of the Missouri State

Medical Association in June, on the *Progress of Medicine*, in which he referred in turn to etiology, prophylaxis diagnosis and therapeutics.

After maintaining that "brilliant results cannot attend our future efforts at therapeutics and prophylaxis, except as a result of thorough etiological research," the paper refers to Prof. Koch's sensational dictum concerning the non-identity of bovine and human tuberculosis, and to the healthy stimulus it will afford to laboratory investigation. It refers to the work of Drs. Reed and Carroll, of the United States army, in investigating yellow fever—their work proving the agency of the mosquito in transmitting infection, and discrediting Sanorelli's bacillus as the microbial cause.

It alludes to the destruction of mosquito habitats by drainage of swamps and the use of kerosene oil as a prophylactic measure in malaria, and the altered quarantine restrictions resulting from a knowledge that rats are carriers of bubonic plague infection.

Cross' diplococcus of scarlatina is mentioned; also the claims of several investigators as to the etiology of malignant growths—not yet established. "Paratyphoid," the name given by Meltzer, of New York, to a disease described by Kurth, Schottmuller and Gwynn, presenting the clinical features of typhoid, but not giving the Widal reaction for typhoid.

Briefly discusses laboratory diagnosis, and the relative value of the *differential* and the *direct* diagnosis. Alludes to the diagnostic value of blood count and estimation of hemoglobin, and the application of the Widal blood test, and remembers somewhat at length to blood cryoscopy—the determination of its freezing point—as furnishing an index of renal insufficiency.

Lumbar puncture as a diagnostic and therapeutic measure; Kernig's sign in meningitis; Babinski's "great-toe phenomenon," differentiating disease of motor paths of the cord from toxic irritation conditions; Koplik's spots in measles; and X-ray medical diagnosis—all receive attention in the order named. The limited use of tuberculin by the general profession as a diagnostic measure is commented upon. After brief mention of thyroid extract, the paper refers somewhat at length to the use of preparations of the supra-renal gland as a cardiovascular tonic and hemostatic.

In the use of diphtheria antitoxin, *early administration*, rather than the excessive doses now in vogue, is insisted upon. The paper

comments briefly upon the indifferent success following the use of tetanus antitoxin and anti-streptococcal serum; notes an apparent revival of interest in the treatment of tuberculosis with tuberculin, recognizing its limitations however. The growth of the sanitarium idea in the treatment of tuberculosis, and comparison with climatic treatment—the possibilities of both combined.

Finally the paper refers briefly to physiologic therapeutics—exercise, physical culture, hydrotherapy; and winds up with a reference to X-ray treatment of superficial carcinoma and skin diseases, and to Prof. Neils R. Finsen's application of modified light in the treatment of small-pox and superficial skin diseases.

### Chronic Inflammation of the Uterine Appendages; Its Treatment by Mercuric Cataphoresis.

Dr. G. Betton Massey, of Philadelphia, Pa., in a paper on this subject, read June 12, 1902, before the section on Obstetrics and Diseases of Women of the American Medical Association at Saratoga Springs, N. Y., said that chronic inflammation of the uterine appendages, occurring in young women, when acute symptoms are absent, and in the later stages of pelvic peritonitis, is amenable to per vaginal mercuric cataphoresis, provided the affected tubal tracts possess proper drainage—whether pus tubes exist or not. Intra-uterine electric treatment of any kind is usually contra-indicated; but in the procedure devised by the reader of the paper, the electrolytic salts of mercury are repeatedly forced by electricity from a large amalgamated brass electrode through the vaginal wall into the affected parts. Temporary lessening and sometimes temporary suppression of menstruation usually accompanies the treatment. Four cases successfully treated were described, in three of which large masses in the region of tube and ovary disappeared after prolonged treatment.

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**Cholera Increasing in Canton, China.**—A telegram received by the Department of State for the information of the Marine Hospital Service from the United States Consul at Canton, dated March 6th, reported that cholera in that city was increasing. Customs Club closed and employees were ordered to live on boats on the river.

## Book Notices.

**Text-Book of Physiological Chemistry.** By CHARLES E. SIMONS, M. D., of Baltimore, Md. Lea Brothers & Co., Philadelphia and New York. 1901. Cloth. 8vo. Pp. 453.

This book is a new one on the subject named. By an oversight, however, notice of it has been delayed until now. It is a book adapted to the wants of the student and practitioner—presenting ascertained facts as concisely as possible. The various chemical methods described presuppose that the reader has followed the course in general chemistry—such as is offered now by most of the medical colleges. As to the subject matter, a general survey is given of the origin and chemical nature of the three great classes of foodstuffs—the albumins, the carbohydrates, and the fats—and the most important products of their decomposition, especially the nitrogenous derivatives of the albumins, and the ferments. Chapter VII gives the physiological chemistry of the digestive fluids, as the saliva, gastric, pancreatic and enteric juices, and bile. Then follow chapters on the processes of digestion and resorption, analysis of the products of albuminous digestion, bacterial action of intestinal tract, the feces, urine, blood, lymph, muscle and nerve tissues, the glandular organs, etc. The scientific student of medicine cannot do without such a book, and this is the best one of the kind we have seen.

**Clinical Hematology—A Practical Guide to the Examination of the Blood, with Reference to Diagnosis.** By JOHN C. DACOSTA, Jr., M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to German Hospital, etc. *Containing Eight Full-Page Colored Plates, Three Charts, and Forty-three Other Illustrations.* Philadelphia: P. Blakiston's Son & Co. 1901. Cloth. 8vo. Pages 474. Price, \$5, net.

Clinical diagnosis nowadays is largely dependent upon the revelations of laboratory examinations. The details are beyond the powers of any one man who assumes the role of the general busy practitioner. As the large business firm is dependent upon its clerks for its success, so is the general practitioner often dependent upon the urinologist, the bacteriologist, or the hematologist for satisfaction as to diagnosis. And without such satisfaction as to diagnosis, it is impossible at times to make prognosis or to suggest the proper line of treatment. Now, as

to hematology, the work before us is one that the doctor needs in every-day experience. While it is a truly practical guide for the hematologist himself, detailing the methods of examination and observation, *for the practitioner* it interprets the blood report according to its true value as a clinical sign. A somewhat lengthy consideration of the technique is given—especially the methods likely to prove useful in every-day practice of the physician or surgeon. The author escapes the criticism of being an enthusiast, for he makes full confessions as to the shortcomings of the present state of his specialty. But as a material help, in conjunction with other means of diagnosis, hematology stands out prominently as an essential aid.

**Manual of Ophthalmoscopy.** For Students and General Practitioners. By J. E. JENNINGS, M. D., Author of "Color-Vision and Color-Blindness," etc.; formerly Clinical Assistant, Royal London Ophthalmic Hospital, London, etc. With Ninety-five Illustrations and one Colored Plate. P. Blakiston's Son & Co., Philadelphia. 1902. Cloth. Large 12mo. Pp. 180. Price, \$1.25, net.

This *Manual* is an elaboration of a series of lectures delivered before the graduating class of the Beaumont Hospital Medical College of St. Louis, with a systematic arrangement of the text, which gives, in a small compass and at slight cost, information otherwise obtainable only in expensive text-books and atlases. The illustrations themselves are alone worth the price of the book. Brief sections on treatment, etc., are given. But it is with reference to matters of diagnosis especially that the purpose of the author and the value of the work become manifest.

**Studies in the Psychology of Sex—Sexual Inversion.** By HAVELOCK ELLIS, L. S. A. (England); Fellow of the Medico-Legal Society of New York, and the Anthropological Society of Berlin; Honorary Fellow of the Chicago Academy of Medicine, etc.; General Editor of the Contemporary Science Series since 1899. The "Studies in the Psychology of Sex" will probably be completed in five volumes. "*Sexual Inversion*" is second volume in the series. Pp. xi-272. Size, 8 $\frac{1}{2}$  x 5 $\frac{1}{2}$  inches. Extra Cloth, \$2.00 net, delivered. Sold only to physicians, lawyers, advanced teachers, and scientists. Philadelphia, Pa.: F. A. Davis Co., Publishers. 1901.

The title above (which we publish in full as sent us by the publishers) describes the scope of this book. On its publication in London four

years ago, a bookseller was prosecuted by the police, and the Recorder of London, the late Sir Charles Hall, sitting as judge, ordered the work to be destroyed. But in France, Germany, and America no such prosecution has been attempted. It is a scientific work of much value to psychologists, and it is ridiculous to undertake the suppression of its publication. The cases of "sexual inversion," or "the turning of the sexual instinct toward persons of the same sex," which are detailed in this book, have, for the most part, been published previously in representative journals by reliable authors. Some of the cases, however, are personally reported by friends of the author for the first time. To the medico-legal man the book is of exceedingly great value in explaining conduct not otherwise understood.

**Outlines of Anatomy—A Guide to the Methodical Study of the Human Body.** By EDMUND W. HOLMES, A. B., M. D., Demonstrator of Anatomy, University of Pennsylvania, etc. *Second Edition.* The New Era Printing Co., Lancaster, Pa. 1902. Cloth. 12mo. Pages, 185.

The first edition was issued in 1897. Its popularity has called for this second edition, in which, however, but few changes of text have been found necessary. The book is only of value in connection with the cadaver; it cannot be used as a quiz compend, nor does it take the place of the larger treatises. The great value of the book is the systematic method of dissection work. The "reading" of the 1,000 or more pages of Gray, etc., is waste of time as compared with the demonstrations of dissecting-room. It is the book for dissecting-room students, demonstrators of anatomy, etc.

**Simon's Clinical Diagnosis.** *A Manual of Clinical Diagnosis by means of Microscopical and Chemical Methods for Students, Hospital Physicians and Practitioners.* By CHARLES E. SIMON, M. D., Author of Simon's "Physiological Chemistry," etc. New (4th) Edition, Thoroughly Revised and Enlarged. In one handsome octavo volume of 608 pages, Illustrated with 139 Engravings and 19 Plates in Colors. Cloth, \$3.75 net. Lea Brothers & Co., Philadelphia and New York, 1902.

The first edition of this book was published little more than five years ago. That the fourth edition should now be called for is flattering evidence of the popularity of this work. "The subject matter deals with the examination of the blood, the secretions of the mouth, the gas-

tric juice, and the gastric contents, the feces, the nasal secretion, the sputum, the urine, transudates and exudates, the examination of cystic contents, the cerebro-spinal fluid, the semen, vaginal discharges, and the secretion of the mammary glands. In every case a description of normal material precedes the pathological considerations, which latter, in turn, are followed by an account of the methods used in examination."

The author has presented the subjects treated in a very clear and interesting manner, not confining himself to bare statements of facts, but also pointing out the reasons upon which the conclusions are based. Chemical and microscopical methods are described in detail, so that the student and practitioner who has not had special training in such manipulations will be enabled to obtain satisfactory results.

In preparing this new edition, special pains have been taken to keep the volume up-to-date; consequently much new matter has been added, together with one new plate and several engravings. Now that the methods taught in modern clinical diagnosis have become so necessary in making accurate diagnosis in the larger number of cases of every-day practice, Simon's Manual will be found a most excellent and useful aid.

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## Editorial.

### Medical Examining Board of Virginia Report.

The unusually large number of examination papers of applicants for license to practice medicine and surgery in Virginia during the session of the Board held in Richmond about the middle of June, 1902, placed a very heavy burden upon the examiners, all of whom have not yet been able to so systematize their reports as to turn in their marks to the Secretary of the Board, Dr. R. S. Martin, of Stuart, Va., who is also President of the Medical Society of Virginia. Probably the report will be in time for publication in the second July issue of this journal. The system of "part oral examinations" to be adopted hereafter will very materially facilitate the returns of the Examiners, although it may compel a day or two longer sessions of the Board, so as then to get through with the "orals."

### The Medical Society of Virginia

Will meet at Newport News, Va., September 23, 24 and 25, 1902. The usual postal-card notice, asking for titles of papers, list of guests to be invited to attend the session, etc., will be issued in about ten days. Dr. Richard T. Styll, Treasurer of the Society, is chairman of the local Committee of Arrangements. Sub-committees will have charge of various items. Those interested in the matter of exhibitions of drugs, instruments, books, etc., should at once write for space in the exhibition room. An unusually large attendance is expected, as questions pertaining to the revision of the Code of Ethics, etc., will come up. Every doctor is interested.

### Statue to Dr. Crawford W. Long.

The commission appointed by the last Georgia Legislature to select two prominent Georgians whose statues shall occupy niches in Statuary Hall, in the Capitol at Washington, met in Atlanta on July 2, 1902. The prevailing sentiment was that only one name should be selected as long as General John B. Gordon lives, and accordingly the commission adjourned, after deciding on Dr. Crawford W. Long, the discoverer of anæsthesia, as the first Georgian to be thus honored. Among other names considered were those of Alexander H. Stephens and Robert Toombs.

Too often are the memories of physicians—those who have been benefactors of the whole human race—forgotten, and the idea of erecting national statues wondered at, upon the mention of some great general or statesman. The commission having deemed it advisable to select but one name at this time, we are pleased to note, have recognized by their wise and just decision the merits to the claim of Dr. Crawford W. Long.

### New Hospital for Roanoke, Va.

The Catholic Bishop of the Diocese of Virginia announces that he has the money in hand for the erection and completion of a handsome new hospital at Roanoke, Va. It is the present intention of the promoters—with indications pointing, so it is said, to Mrs. Thomas F. Ryan, of New York, as prime mover—to begin work at once and have everything in readiness for the reception of patients early next year. May such philanthropists long live to continue in their good work.

### American Proctologic Society.

The fourth annual meeting of the American Proctologic Society was called to order in the parlors of the United States Hotel, Saratoga Springs, N. Y., by the president, Dr. Thomas Charles Martin, of Cleveland, Ohio, at 2 P. M., Tuesday, June 10, 1902. Drs. William Bodenhamer, of New York, and Edmund Andrews, of Chicago, were elected Honorary Members of the Society. The following were elected active members of the Society: Drs. A. Teirlinek, Ghent, Belgium; William L. Dickinson, Saginaw, Mich.; J. M. Frankengerger, Kansas City, Mo.; John T. Jelks, Memphis, Tenn. Drs. Mathews and Beach were elected a Committee on Publication of Transactions. The following officers were elected to serve the ensuing year: *President*, Dr. Samuel T. Earle, Baltimore, Md.; *Vice-President*, Dr. Floyd W. McRae, Atlanta, Ga.; *Secretary and Treasurer*, Dr. William M. Beach, Pittsburg. *Executive Council*—Drs. George J. Cook (chairman), Indianapolis, Ind.; Lewis H. Adler, Philadelphia, Pa., and Thomas Charles Martin, Cleveland, Ohio.

Adjourned to meet at the time and place of the American Medical Association, 1903—New Orleans, May, 1903.

### Centenary Hospital.

The Faculty of the Barnes Medical College, by heroic efforts, and at a cost of nearly \$115,000, have at last completed the new "Centenary Hospital." The beautiful six-story building is in direct connection with the College, corner of Garrison and Lawton avenues. It is modern, with capacity for one hundred and fifty patients, and strictly fireproof throughout, and furnished with every modern hospital convenience. No expense has been spared to make it the best hospital in St. Louis. Its pay wards are open to all on the most reasonable terms consistent with the accommodation and attendance desired, and the dispensation of its charity will only be limited by the urgency of cases applying for relief and the financial ability of the institution. Its operating rooms (three) are open to all physicians, and they are cordially invited to treat their patients here, under the same terms accorded the regular staff. We assure them that every courtesy will be extended and every ethical right absolutely maintained. We earnestly solicit, and confidently expect, the

hearty, generous, and substantial support of the friends of the Barnes Medical College wherever they may be, and on this support the success and reputation of the institution will much depend. The regular staff of surgeons, physicians, and trained nurses are thoroughly competent to fulfill any trust committed to their care.

### Oral and Written Examinations Hereafter Before Virginia State Board of Medical Examiners.

During June, 1902, session of the Virginia State Board of Medical Examiners, the following resolution was adopted and ordered to be inserted in the advertisement of the Board, as seen on last cover page of this journal:

*"Resolved*, That each applicant for examination before the Board shall stand an oral examination, in addition to the usual written examination." This resolution will apply to the next meeting of the Board for examinations, which will be held in Richmond, Va., December 15, 16, 17 and 18, 1902.

### Dr. R. S. Martin's Sanitarium at Stuart, Va.

During the months of July and August, Dr. R. S. Martin, the President of the Medical Society of Virginia, Secretary of Virginia State Board of Medical Examiners, etc., will take a limited number of convalescing or chronic cases in need of a change of climate at his sanitarium, which is situated at Stuart, Patrick county, Va., in the mountains of Virginia, and cannot be surpassed for pure air and water. No contagious or insane cases received. Board, six dollars per week, payable weekly. For further information apply to Dr. R. S. Martin, Stuart, Va.

### The Substitution of Counterfeit Remedies on Physician's Prescriptions.

The counterfeiting druggist or apothecary is as mean a man as he who uses another's good name, to which he is not entitled, for the promotion of his ends. It is a false doctrine that the end justifies the means—when the means adopted are not above suspicion as to their correctness. But when the doctor prescribes a combination of drugs or a special preparation, the merchant or the druggist or apothecary who slips in an unprescribed substitute on the plea that it is "as good as the original," does that which honesty forbids, and courtesy would never

tolerate. "No physician can afford to be indifferent regarding the accurate filling of his prescriptions." This is a lesson that should be impressed upon every good doctor who seeks results and fair dealing with his patients. "Honesty is the best policy."

### Association of Surgeons of the Southern Railway Company.

During its recent session at Washington, D. C., the following officers were elected for the ensuing term: *President*, Dr. Rhett Goode, of Mobile, Ala.; *Vice-Presidents*, Drs. T. P. McMahon, of Illinois; W. O. O'Brien, of Alexandria, Va.; *Secretary and Treasurer*, Dr. J. J. Harrison, of London, Tenn. *Old Point Comfort, Va.*, was selected as the place for next annual session, to be held June, 1903. Dr. W. S. Morland, of Atlanta, Ga., read a paper during the recent session on "The Treatment of Ulcers." Dr. George Ross, of Richmond, Va., read a paper on the *Injection Treatment of Hemorrhoids*. Other papers of value were presented during the session.

### St. Luke's Hospital, Richmond, Va.

According to custom, this hospital is about to close for a month or more. Its popularity and good work during the past year, and the magnificent results of treatment, shows the ability of the doctors in charge and the attention to technique adopted by the nurses. Dr. Stuart McGuire deserves an unusual degree of praise for his unexcelled management of this hospital, founded by his illustrious father, Dr. Hunter McGuire. The hospital is usually closed during the month of August.

### The Virginia Legislature

Will assemble in Richmond on July 15, 1902, to put into operation the new Constitution of Virginia. It will be in session probably a month, but it is not probable that any new measure will be entertained that does not refer to the adoption of the new Constitution.

### Drs. Joseph A. White, of Richmond, Va., and J. R. Gildersleeve, of Tazewell, Va.,

Have engaged passage on the Atlantic steamer leaving New York city July 26th for Liverpool, and will be absent about six weeks—spending their vacation in England and on the Continent.



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## Original Communications.

### WHAT CAN BE DONE TO REGULATE THE NUMBER OF YOUNG MEN STUDYING MEDICINE?\*

By R. S. MARTIN, M. D., Stuart, Va.,

President Medical Society of Virginia; Secretary Virginia State Board of Medical Examiners, etc.

If it is the desire of the medical profession to maintain the progressive spirit which has been manifested in the last fifteen or twenty years in the advancement of medical science, in educational requirements of her graduates, and to place us—where we justly belong—in the lead of all professions, then it seems to me time to call a halt in the production of doctors.

Most of us must admit that 6,000 physicians graduated annually are too many for the United States. The quantity is too great, and the quality, in most cases, needs improvement.

Medical Examining Boards have been the means of elevating the standard of medical education to its present status. I believe they see the necessity of further advancement; and through their efforts more effectual laws will be asked for and passed, more rigid examinations required, and better literary education will be demanded of those seeking to enter the profession. If better qualified doctors is the great wish of the profession, if a profession with the code of ethics as their guide is to be desired, then something must be done to stop the too great number of young men from entering the profession. Quackery, empiricism and charlatanism are abroad in the land. Medical laws are hard to enforce. The regular profession is overcrowded, and dark clouds seem to be gathering all around us; but remembering the great achievements of our profession in the elevation of the standard of medical education and the cure and alleviation of human suffering, I have

great faith, and believe that by a united effort, the evils of which we complain can be rectified, and all the dark clouds dispelled. If the nation wishes better physicians, her only hope is through the regular profession. (Osteopathy, Christian Scientists and Magnetic Healers are fakes, and have nothing to offer.) No advancement or discovery of any value pertaining to medicine or surgery has ever been made by any one, so far as I know, outside of the regular profession. We stand as sentinels on the tower and watch the health of the nation; and while we spend our lives and talents and means for the benefit of others, the United States Congress and the different State Legislatures should give us what we want in the way of legislation to help elevate our profession, down quackery and empiricism, and thereby protect the health and lives of the people.

A few months ago I wrote a few of the leading physicians in America and asked, "What, if anything, should or could be done to regulate the number of young men studying medicine?" and I wish here to give a brief synopsis of their answers:

Dr. John A. Wyeth, President A. M. A., says: "In answer to your question, 'What should be done to regulate the number of young men studying medicine?' I would reply, a gradual elevation of the standard of requirements. In my opinion there are too many medical schools, and graduation in medicine is made too easy. Even after they have graduated they should not be allowed to practice until they can pass a rigid practical, as well as theoretical, examination. For the general good I would say that a man entering the profession of medicine as a student in college should have a very good classical education, for this implies a sufficiently thorough education in other departments of study. He should study at least four years at a good school, and at least one year in a post-graduate school or hospital. The final examination for practice should include bacteriologic, microscopic, and chemical analyses, as applied to practical medicine."

Dr. George H. Simmons, Secretary A. M. A.,

\*Address delivered before the Confederation of Medical Examining and Licensing Boards, at Saratoga Springs, N. Y., June 10 1902.

says: "What can be done, however, is for the profession of the country to organize, as it is going to do very shortly, and for the new House of Delegates of the American Medical Association to take hold of the matter systematically and investigate conditions and act upon them. It will be necessary, of course, to weed out a lot of the cheap colleges of the country, but to have results from this we must have a united profession. All the troubles, or nearly all, that are afflicting us to-day are the results of internal conditions—internal in the profession, I mean. The profession alone can change them. There is no doubt but that we have made a good deal of progress in some respects in regard to the raising of the standard of medical education, but we have made but very little progress in raising the standard of admission to the medical colleges, and we never will until we take away from colleges the right to say who shall be admitted. Ohio came into the line last year by making all students pass an examination before those not connected with the school. New York, of course, is the same. Minnesota, also, and to a certain extent, Pennsylvania. If you have noticed the *Journal* recently, you will have seen that there is a proposition to get the same law in Michigan, and I think it is coming all over the country. If we can regulate the students' examination after they get their diplomas, we shall have made a tremendous step forward in remedying the conditions you speak of."

Dr. N. R. Coleman, President of the National Confederation of State Medical Examining and Licensing Boards, says: "Replying to your question relative to the number of medical students at the present time, permit me to say that in order that the number shall be diminished it is necessary, first, to raise the standard of minimum scholastic attainment before entering upon the study of medicine. A majority of the States to-day require nothing but a primary or common school education in order to enter upon the study of medicine, while they require in the medical or technical education a definite period of study, advancing from two courses of lectures of 12 weeks each to four courses of lectures in four separate years of six months each. Therefore the literary has been woefully neglected, while the technical education has been given more than due degree of prominence.

"2. Require the students to spend one year with a preceptor before entering a medical school, and require the preceptor to make a

sworn statement as to the fitness and moral character of the student. When students were required to take tuition under a preceptor they were more carefully selected than they are to-day. At the present time many medical colleges are running into commercialism, and the student seems to gravitate of his own volition into the institution.

"3. State Medical and Licensing Boards should cease to recognize all inferior or low grade colleges, only recognizing those with the best facilities as regards their general equipment and *faculties*.

"4. State Boards should raise the standard of their medical examinations, and continue to advance the standard until the number of medical men in each *State* was brought down to a normal condition, and that might be placed at 1,000 inhabitants for each physician. The above are views that I have entertained upon this particular subject for many years, and the Board in Ohio is endeavoring to raise the standard, as you will notice. As a result of this, I believe that the number of students entering the medical college this year will be cut down 50 per cent. Before our examining law went into effect we were issuing 700 certificates a year. Since the law required an examination of all, and you will notice it does not require an examination of all on account of the exemption clause, we have issued less than 300 a year. Next year we will probably not issue over 250, and the following year, when the exemption clause ceases to be effective, we will not register 200. When our laws went into effect in 1896 we had hundreds of women practicing midwifery. The past year we have just issued the three certificates. In ten years there will not be 20 midwives in the State. I think the entrance qualifications to the medical colleges is the keynote to the whole situation, and if you will observe the Ohio law you will see that it is equal to, if not superior to, any in the States of the Union."

Dr. Jos. M. Mathews, President State Board of Health of Kentucky, says: "There can be no question but that too many young men study or attempt to study medicine who are not fitted to do so. The fault lies with the general practitioner. Nearly invariably when he is consulted by young men in regard to entering the profession he is encouraged to do so, and that, too, when the mere presence of the applicant would indicate his unfitness. He should be told that there was an educational qualification which he did not

possess, which would render him unfit. This, then, is in my opinion the keynote to the solution of your question—viz., educate the general practitioner to discourage such applicants. I really see no other solution.”

Dr. W. L. Rodman, of Philadelphia, writes: “Undoubtedly the evil of which you speak is a very great one, and shows few symptoms of amelioration. The only way in which the standard of men appearing before the State Medical Boards can be improved is for the medical colleges primarily to advance their standards. Here, in the East, we find a vast difference in the men we are getting now and those we got even two years ago. A large number have degrees; all of the rest are submitted to a preliminary examination before matriculation. If I was a member of a State Board I would make it very difficult for any man to pass such board who has not graduated at a medical school that was reasonably strict in its requirements. I feel that the State Boards hold the whip handle over the schools if they cared to do so, and am hoping that in time there will be such a concert of action between them as to force, even though unwillingly, all medical schools up to the point of exacting certain qualifications of men entering upon the study of medicine.”

Dr. L. F. Barker, of the University of Chicago, says: “In reply to your letter asking for suggestions with regard to State examinations, I would advise the following:

“1. The State should raise the requirements for admission to the schools of medicine in which the applicants study. I think the time has come when students who are to take up the study of medicine should not only have entered a good university, but should have spent at least two years in that university, and during that time should have studied English, mathematics, history, general chemistry, qualitative analysis, organic chemistry, at least a year's work of college physics (including mechanics, heat, light, sound and electricity), general biology and comparative anatomy. In addition, before starting the study of medicine, the student should possess a reading knowledge of French and German. There should be two State examinations to be passed by applicants.

“(a) A preliminary examination at the end of the second year of his medical work. This examination should include the subjects of anatomy, physiology, physiological chemistry and pharmacology. The examination should be

largely practical, not written, and should be conducted by men who are teaching these subjects in modern medical schools, and not by practicing physicians, who are not intimately connected with such teaching, and who, therefore, cannot be familiar with the status of the science at the moment. The student should be required to register with the State Board at least two years before he applies for this examination, and at that registration should give evidence of having the admission requirements stipulated above in 1.

“(b) There should be a final examination at the end of four years' study in the medical school. This examination should include the subjects of gynecology, rhinology, laryngology, neurology, psychology, otology, ophthalmology, etc., which the student may have selected. These examinations will be useless if they are *simply written* examinations. They should be almost entirely *practical* examinations, conducted in hospital wards by men who are teaching these subjects in such *wards* or *dispensaries*, and should test not the memory power of the student, but his capacity for making actual examinations and successful diagnoses, and for outlining adequate treatment.

“2. The student should pay \$20 for his first registration, \$30 for his preliminary examinations, and \$50 for his final examination. If these rules were put in force, I think you would have fewer applicants, and those who apply would be much better quality.”

Dr. Norman Bridge, of Los Angeles, Cal., writes: “There is, in my judgment, no feasible way of limiting the number except to make the *business more serious than it has been heretofore*, and therefore, *most useful and creditable*. If the colleges and the State Board of Examiners will raise the standard of qualifications necessary for the degree, and for license to *practice, there will, I think, cease to be any difficulty on this subject.*”

Dr. Leonard Freeman, of Denver, Colo., writes: “My belief is, that if the standard of *entrance* examinations was raised and the time of *study extended*, that the number of graduates would be decreased and their qualification increased. I also think that establishment of the State Examining Boards *would be of value*. We must not lose sight of the fact, however, that there are scattered over the country many small communities requiring physicians, but unable to pay those physicians a *very large income*. If

we raise the standard *too high*, it will not pay men to take the time and undergo the expense to become physicians and bury themselves in these small places."

Dr. W. A. Spurgeon, President of the State Board of Medical Registration and Examination of Indiana, writes: "As I understand your question, would say that it is a question of qualification. As medical examiners, we should place the standard so high that only the qualified *can pass and stand together in an effort to elevate the standard. Of thoroughly educated, well qualified men, we will never have too many, and these alone should be admitted to practice.*"

Dr. P. Max Flosbey, Secretary of Ohio State Medical Society, says: "The only thing that can be done to regulate the number of young men studying medicine is to raise the requirements for admission to medical schools. We have done this in Ohio, and the results have been beneficial. There has been a decrease in the number of applicants for examination since the educational qualifications of the applicant have been required."

Dr. H. D. Niles, of Salt Lake City, writes: "In my judgment the evil you mention (too many poorly qualified practitioners), as well as some other evils that we as physicians need to combat, can never be overlooked by our present method of warfare. It is not enough that the thoughtful members of our profession appreciate these evils, and from time to time, in an irregular, unsystematic way attack them. We need to organize and unite our forces (approximately 100,000 strong), then plan and carry out as a body whatever course the best interest of our profession as a whole seem to demand. In such reforms I believe that persuasive arguments do not convince unless the creation of a general favorable sentiment furnish us with willing ears. We, therefore, need to speak and act authoritatively as the representative of *one hundred thousand* thoughtful and well-meaning citizens. This should come, I think, through our various societies, but culminating after due deliberation and discussion in a verdict (representing a consensus of opinion) pronounced by our most representative body, 'the American Medical Association.' Afterwards every honorable member of the profession should be interested to stand by and uphold that verdict. But I will not tire you further with the details, doctor, but I want to say that I am interested and will be glad to help the movement in any way I

can. Let me add, however, that I believe there should be a standing committee in every medical society in the United States, and at least a column in every reputable medical journal in the United States, devoted to 'medical reforms.'"

Dr. John M. Dodson, of Chicago, writes: "In my judgment, no method of limiting the number of students entering upon the study of medicine would be satisfactory or successful except that of increasing the difficulty of procuring the degree of M. D. and the license to practice by raising the requirements for admission to the *medical schools*, improving the character of the education given, and making the examinations all along the lines more thorough. As I have observed the examinations as given by the several State Boards of the West, they are far more from satisfactory as means of determining the actual qualification for practicing. It has seemed to me that they might be made of a more practical character, and that the questions might be selected in such a way as to be fairer test than they have been of a man's real capacity. I believe that no applicant should be allowed to come up for examination before a State Board that has not procured a degree from a recognized medical school. On the other hand, it is very desirable that in all States examination before the State Board should be required, as is the case, I believe, in Virginia, instead of a license being issued on mere presentation of diploma. Efforts which are being made to secure co-operation on the part of the various State Boards are of the greatest importance. It does not seem feasible, under our forms of government, to have a national board of examiners, or at least we could not compel all persons that are in the practice of medicine to procure a national license. The matter is obviously one for State control; but if the license of the various boards could be made interchangeable and given more or less the character of a national permit, it would be possible to make the examination more severe, to take a longer time in giving them, and make them of a practical character in large part by increasing the fee for same somewhat. The various State Boards could co-operate to great advantage, moreover, in the inspection and classification of the various medical schools. I have wondered why the national association of boards of medical examiners have not made provision for this matter of the inspection of colleges and adoption of some uniform plan of re-

cognizing them. As a rule, the officials of the State Boards have been very familiar with the character of the institutions within their own State and the neighboring States, but have had little exact knowledge of the qualifications of more distant institutions. It would not be feasible for the secretary of every State Board to visit all the medical institutions in the country, but through the medium of a national association a very thorough and exhaustive investigation might be made which would result in weeding out many of poorer colleges and in stimulating the others to better work."

Dr. William Warren Potter, President of the State Board of Medical Examiners of the State of New York, writes: "I beg to state that in the State of New York we have observed a steady improvement in the equipment of the candidates who come before us for license. This is the case not only with regard to medical acquirements, but also relating to academic preliminaries. Our laws are pretty strict on both lines, and we find the system to be working well."

Wm. H. Wathen, A. M., M. D., LL. D., Dean of the Kentucky School of Medicine, says: "I am in receipt of your letter requesting my opinion as to the best means of preventing the great excess of incompetent doctors upon whom the medical colleges are conferring the degree of Doctor of Medicine. I am pleased to learn that the secretary of one of the most painstaking and efficient examining boards in the country is interested in the landable effort to protect the people against uneducated and unworthy physicians. The medical colleges of this country are graduating more than twice the number of doctors that are needed, and the majority of these should not be allowed to practice medicine. The remedy is in the *concerted action of the State Examining Boards*, and if every State would pass a law prohibiting any one from obtaining a certificate to practice medicine until he passes a rigid examination, and refuse to examine any one who is a graduate of a school that does not comply with minimum requirements generally agreed upon within five years, more than fifty per cent. of the colleges in this country would cease to exist, and the other colleges would do excellent work, and graduate men of education, both in literary and medical sense. These requirements should refer to the length of the course, the equipments, the number and the character of the teachers, the curriculum, and

last, but not least, to the minimum fee to be charged; for in this the great evil lies more than in anything else. If the State Examining Boards would adopt these minimum requirements and compel colleges that are not endowed, and required under the laws of their States to do otherwise, to charge every student a minimum fee of \$5 matriculation, \$75 general tuition, \$30 for examining of graduation, and \$10 for each of the laboratories of histology, pathology, chemistry, anatomy and surgery, and allow no applicant to be examined for a certificate until both the applicant and the college has made affidavit of compliance with these requirements, many medical schools that now have large classes would have but few matriculates. It is a notorious fact, beginning with St. Louis, Louisville, Baltimore and the South—with the notable exception of a few colleges—that medical students are practically purchased by permitting them to attend lectures at any price named. These colleges publish in their catalogues a schedule of fees in accordance with high grade schools, but write letters all over the country offering to take students at any price necessary to induce them to attend. And when the students come to the city to attend school, they will have their emissaries at depots and in the various colleges to inveigle these young men into their web. Other colleges frequently offer students in the Kentucky School of Medicine as an inducement for them to leave a reduction in fees as low as from \$10 to \$35, while their catalogues advertise the minimum fee of \$110. The question will never be solved unless the financial part is rigidly enforced—though I am aware of the fact that many State Boards and Associations have claimed that colleges could charge just what they pleased, and could not be regulated in this particular by legislation. This claim is entirely false, and if adhered to we will continue to have incompetent doctors graduated from so-called medical schools."

Dr. A. F. Jonas, of Omaha, Neb., says: "It is a difficult matter—probably impossible—to regulate the number of young men entering the study of medicine. In my opinion, every young man, before beginning the study of medicine, should have a bachelor's degree. This might, in a measure, regulate the number of students; at any rate, it would increase and elevate the standard, but as to the number I have my doubts. In Germany, where the literary degree has been required for many years, the number of students

is constantly on the increase. Briefly, in my opinion, there should be the requirements of a bachelor's degree, a four years' course, with nine months in each course, and no graduate should be allowed to practice without having had hospital experience."

Dr. Frank Billings, of Chicago, writes: "The reasons for the large number of medical graduates annually in our country is due, I think, to several causes. The chief one is the fact that in most States colleges of low grade exist, and will continue to exist as long as there is no national control of medical education in the country. This cause we probably cannot remove at least for many years because it will require the education of the people to stop it. Now most of the people cannot distinguish between a good doctor and a poor doctor. In our State there are many medical schools, because a charter may be easily obtained by any number of doctors who desire to start a so-called medical school. Night schools are permitted not only in our own State, but in others, and this lends encouragement to incompetent and unprepared men and women to study medicine. There is a belief, too, among people that the practice of medicine is a lucrative occupation, and this encourages many people to study and gain admission to the profession in the easiest way possible. How are we to prevent this great increase in the number of people studying and getting into the profession I am at a loss to say. If we could have some sort of national control of medical education, a step in the advance would be gained. If the recognized leaders in the profession would write for the lay press and make known to the people generally the present status of medicine and the requirements, educational and otherwise, to make a good physician, I think it would help much towards educating and enlightening the people, and perhaps make them discriminate in the selection of a physician. This would naturally drive the poor practitioner from the field, and would make the student who desired to enter the profession for the purpose of gaining a living only hesitate and probably seek some easier road to gain a livelihood. The best schools of the country are doing a good work in requiring a better preliminary education of their matriculates, and if they will continue to still further advance the requirements it will help in diminishing the number of students of medicine. But just as long as our States differ in the requirements for the licensing of physicians, and as long as different States may charter any num-

ber of medical schools, just so long will we have a great number of medical students and incompetent practitioners thrown upon the public. If the different examining boards of the States could get together and agree upon a uniform and reasonably rigid examination of physicians who desire to practice medicine it would be the best method out of our present dilemma."

Dr. J. E. Moore, of Minneapolis, Minn., writes: "I consider your inquiry a very timely one, in which every medical man endowed with the true professional spirit should be greatly interested. The University of Minnesota, with which I am connected, requires for the future that an applicant for admission to the medical department must have passed through a sophomore year of the academic department of this or some other equally good institution. In this way we feel that we can say that every man who leaves our medical school will be probably fitted for the profession, and, of course, we do not expect to graduate nearly so many as if our requirements were very much less. Unfortunately, however, we have another medical school in our city which will accept of students who failed to comply with our requirements and graduate men who are unfit to enter the medical profession; and here, in my opinion, is where the evil lies in medical schools of low degrees and inferior equipment, rather than in the students themselves. In my humble opinion, the only way to reduce the number and improve the quality of our medical students is to make it legally impossible for a medical school to exist which does not have and live up to a high standard of requirements for entrance and graduation, but how to bring this about is more than I, at present, am able to suggest. Quality and not quantity should be the motto of all medical colleges."

Dr. H. L. E. Johnson, Chairman of the American Medical Association, says: "I presume this question has arisen many times in the minds of active physicians, and the solution of the problem is probably no nearer than it was a few years ago. In my modest judgment, based upon limited observation, I should suggest all applicants for admission to a medical school should be required to have the degree of B. S., A. B., or A. M., or to pass an examination equivalent to one of these degrees. While I do not pose as an authority upon this matter of requirement, I give you my views in reply to your courteous communication on the subject."

Dr. Emil Amberg, of Detroit, Mich., writes:

"In reply to your favor of January 29th, permit me to say that an improvement in the educational qualifications of the applicants for the study of medicine could, in my opinion, be obtained by not allowing any one to enter a medical school unless he passed an entrance examination conducted by a special board composed of teachers from State institutions who are not medical men. Graduates from recognized literary schools should be exempted. Furthermore, I think it advisable that graduates from schools of a high standard, which admit only college graduates to study, be given the license to practice by all medical boards in the country after having passed the State medical examination. The examination for the degrees and the State examination should be combined and should be practical and theoretical. The schools should be inspected regularly. I think an arrangement could be made at least with Reciprocal Federation of Medical Schools, which has recently been formed. The demand for well equipped medical schools as to teachers and teaching facilities should force many of the schools to close. The State Boards can do a great deal to this end by absolutely refusing admittance to examination graduates of medical schools of a low standard, even if these schools have a four year course and belong to the Association of Medical Colleges. I think that in the future each State will be afflicted, directly or indirectly, with the State medical schools. It cannot be avoided that practical work in a hospital will be demanded from a graduate before his license is issued. Also the economical conditions in our country favor a prolongation of the study of medicine."

I have read at length these letters that you might see the consensus of opinion as to the best mode of limiting the number of young men studying medicine. No one attempts to deny but that a change could and should be made. The power to bring about this change lies in the profession, and judging the future by the past, it is surely coming. The progress in the profession in the last twenty years has been remarkable, and the profession can't afford, and will not take a step backward. When I graduated in 1881, only a two years' course was required. There were at that time only five schools of a three years' course, and 103 schools of a two years' course, and not one school of a four years' course. In 1899 we find 141 schools with a four years' course, 10 schools with a three

years' course, and two schools with a two years' course. Twenty years ago from seven to nine teachers, and three to five months, was the rule; now four years, scores of teachers, and six to eight months. Few, if any, laws were in existence twenty years ago restricting the practice of medicine.

I remember I carried home after my course of lectures a pair of saddle bags, and in my mind I had a better opinion of my medical knowledge than I have to-day. I was permitted to practice, and it has always been a great wonder to me that I did not do more damage than I now remember of doing.

The first laws enacted were the right to practice to those holding diplomas from any chartered medical college. Then this was limited to those who graduated from colleges with a specified standard. The next laws were those creating boards of medical examiners and requiring all applicants to pass examination before they could offer for practice. Thirty-eight States now require examinations, and nine others either require an examination or a diploma from a recognized college. The number of such college graduates in some of the States is very limited, and soon the college diplomas will not be recognized in any State as a sole qualification. This condition of affairs is very satisfactory, and the profession should congratulate itself on what has been done, but there still remain other heights to climb and other victories to win.

Nine years' experience as a member of the Medical Examining Board of Virginia has convinced me that one thing woefully neglected is the educational qualifications of the applicants, and while I have noted improvement along this line, it does not compare with the improvement in medical requirements. Ohio, Pennsylvania, New York, and some other States have laws requiring an entrance examination by an independent board, if applicants have no degree as to educational qualifications, and this to me is the keynote to the situation.

Other States will soon fall into line, and the steady onward march will be maintained until we reach the goal of our ambition—a *profession equal, if not superior, to any in the world*. We owe it to the people to give them better qualified physicians. Quackery and incompetent physicians are abroad in the land, and like Banquo's ghost, they are hard to down. But as we gain more knowledge in the treatment of disease, we will command greater respect and confidence

from the people, and in a very short time the Osteopath, the Magnetic Healers, Christian Scientists and Dowieism will go like other fakes and quackeries have gone in the past. I have met men who claimed to be physicians who could not diagnose hemorrhoids from typhoid fever; who did not know mania from hysteria. I once heard an old doctor say boastingly in a local medical society that he never bathed his hands in cases of labor until after the birth of the child and delivery of the placenta. This man was one of the recognized leaders in his town in his day. I am glad his day is over.

We owe it to young men who wish to enter the profession to stop the existing conditions in the medical schools, turning out so many incompetent doctors in an already crowded profession. I know a number of young doctors who are hardly earning a living, owing to the fact that they get nothing to do. A crowded profession brings about more envy and jealousy and often makes men resort to things unprofessional, thus lowering the profession with the laity. I have known young doctors who hired themselves for a stipulated salary to keep the wolf from the door. I have known other young men who generally drifted into quackery after a few years' ineffectual efforts in the regular profession to obtain practice. We owe it to ourselves to build up our profession, and to do this we must begin at the very fountain head.

If too many incompetent doctors are a menace to our profession and its well being, we must have it in our power to regulate the number entering the profession. Physicians in this country can get what they want in the way of legislation by making a united effort. Defeat will only come by failure of co-operation. If we can control the entrance examination to medical colleges as to educational qualifications and moral fitness, then make the final examination before the different State Boards more rigid, both practical and theoretical, and have some fair and satisfactory arrangements made in regard to reciprocity between the different State Boards, we will have made a tremendous step forward. This will be just to all, and will interfere with no man's personal liberty as claimed by some, but will simply require all to enter at the *same gate* and in the same way. In my judgment a restriction must be made on the number of young men entering the profession. The way is plain. The necessity of it is clear to all thinking men looking for a continued elevation

of the profession. It is *no leap in the dark*; it has already been tried successfully in several States in the Union. If what I have said, if what I can do, will in the least help to bring about this result in this country, I shall be satisfied.

## INFLUENCE OF TYPHOID FEVER ON THE NERVOUS SYSTEM.\*

By C. C. HERSMON, M. D., Pittsburgh, Pa.

Lecturer on Mental and Nervous Diseases in Western Pennsylvania Medical College, etc.

Typhoid fever is caused by the introduction of a specific poison. This poison in most cases attacks the nervous system first, as evidenced by the prodromal aches and pains, that of the head being severest, sometimes uncontrollably so. The optic nerve is usually quite sensitive, photophobia being a prominent symptom.

Not infrequently do we have the cardiac ganglion and nerve supply of the heart, in general, supercharged with the poison, causing a very rapid and weak heart which greatly jeopardizes the chances of recovery.

The psychoses are the initial delirium which may be a very early symptom; the febrile delirium which usually comes on in the second or third week, which amounts to a confused condition of the mind, a melancholia or a violent motor excitement, or the low muttering delirium so common in fatal typhoid.

Convalescence may be disturbed by a delirium which is due to the exhausted condition. Mania and melancholia are often seen in the inherited neurotic type. Meningitis is a grave complication. I have treated two such cases within the last two years, with one recovery. Friedlander, of Berlin, gives eighty per cent. deaths in typhoid meningitis.

Among the neuroses we find epilepsy, hysteria, tabes and multiple sclerosis, and the typhoid spine, described by Gibney. Friedlander also mentioned infantile, spinal paralysis, paralysis agitans, myotonia, chorea, tetany and various types of anesthesia, hyperesthesia, neuralgia, besides trophic and vasomotor neuroses.

The hearing is often involved, and sometimes

\*Original abstract of a paper read before the West Virginia State Medical Association during its session held at Parkersburg, W. Va., during May 1902.





rated more widely than they should be. The best way, therefore, to elevate the osseous structure is to break this process loose from its attachments with a mallet and the flat side of a chisel covered with rubber, and then loosen the nasal bones by means of strong forceps, one blade inside, and one out, the inside blade being covered with rubber. This will make the osseous framework movable with the fingers. They can be then moulded into shape and packed up from the inside into a vulcanite mould, which has been made over a nose of good con-

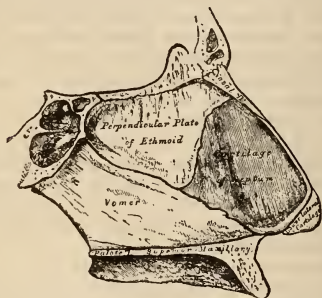


PLATE 2.

tour, which mould is held in place by straps. It will take at least a month for the parts to adjust themselves, and when adjusted, will accentuate still more the depression of the cartilaginous and soft parts. Plate 1 also shows the relation of these parts to the osseous structure, and to each other.

The elevation of the latter is accomplished as follows: First, the cuticle and sub-cutaneous tissues at the point of depression are loosened

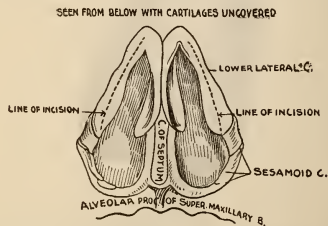


PLATE 3.

from the septum subcutaneously, so that a probe can be passed from one nostril to the other over the triangular cartilage, which is shown in

Plate 2, and is usually depressed, twisted and driven down over the vomer. Then the inferior lateral cartilage, which is part of the framework of the ala of the nose, is split from without inward and up to its connection with the septum cartilage (see Plate 3). This is done on each side, leaving a flap hanging in either nostril attached to the angle, formed by the septum cartilage and the cartilages of the ala. A thread armed with two needles is passed

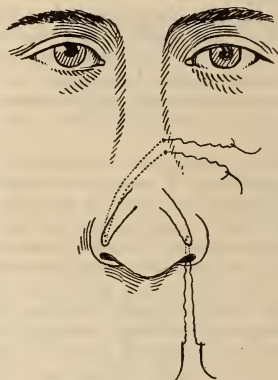


PLATE 4.

through the lower end of the flap (see Plate 4). The needles are then passed up through the gap, made between the septum cartilage and the overlying soft parts when these latter were separated, under the skin and over the cartilage, and then through the superior lateral cartilage



PLATE 5.

and skin of the opposite side (see Plate 4). By tying the two ends of the thread together over a

roll of tape, the flap is pulled up into the gap between the skin and cartilage, and held in place (Plate 5).

When the two flaps are tied into position the raw surfaces are brought into apposition,



PLATE 6.

and the flaps completely fill up the gap between the skin and cartilage, and make an elevation where previously there was a depression.

In the healing process this slight elevation



PLATE 7.

gradually contracts, so that the profile of the nose becomes practically a straight line.

Of course, the amount of the elevation depends upon the amount of tissue, or the size of the flap made, and some judgment has to be used in making the flap.

I have attempted an operation several times very similar to this, without passing the stitches through the lateral cartilage and skin, pinning the flaps into position on the inside, but with very poor success. Putting in the stitches as above described prevents the flaps from becoming displaced, and holds them firmly until cicatrization takes place. The healing is rapid, and the stitches leave no noticeable scar.

The result can be seen in the photographs of the case presented in illustration, Plate 6 showing the profile of the nose before the operation, and Plate 7 the profile after healing.

200 E. Franklin St.

## CURSORY REVIEW OF THE HISTORY OF THE INSANE IN NORTH AMERICA, AND OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.\*

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As we meet here to-day in this beautiful city upon the St. Lawrence, renowned in the history of Canada and of the United States; as we stand upon the threshold of this new century, it seems to be appropriate to the occasion and perhaps interesting to us all to take a cursory review of the history of the insane in this country; and, in connection therewith, a special review of the history of the American Medico-Psychological Association, whose labor and whose laborers in the past we all revere, and whose honor and whose progress in the future we all delight to promote.

So much has been written along this line in the last few years and the ground has been so fully covered by many able and distinguished members of this Association, that I can only hope to collate in more concise form some of the most important statistics and to gather up some of the most important facts in this general review—not having the time or space to describe

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more minutely the work and workers of the past century. This, fortunately, has been done by distinguished members in the past few years commemorating the half century celebration of the American Medico-Psychological Association. From these writers I shall quote freely, and wish here to make my acknowledgments.

A beautiful and praiseworthy sentiment, I have noticed, given expression to in the last year in one of our Western cities, "A Century Chest," directed "to the citizens" of Colorado Springs, of the twenty-first century, to be opened after midnight December 31, A. D. 2000. This century chest is intended to carry messages from the citizens of the first year of this century to the townspeople who may be living and occupying their places in the first year of the next century. Sixty letters or essays written by prominent citizens, covering every phase of business, professional, literary, educational, artistic, and social activity, with one hundred photographs of prominent scenes and places, etc., were enclosed, as also many letters from and to personal representatives of families. Would that we could open a century chest of this last century, and would that we could dedicate here to-day such a century chest, conveying messages to our successors occupying our places here in the year 2001. As a substitute for such a chest we can only delve into the musty records of the past, much of which is defaced, decayed and lost, and much of which can never be replaced, to find out as best we can what was transpiring the first year of the eighteenth century.

From the census of the United States, and from other sources, I have prepared the following table, showing the population of the United States during each decade, and the percentage of increase, also the insane population in each decade, and the percentage of increase, as far as could be obtained.

We have also endeavored to show the hospitals for the insane opened during each decade.

These divisions into decades constitute milestones or landmarks in our field of labor from which reviews and comparisons can be noted. They may serve as lamps of light that pass from hand to hand, from decade to decade, and serve to light up the progress of psychiatry from age to age.

It will be seen that the population of the United States, at the ninth census of the eighteenth century (1780), just after the ratification of the Constitution by the thirteen original

States, was something near four million. Three additional States (Vermont, Kentucky and Tennessee) were admitted during the last decade, and at the beginning of this century the population had increased to 5,308,483, or 35.10 per cent. In the first decade only one State (Ohio) was admitted, but the population had increased to 7,239,881, or 36.38 per cent. During the second decade five States (Louisiana, Indiana, Mississippi, Illinois and Alabama) were admitted, and the population had increased to 9,633,822, or 33.07 per cent. During the third decade two States (Maine and Missouri) were admitted, and the population had increased to 12,866,020, or 33.55 per cent. In the fourth decade two States (Arkansas and Michigan) were admitted, and the population had increased to 17,009,453, or 32.67 per cent. In the fifth decade four States (Florida, Texas, Iowa, Wisconsin) were admitted, and the population had increased to a little over 23,191,876, or 35.87 per cent. In the sixth decade three States (California, Minnesota, Oregon) were admitted, and the population had increased to 31,445,321, or 35.58 per cent. In the seventh decade four States (Kansas, West Virginia, Nevada and Nebraska) were admitted, and the population had increased to 38,558,371, or 35.53 per cent. In the eighth decade only one State (Colorado) was admitted, but the population had increased to a little over 50,155,783, or 30.08 per cent. In the ninth decade four States (North Dakota, South Dakota, Washington and Montana) were admitted, and the population had increased to 62,622,250, or 24.88 per cent. In the tenth decade three States (Wyoming, Utah and Idaho) were admitted, and the population had increased to 75,694,764, or 20.87 per cent.

Considering this wonderful growth from sixteen States and a population of 5,308,483 the first year of this century, to 45 States and a population of 75,694,764 at the close of the last year of the nineteenth century, what may we not expect for the incoming century? What message or what revelation would be disclosed in our century chest to those who occupy our places at the close of the last year of this twentieth century?

Turning now from this marvellous record of development and growth to the history of the insane and insane hospitals (or I might say to the darker record of degeneracy and decay), what a contrast is presented.

It is to be regretted that no accurate or reliable statistics as to the insane prior to 1850 is obtainable. The eleventh census shows that of the population of the United States in 1890 (62,622,250), 1,500,000, or one in 42, or over 2 per cent., were mentally or physically defective. The eleventh census singularly shows also the rate of colored insane to colored population is more than twice as great in the northern part of the country than in the southern. (Eleventh Census, page 10.)

It may be interesting to note here that the earliest record of an asylum for the insane is "an asylum said to have existed at Jerusalem about the fifth century" (2). The celebrated institution at Gheel, Belgium, now among the best in the world, was first established about eleven centuries ago, as a church and altar, where those afflicted with mental diseases were carried to intercede with the spirit of the patron saint for relief, and a number of insane are supposed to have been kept there ever since (2).

The Asylum Reiner Van Arkel (after the founder), at Bois Le Duc, in Holland, 1442, for the care and custody of six unfortunate persons, now has a capacity of 600 (2).

Bethlem Hospital (Bedlam), used as early as 1403 and probably earlier, was almost the only representative for many centuries of the attempt to provide for the insane in England (3). The New Bethlem Hospital, opened in 1676, "was the first large hospital built for the sole object of providing for the insane in England" (3). St. Luke Hospital, London, was opened in 1751. The Retreat at York, "the cradle of reform which made the year 1792 the date of the new departure in the treatment of this unhappy class," etc., was actually founded in 1777. "At the beginning of the eighteenth century there were in England several private asylums for the insane" (3).

The following 15 asylums, public and private, with date of founding, were in operation in England in 1792:

Bethlem, about 1401.

St. Luke's, 1751.

Bethel Hospital (Norwich), 1713.

St. Peter's (Bristol), 1696.

Hoxton Asylum, 1744.

Droitwich Asylum, 1791.

Lea Pale House, 1744.

Ticehurst (Sussex), 1792.

Liverpool Royal, 1792.

Manchester Royal, 1706.

Lunatic Ward, Guys H., 1728.

York Lunatic (Bootham), 1777.

Brooke House (Dr. Monro's), 1759.

Fonthill-Gifford, Hindon, 1718.

Belle Grove House, 1766.

In German nations the first asylum for the insane exclusively was founded at Vienna, in 1784.

Coming back to America, the United States census shows that the first hospital for the insane in America was established at Williamsburg, Va., in 1773. This hospital, "for the reception of idiots, lunatics and persons of insane and disordered minds," was provided for by the House of Burgesses in 1769, and was opened for patients in 1773.

Prior to this time Pennsylvania Hospital had one department especially devoted to the care of the insane; the first patient being admitted in 1752 (4). The New York Hospital received insane patients for treatment as early as 1797. A separate edifice was erected some years later, which afterwards became the well known Bloomingdale Asylum, founded in 1821.

The Maryland Hospital, in Baltimore, in 1797, made provisions for a limited number of insane (4).

The "Friends Asylum," at Frankford, Pa., opened in 1817, was the first private or corporate asylum in the United States. It is worthy of note here that William Tuke, who originated the great reform at York Retreat, England, in 1792, was a member of the Society of Friends (5).

The census of the United States records shows one other celebrated private or corporate asylum opened in the second decade of this century—viz., McLearn Asylum, Waverly, Mass., opened in 1817; also two other in the third decade—viz., "Bloomingdale Asylum," New York, opened in 1821; the Hartford Retreat, Conn., opened in 1823. All four of these private or corporate asylums, the only distinct and separate asylums for the insane after the one at Williamsburg, Va., 1773, until the third decade, have done magnificent work, and stand to-day in the forefront in American psychiatry.

During the third decade, the second, third and fourth State asylums established in the United States were the Eastern Asylum, Lexington, Ky., opened in 1824; the South Carolina Asylum, Columbia, opened in 1828; the Western Asylum, Staunton, Va., opened in 1828. During the fourth decade, as seen in the table,

six State asylums were opened. During the fifth decade nine more State asylums were opened and four private asylums or hospitals for the insane.

In 1850 the insane population in State institutions is given at 15,610. During the sixth decade twenty State asylums were opened and five private, and the insane population had increased to 24,042, or 54 per cent.

During the seventh decade 22 State hospitals were opened and ten private hospitals, and the insane population had increased to 91,959.

During the ninth decade 38 additional State hospitals were opened and 18 private hospitals, and the insane population had increased to 106,485, or 15.08 per cent. During the tenth decade 30 additional State hospitals were opened and 20 private, and the insane population increased to ———. These statistics while not entirely accurate, especially for the earlier decades, are as nearly so as can be obtained, being taken for the most part from the United States census. As before said, the census of the United States shows that in the beginning of the nineteenth century but one hospital for the insane (Williamsburg, Va., 1773) existed in America. At this time but eight public and seven private hospitals existed in England.

Jamestown, Va. (settled May, 1607, situated on a little island, 1,600 acres in James river), has been aptly called the "Cradle of the Republic." Here was erected the first English church, here was performed the first English marriage, December, 1608 (John Leydon to Annie Burras), here was born the first (save one, Virginia Dare, at Roanoke Island) English-speaking child, October 5, 1609 (Virginia Leydon), here the first Legislative Assembly convened (July 30, 1619), and here the cultivation of tobacco was inaugurated by John Rolph, the husband of Pocahontas. Here, too, the first members of the medical profession landed in America, Dr. Wooten, Surgeon-General of the London Co., in 1607, and Dr. Russell, with Captain Smith, in 1608. When Minich purchased Manhattan Island in 1621 for \$24 no physicians were there. The first physician in what is now New York was Lamontague, who arrived in 1637 (Russell Park). Williamsburg, Va., may just as aptly be called the "Cradle of Psychiatry" in America, for here was the only representative of a State hospital exclusively for the insane in America for nearly half a century.

Here, too, William and Mary College (next oldest to Harvard in America) was established, in 1693; the alma mater of Jefferson, Madison, Monroe and others. We might with plausibility also, as an additional record for our century chest, designate Virginia as the "Mother of Psychiatry" in the United States, as she has long been designated as the "Mother of States and Statesmen." There are members here to-day representing large and prosperous States of the Union that from her derive their domain and proudly claim their descent as "Daughters of the Old Dominion."

As the Dominion of Canada, whose wonderful progress has lately been told by one of your distinguished members of Parliament, has contributed much efficient work and many distinguished workers in our past history (being embraced in our Association), we note here that the first asylum for the insane in Canada (the Provincial Lunatic Asylum) was opened at St. John, New Brunswick, in 1835. Another asylum (Beaufort Lunatic Asylum) was opened at Quebec in 185—. At the beginning of the nineteenth century (1800) the population of Canada was 240,000. At the beginning of the fifth decade (1840) the population of Canada was less than 1,000,000. (Dr. Curwin.)

During the sixth decade two hospitals for the insane were opened—Rockwood Hospital, Ontario, in 1855, and Nova Scotia Hospital, Halifax, Nova Scotia, in 1858. During the seventh decade (1861 to 1871) two asylums—St. Ferdinand Asylum for Female Idiots, opened at Quebec in 1868; London Asylum, London, Ontario, opened in 1870. The population of Canada in 1871 was 3,485,751.

During the eighth decade five asylums were opened—Provincial Asylum, New Westminster, British Columbia, 1873; Asile St. Jean do Dieu, Longue Pointe, Quebec, 1873; Hamilton Asylum, Hamilton, Ontario, 1876; Hospital for Idiots, Osillia, Ontario, 1876; Prince Edward Hospital, Charlottetown, Prince Edward, 1879. The population in 1881 was 4,324,810.

During the ninth decade two asylums were opened—Harvard Retreat, Guelph, Ontario, 1883; Selkirk Asylum, Selkirk, Manitoba, 1885. The population in 1891 was 4,893,239.

During the tenth decade (1891 to 1901) four asylums were opened—Protestant Hospital, Verdun, near Montreal, 1890; Brockville Asylum, Brockville, Ontario, 1894; Asylum for Insane, Brandon, Manitoba, 1891; Asylum for

Insane, Cœburg, Ontario, 1901. The population in 1901 was 5,338,833. There were at that time 10 hospitals for the insane in Canada.

"The Association of Medical Superintendents of American Institutions for the Insane" was organized October 16, 1844, in Philadelphia, Pa., as a result of a conference between Dr. Stribling and Dr. Samuel Bayard Woodward, at Staunton, Va. Dr. Kirkbridge and Dr. Ayl approving the movement, the meeting was called in Philadelphia, and the Association organized by the election of Dr. Woodward as president, Dr. Samuel White as vice-president, and Dr. Thomas S. Kirkbride as secretary and treasurer. The other original members (as their names deserve to be recorded again and often) were Dr. Isaac Rey, Dr. Luther V. Bell, Dr. Pliny Earl, Dr. C. H. Steadman, Dr. John S. Batton, Dr. Francis T. Stribling, Dr. Amariah Bingham, Dr. William Ayl, Dr. John M. Galt, and Dr. Nathaniel Cutter. Like the United States, we commenced with thirteen original members. At this time there were fifteen State asylums in the United States, and seven private or corporate hospitals for the insane.

The Association continued to grow in numbers, influence and in good works, until in 1892 over 250 members were enrolled. The name of the Association was then changed at the annual meeting in Washington city, 1892, to "The American Medico-Psychological Association." The membership enrolled to-day is about 362 (19 honorary, 251 active, and 92 associate).

The hospitals for the insane represented in this Association number about 129. The history of the work and the workers in this Association has been so ably reviewed of late at the semi-centennial of the Association by many distinguished members, that I can only refer to a few of these (desiring only to add one sprig to the wreaths of immortelles in memory of those gone before (some of whom we mourn to-day, having passed away since last we met), and giving due mead of praise to many ardent, brilliant workers of the present). In the beginning of the century, and earlier in colonial days, many ardent workers and philanthropists did much to bring about humane care of the insane; chief among these, Dr. Beny Rush, of Pennsylvania, by his writings and by his work in behalf of the insane in Pennsylvania Hospital, is justly entitled to be called the "Father of Psychiatry" in America.

Benjamin Franklin, of Pennsylvania, and Thomas Jefferson, of Virginia, are known to

have exerted their powerful influence in behalf of the furtherance of this humane movement, as also the Galts, of Virginia, and others.

Dr. Amariah Bingham, superintendent of Utica Asylum (1844), at private expense, founded the first journal in the English language devoted to mental medicine. This journal has continued its good work to the present time and is now the American Journal of Insanity, and is the official organ of this Association. Dr. John P. Grey, superintendent of Utica Asylum in 1854, was "the first in this country to recognize the importance and to introduce special investigation into pathological conditions existing in insanity," and to Utica Asylum belongs the credit of having the first special pathologist on its staff (9).

In the early history of the Association in the "sixth decade, Dr. Kirkbride, of Pennsylvania, in construction, and Drs. Galt and Stribling, of Virginia, in treatment, management and discipline, were the recognized leaders" (7).

Many others are worthy of mention, but space forbids. In even a partial review of the work of the century for the insane, I feel that I would be remiss in my duty did I fail to mention and pay a passing tribute, as many others have done, to that noble woman, Miss Dorothea L. Dix, "whose career of humanitarian effort has never been surpassed. This frail woman visited in person jails, poor-houses and asylums in every State east of the Mississippi river." She is said to have founded more than thirty hospitals for the insane in the United States, besides several in Europe.

In the work of the alienist the century has been an age of construction, but it will be seen that the sixth, seven and eighth decades were marked by an increased activity throughout the Union in asylum construction.

This was due, doubtless, to the wonderful activity and "reform in hospital construction and management under charge of medical men" during the civil war. Never before in the history of the world was so vast a system of hospitals brought into existence in so short a time; never before was the mortality in military hospitals so small, and never before have such establishments so completely escaped from diseases generated within their walls. This was one of the crowning glories of our profession in the century's history, and a model for the world. "Surgeons were in complete military command, and were held to a corresponding responsibility."

The contest of the century has been for the establishment of medical government of our hospitals for the insane. This record of military hospitals wonderfully aided the contest, and in the language of Dr. Cowles, we can say: "Thank God, the contest has been won." Much also has been accomplished in the last century, especially to the latter part of the century, in the better care and management of the insane, by the educational movement or training of nurses for the insane.

It is said "the problem of nursing the insane arose with Pinel." "Take trained attendants at York in the beginning of the nineteenth century; Kirkbride gave systematic instructions to them in 1845, but it was not until towards the close of the century that a more general, systematic effort was made in organizing and encouraging training schools for attendants in many hospitals throughout the country. This has rapidly increased in later years in general hospitals, and also to a great extent in hospitals for the insane throughout the country, and much good has been accomplished thereby." In 1885 there were only two organized training schools for nurses in hospitals for the insane; in 1892 there were 24; in 1895 they had increased to 88, and 896 nurses—men and women—had been qualified by being instructed in their special work. Up to the end of the century the number of training schools had increased to over 100, and several hundred nurses—men and women—have been specially instructed and qualified in the care of the insane. The beneficial effects and influences thus spread abroad from these training schools are incalculable, and to one distinguished ex-president of this Association more than all others the credit is due of having organized and encouraged this work (Dr. Cowles).

As we bid adieu to the nineteenth century, which has been called the "era of special asylums," the "era of construction and building," and look forward into the twentieth century, the era of psychopathic hospitals and colonies for the insane, we can but be encouraged. With the remarkable development of clinical and laboratory methods of research, with the increased facilities for scientific investigation now being inaugurated in many of our best hospitals, it is to be expected that the "discoveries of the new century will startle the world, and the unfortunate sufferers from insanity will gain immeasurably by better methods of care, treatment and cure to be ascertained in coming years."

This bright prospect looming up before us in the field of psychiatry, the many ardent, brilliant workers now entering this field intent upon elucidating the many vexed problems therein, gives bright promise on the future of splendid results.

We bid these workers God-speed, and when the records of the twentieth century are enrolled (and we all here to-day have passed beyond), may the results in all the departments of learning, science and art, and especially in psychiatry, be transcendently more brilliant than that of the last century.

It is said that we of the present age "are in a large measure the summing up of all our ancestors—of the lives they led, of the thoughts they held, and of the virtues and vices they practiced." May this thought be an incentive to each and all so to live and labor that the world in succeeding generations may be the better from his having lived and labored in it.

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### SOME POINTS IN THE PATHOLOGY OF AND THE VALUE OF IRON IN THE TREATMENT OF ANEMIA AND CHLOROSIS.

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In discussing this subject it is not my purpose to advocate strictly proprietary preparations, nor to extol the vaunted virtues of such as contrasted with the many officinal drugs of the pharmacopeia; but, rather, to record the result of an experimental research conducted solely with the intention of ascertaining the efficiency of a valuable ferruginous preparation. And while not unmindful of the utility of that form of medication, which has stood the test of time, yet, in this age of progress, when new methods and measures usurp the attention and command the co-operation of a thoughtful constituency, one must needs of necessity forsake his conservative proclivity and pay due homage to whatever in his experience has most abundantly redounded to the amelioration of mankind. One succeeds through experience and profits through success. If, therefore, greater good can be accomplished through the instrumentality of a remedy thoroughly ethical in its composition, yet proprietary in fact, it behooves the profession, as a patron of progressive science, to fa-



miliarize itself with and adopt remedial measures best calculated to subserve its ultimate end.

No stigma can accrue to him who attains an objective point, whether by officinal or non-officinal combinations; for the primal principle of medicine is embodied in a set determination to alleviate diseased conditions, permanently, and with the utmost dispatch; and to employ in the elimination thereof those preparations which, although innocuous in themselves, are, nevertheless, most radical in effect.

If I take the liberty of calling attention to a preparation of iron and maganese, which, owing to its happy composition, is a true panacea against chlorosis, anemia, rachitis and all diseases which are due to an alteration in the composition of the blood, and which possesses all the properties that are needed to restore in a very short time all the elements that are lacking in the circulating fluid, it is only in the interest of suffering humanity, in the interest of science, and in the interest of the progress of the medical profession itself, which certainly constantly endeavors to restore, with the greatest possible rapidity, the failing health of patients.

Then, with a uniformity of opinion and relegation to oblivion of minor technicalities in the administration of drugs, and a greater latitude to the physician in their usage, humanity will be spared much needless suffering, and prosperity endowed with a nobler heritage.

Before going into the treatment of this class of diseases it might be well to consider for a few moments the *pathology of the blood as found in this class of diseases.*

The blood holds in solution certain albuminous bodies, and a number of mineral substances that might be called invisible constituents, the study of which belongs to the physiological chemist. In addition, it holds in suspension certain bodies, the red and white corpuscles, which are open to direct inspection. The study of these latter elements, their form, color, size, number and relative proportions, are the histological factors with which we are concerned. The chemistry of the red corpuscles is complex, and in some respects still unsettled. Its most important ingredient, hemoglobin, possesses brilliant optical properties, and is the only proteid of the body containing iron. It is the blood constituent that conveys oxygen to the tissues, and is characterized by the readiness with which it absorbs and parts with oxygen. In arterial blood it exists as oxyhemoglobin; in venous as reduced hemoglobin, easily distin-

guished by a spectroscope. It is crystallizable and easily obtained from the blood of man and of animals. It is the vital element of the blood, always present, and when slightly reduced below the normal, results in functional disorder; and if extreme, in grave and irreparable organic lesions. The absence of this substance from the blood, in greater or less degree, is the cause of the various forms of anemia.

Next in importance are the blood corpuscles, the white being a large spherical mass of granular nucleated protoplasm, existing in the normal proportion of one white to five hundred red. Other morphological elements that concern us in the study of this subject are the hemotoblasts of Haymen, whose functions are concerned in the production of fibrin. The microcytes, much smaller than the red corpuscles, contain abundant coloring matter, and are numerous in the idiopathic and pernicious forms of anemia.

We have thus outlined these constituent bodies of the blood to elucidate our subject and to emphasize the relative importance in the subject we are about to consider, for the functional power of the blood depends wholly upon the number and quality of its red corpuscles; and when a deficiency exists the tissues suffer for want of oxygen—the most nutritive element of the body.

*In the diagnosis of anemia and chlorosis,* the use of the hemaglobinometer is as important as the microscope; the modern instruments now supplied are all that could be desired. A microscopical examination may be quickly made, and at the bedside, if desired, and affords the means of deciding promptly the probable form of the disease present.

Instruments for estimating the number of corpuscles per millimeter are also of the greatest value, but the microscope is the instrument of great importance, and a frequent use of it is of great value in both diagnosis and treatment. By this means the blood changes may be accurately observed, and corpuscles estimated, and their size, shape and color determined. This may be done without staining the corpuscles, and it is a good plan to make the first examination with a comparatively large quantity of blood to determine the tendency of the corpuscles to form rouleaux. It is well to remember the distinguishing characteristics of chlorosis—namely, greater deficiency in hemaglobin of the blood, in proportion to the diminution of red corpuscles. This condition does not obtain in idiopathic anemia. The corpuscles vary greatly

in size; while the average is below the normal, some are above.

As the severity of the symptoms increases, and in cases approaching the pernicious form, we observe a large number of large corpuscles. Another characteristic is that the corpuscles have a tendency to assume an oval form, and the more severe the type, the greater the number of corpuscles having this shape. In most cases, if at all severe, we find mild fever; it is the usual condition in all severe cases—the so-called anemic fever. It is often difficult to obtain blood from the finger or ear for examination, but after cleansing the tip of the finger, lowering the hand, and applying a string or rubber band, we can prick the finger with a fine needle and get a sufficient supply by means of artificial congestion. It is better, however, to obtain the blood from the ear, if possible. The edge of a clean glass slide is touched upon the exuding drop, then gently drawn across a clean cover glass; this method distributes the corpuscles nicely upon the cover glass, and so thinly that they dry quickly before they have time to become *crenated*. They may then be fixed and stained by the usual methods for preservation or future reference. As to staining, it is best to adopt some one of the many useful formulæ for double staining and stick to the one that gives best results:—A red stain for the red corpuscles, and a dark green for the white corpuscles. This gives a nice contrast, and may be easily photographed by using a Carbutt orthochromatic or color sensitive plate.

Anemia, as a rule, is not recognized until the hemoglobin represents about three or four million corpuscles per cubic millimeter; but their real value may be only 50 per cent. of the normal. In this degree of anemia, none would have the signs and symptoms—such as pallor, vertigo, flushing of face, tinnitus aurium, headache, irregular appetite, ill temper, etc. Should the corpuscles fall below or approximate two or three million, we should have an increased amount of hemoglobin, with a large decrease in the number of cells. It is a fact familiar to all students of blood diseases that as the number of corpuscles diminishes the percentage of hemoglobin increases, until in the severe forms it may equal or exceeds the percentage of red blood corpuscles. A number as low as 3,000,000 per cubic millimeter denotes a grave form of anemia. In the pernicious form the increase in size of the corpuscles seems to be conservative, a compensation by nature, for they will carry as

much hemoglobin as double the number in normal corpuscles; and hence the enlarged and distorted corpuscles are suggestive of a grave condition.

It is well to remember that *an anemia* may not be considered grave until the corpuscles have undergone distinct alterations as to shape and size. In the most severe form, the number of corpuscles varies from 500,000 to 2,000,000 per cubic millimeter. This degree is suggestive of disease of the blood-making organs—the spleen, lymph glands, or bone marrow. Then, in the grave forms, we have always an increased size, combined with an increase in number; while in *chlorosis*, we have generally a diminution in size, combined with an increase in number. It is an established fact that the amount of hemoglobin in two red corpuscles from different individuals may differ as much as 50 per cent.; so that the number of corpuscles does not afford a reliable test of the presence or absence of anemia.

When below the normal average, anemia may be determined by a simple count, but its degree is only determined by the percentage of hemoglobin, the reduction of which may be greater than that of the corpuscles.

When the number of corpuscles is not far from normal, or greater than normal, this test is superior. As between two tests, in such cases the color test is to be preferred. In an examination of the blood it is important to determine the functional value of the red corpuscles, which bears a close ratio to the amount of hemoglobin in each.

Anemias are properly classified with reference to their origin. Anæmia resulting from nutritive disturbances in the blood, to food supply, digestion, absorption, and the direct loss of blood by hemorrhage, as causative factors, might be called secondary, while the primary include chlorosis, leukemia, and pernicious anæmia, and a third, suggested, to include those forms resulting from the effect of toxic substances in the blood—namely, toxemia.

Notwithstanding our ability to classify anemias better than in former years, there are still quite a number of cases which can only be classified as *idiopathic*, with typical symptoms, as laid down by Addison, and elaborated upon by more recent writers.

These cases are so uniformly progressive to a pernicious or fatal termination, we are led to believe that when we report a cure there was possibly an error in diagnosis.

We cannot hope to cover the extent of the subject, including all the varieties, but will consider briefly the two forms most frequently encountered—viz., *chlorosis* and *idiopathic anemia*; for the blood changes, symptoms, and chemical features, as well as the treatment, apply largely to the above forms of this disease.

As is well known, Hannon was the first to discover the presence, within the blood, of manganese, and to call the attention of clinicians to its great importance in connection with the absorption of oxygen. He employed manganese in combination with iron, especially in chlorosis, and asserted that he had obtained good results, even in cases in which iron, when given alone, had failed to prove efficacious.

It is well known that the chemical action of iron and manganese upon the red blood globules is due to the property possessed by these metals of fixing oxygen, a quality possessed by manganese to a much greater extent than by iron. And, as a result, manganese is quantitatively more active than iron. If we express this as a percentage, we find that manganese is to iron as 35 is to 21. In accordance with this proportion, manganese, as an element of the blood, has a more strongly ozonizing action on the oxygen than that displayed by iron, and is therefore more strongly oxydizing and more actively assimilative.

As soon as the necessity and usefulness of introducing manganese and iron in the altered blood were recognized, it became indispensable to discover a form under which these metals might be absorbed in the whole digestive tract—that is to say, a form uninfluenced by the acidity of the stomach and the alkalinity of the intestines, and whose composition should correspond, as much as possible, with that of the blood itself.

Experience has taught us that metallic iron is badly tolerated, because in the presence of the hydrochloric acid of the gastric juice a reciprocal action takes place, in virtue of which hydrogen is set free, instantly acting upon the carbon found in all iron, and producing a carbide of hydrogen, which causes nausea and vomiting in some patients. The iron, giving with the oxygen two compounds—to-wit, an oxydulum and an oxide; is then transformed into a chlorine compound, which corresponds to the oxydulum. Now, while remaining an oxide compound, it is not absorbed in the same form by the digestive tract. At the expense of the oxygen found in the stomach, and by the intervention of the

hydrochloric acid found in the gastric juice, an oxide salt is slowly formed. This process, however, subtracts from the stomach a certain amount of hydrochloric acid needed for digestion, in consequence of which inappetency and digestive disturbances occur.

If we thought of obviating this trouble by making use of ready dissolved compounds with a basis of iron oxide, we would find ourselves checked by the caustic and astringent properties of these chemical preparations, which also bring about gastric disturbances. The action of the undissolved iron and manganese compounds is analogous, because they also take hydrochloric acid from the stomach. This is especially true of the strongly alkaline saccharate of iron.

The result of these conditions is therefore that neither the compound with an oxydulum basis, or the soluble or insoluble ones with an oxide basis, or the acid or alkaline compounds of iron and manganese, can be considered as being adapted to pharmaceutical purposes.

The favorable influence of some underdone meats upon the state of chlorotic persons is well known. Unfortunately, a meat treatment can be prescribed in but few cases, for the reason that in most instances the disease, when first observed by the physician, is already so far advanced that the patient not only lacks appetite, but shows a distinct repugnance towards meat. The cause of the red color of those meats lies in the iron which they contain. From this fact the idea was evolved of the necessity for finding a chemical compound, in which iron should enter into a combination similar to that found in its organo-plastic form—i. e., meat. The albuminates and peptonates of iron were therefore discovered.

Now, in regard to the *albuminate of iron*, we know that it possesses the same drawback as the alkaline saccharate of iron, since it is held in solution by a relatively large quantity of caustic soda, which neutralizes the hydrochloric acid of the gastric juice. Besides, just like all the other albuminates, it becomes peptonized in the stomach, and this results in freeing an oxide of iron. Through the action of the hydrochloric acid of the gastric juice this oxide of iron is changed into chloride of iron, which exerts a caustic action upon the gastric mucous membrane. On the other hand, the peptonates of iron, which have been in use for some time back, are held in solution by the addition of a relatively large amount of mineral acid (hydrochloric acid), and are precipitated as soon as the

latter is neutralized. This decomposition takes place through the action of the intestinal alkali, and prevents absorption. If this statement is met by the objection that all the substances which reach the intestines from the stomach are of an acid reaction, and that it is through this very precipitation that they are rendered assimilable by the stomach, we will answer that this is only true when the hydrochloric acid is not augmented by introduction from outside. Its small amount has no essential action upon the alkalinity of the intestines, whereas its increase, through the administration of the *acid peptonate iron*, must prove a hindrance to the intestinal function.

In the *treatment of severe anemia*, we would place rest as of first importance. We have seen many cases where all therapeutic treatment had failed, and when placed in bed for awhile the patient would respond quickly to medicines. Attention to the secretions, the diet, the skin, the mental condition, is all-important. The great therapeutic agent, and the one of the greatest virtue in these diseases, is an assimilable preparation of iron. The next best agent is an assimilable preparation of manganese. Therefore a combination of these two excellent agents produces a superior chalybeate tonic and reconstructive.

"As a matter of fact, manganese, owing to its power of carrying oxygen in the blood, has an importance which is fully as great as that possessed by iron. Eminent scientists have repeatedly expressed the opinion, and have even asserted that the cause of chlorosis, which often lasts for years, and of other diseases due to the blood, must be sought for in our lack of means adapted to return to the blood its manganese under an easily absorbable form. The most varied experiments were conducted in order to associate manganese with iron; most of the preparations, however, contain inorganic metallic salts, and therefore, since they favor or even directly cause digestive trouble, they are not adapted to therapeutic uses.

"The preparation of Dr. A. Gude, of Leipzig, contains manganese in the happiest possible combination with iron and peptone, in such a manner as to secure its absorption by the blood. In the body, it undergoes no chemical alteration whatever, being very rapidly and completely absorbed and taken up by the blood.

Below I append a few clinical reports of some interesting cases occurring in my practice:

CASE I. *Pernicious Anemia*.—A man, aged 35 years, came to me in February, 1900, complaining of *giddiness*, shortness of breath on exertion, and general languor. His skin was of the peculiar lemon tinge so often seen in these cases. The patient had not lost flesh, and, in fact, he thought that he was stouter than formerly. Inquiry elicited the fact that he had had a family worry sometime previously, and that he had never felt himself to be the same man since. He had begun to feel weak and unable to exert himself, and his friends at the same time began to notice his increasing pallor. The urine was high colored, but free from albumin. The ordinary causes of anemia were carefully eliminated, and the case was diagnosed as one of pernicious anemia. An examination of the blood resulted in the discovery that its specific gravity was reduced. The corpuscles did not adhere in rouleaux, and their number was greatly reduced, 3,400,000 per cubic millimeter; but what was most noticeable was their great variation in form and size. Nucleated red corpuscles were also present; hemoglobin, 45 per cent. of the normal. Arsenic in gradually increasing doses, in the form of Fowler's solution, was given and continued for some time, but with absolutely no good effect. At the commencement of this treatment the patient was kept in bed. The diet ordered was chiefly farinaceous. Iron was then administered, but with like results. The patient was evidently getting weaker. Happening to mention the case to a friend, he advised me to try peptomangan, Gude. It was given daily with the best results for two and a half months. A further examination of the blood showed that the corpuscles were assuming their natural shape, and their number had increased to 4,500,000, and the hemoglobin to 78 per cent. of the normal; but the more tangible and satisfactory result was the condition of the patient, who was able to resume his work with a freedom from all his previous symptoms.

CASE II. *Pernicious Anemia*.—This case was interesting from the fact that the patient had been treated with salol after the failure of arsenic with marked improvement, but unfortunately with a relapse. The patient was a woman aged 38 years, who complained of faintness, palpitation; loss of appetite, extreme debility, and constant vomiting. The pallor of the skin was striking. The mucous membranes were pale, there was edema over the malleoli,

and there were some petechial hæmorrhages on the lower limbs. An examination of the blood revealed the fact that the red blood corpuscles were greatly reduced in size and number, 3,200,000 per cubic millimeter, hemoglobin, 65 per cent. of normal. It happened that the patient when residing elsewhere had been under treatment for the same condition, and she thought that she had been cured, but after a period of four months the old symptoms returned.

Correspondence with her previous medical man revealed the fact that she had been treated with arsenic, and later with salol with apparent benefit. I therefore determined to commence the treatment with the administration of Gude's pepto-mangan. This was continued on and off for a period of three months, during which time repeated examination of the blood was made, marked improvement being noted, and on dismissal an examination showed the red blood corpuscles increased to 4,700,000 and hemoglobin almost to normal.

CASE III. *Malarial Anemia*.—On September 17, 1901, was called to see Mrs. J. E. D., aged thirty-three, weighing 97 pounds, who had been suffering from repeated attacks of quotidian malaria for the past two years. The patient was complaining of nausea, vomiting, and severe frontal headache, pain between the shoulders and bowels constipated. On examination we found the patient anemic and emaciated; the skin very yellow; the face flushed; the tongue heavily coated with thick, yellowish fur, and flabby; the conjunctivæ yellow, lungs and heart normal; pulse full and bounding, about 120 beats per minute. The liver was congested and tender; the spleen very large and tender, reaching almost to Poupart's ligament and about one and one-half inches thick, and three and one-half inches wide (these dimensions were easily made out, as the abdominal walls were very thin, and easily palpable); some tenderness over the abdomen on deep pressure, probably due to weight of the spleen.

As soon as placed in the hospital we made a blood examination, which showed the red blood corpuscles greatly reduced in size and number, 2,850,000 per cubic millimeter, their great variation in form and size was quite noticeable. The percentage of hemoglobin was reduced to 40 per cent. After regulating the secretions of the liver and alimentary canal, and prescribing for the malarial poisoning. The patient was placed upon tablespoonful of pepto-mangan,

Gude, three times a day, and a stuffing diet of nutritious food, consisting of meat, broths, eggs, milk and Port wine.

This treatment was continued for four weeks, when her condition became much improved, her skin cleared up, she gained in weight and appetite returned. She was ordered to the mountains of Virginia, and took a supply of pepto-mangan, Gude, with her, and on her return, after a two months' stay, an examination of the blood showed the following: Red blood corpuscles, 4,500,000 per cubic millimeter; percentage of hemoglobin was increased to nearly normal. She now weighed 112 pounds, and was in splendid condition physically.

CASE IV. *General Anemia in a Young Girl of Sixteen Years*.—When first seen she was pale, thin, and was badly constipated. There was almost constant headache, and she had but very little appetite. She first menstruated in her fourteenth year, but has not been regular for over a year. The corpuscle count was 3,000,000 to one cubic millimeter. Gude's pepto-mangan in tablespoonful doses three times a day after meals was given for a period covering four weeks. In two weeks after beginning the treatment she began to have some color in the lips, and from that time on rapidly improved in all symptoms, and now has no trouble except with the menstrual function. The blood at last count, one week ago, was 4,000,000 to one cubic millimeter. Her weight increased during this time nine pounds.

CASE V. *Young Lady Nineteen Years Old, Presented Herself for Treatment Suffering with Marked Chlorosis*.—The disease was of several months' standing—prominent among her symptoms was a general functional disturbance, together with mental anxiety and a disinclination to work, to enjoy life, or move about, marked muscular weakness, cardiac palpitation, difficulty in breathing, loss of appetite, headache, vertigo, restless, and sleeplessness. Patient's family and personal history good; she first menstruated in her fifteenth year, but scanty and irregular.

There was marked pallor of the skin and mucous membranes. The area of cardiac dullness was increased, bellows murmurs were heard over all the valves, pulsation at radial artery was soft and compressible. The spleen was enlarged and tender, the liver was normal in size, and no glanular swellings; the bones were not tender to pressure.

A microscopic examination of the blood showed the following: Red blood cells, 2,800,000 per cubic millimeter; hemoglobin, 35 per cent. The white cells were greatly increased and of irregular shape.

The treatment was as follows: Patient was advised to live on a mixed diet, with an abundance of fresh air, and moderate outdoor exercise; she was ordered to take a tablespoonful of pepto-mangan, Gude, three times daily after meals. At the end of four weeks' treatment a blood examination showed the red cells to have increased to 4,600,000 per cubic millimeter, and the hemoglobin to 75 per cent.

The great improvement in this case of an increase of more than one million and one-half red blood cells to the cubic millimeter and an increase of more than 100 per cent. of hemoglobin is worthy of special notice. The patient's condition progressively improved, all nervous symptoms subsided, appetite soon returned to normal. Complexion became rosy, and her disinclination for outdoor exercise suddenly disappeared; she took on new life and energy.

CASE VI.—Jennie L., aged 17, suffering from anemia following neurasthenia, had been gradually failing for two years, had lost appetite and interest in surroundings, headache, insomnia, and disturbed menstruation were annoying symptoms. Skin and sclera pale lemon yellow; had sought the advice of various physicians; *benefit invariably* transient, finally ending with a general course of *patent medicines*. She had taken *Peruna*, *Lydia Pinkham's Comp.*, and the various iron and other so-called blood making tonics.

She was suffering with a well-defined case of anemia, and was accordingly placed upon Gude's pepto-mangan, tablespoonful doses three times daily after meals.

A thorough examination before beginning treatment showed a decided deficiency in red blood corpuscles, 2,400,000 per c. mm., and a marked excess of white cells, hemoglobin 35 per cent. In addition to medicine ordered, patient was given a liberal quantity of a highly nutritious diet.

At the end of the fourth week, microscopic examination showed the red cells increased, and hemoglobin increasing, while the white cells were reduced nearly to normal. Her appetite had returned, she slept well, felt stronger, had no more headaches, had gained four pounds in weight, pepto-mangan was continued two weeks

longer, at which time the general health of the patient was found to be nearly normal, as was also the blood standard, and she had gained twelve pounds in weight.

Before closing this clinical report I must acknowledge the valuable assistance rendered by my good friend and colleague, Dr. W. E. Fitch, in microscopical work and blood counts.

I could report several other cases, but for clinical purposes I believe the above will serve to convince the reader that we have in pepto-mangan, Gude, an ideal chalybeate tonic and reconstructive.

It must be conceded that in matters of therapeutics it is always difficult to appreciate correctly the relation of cause and effect, and to eliminate the factor of accidents in estimating the efficiency of any plan of treatment. In order to arrive at a positive and unbiased decision, it is necessary to resort to a series of observations and control experiments of so great an extent that the single observer, even though he have at his disposal a vast amount of material, is only capable of furnishing a small contribution in the discussion of these questions. Furthermore, a certain amount of latitude must always be allowed to individual judgment. Yet, while fully conscious of these limitations, I think I am justified in asserting that in my therapeutic trials with pepto-mangan I obtained all that can be rationally demanded. And I further consider myself warranted in stating that in view of the unquestionable necessity of ferruginous medication in certain troublesome constitutional affections this preparation acts as a most efficient and useful auxiliary to our therapeutic armamentarium.

308 Oglethorpe Ave., West.

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## Analyses, Selections, Etc.

### The King's Case.

Dr. Joseph Price, of Philadelphia, one of the world's authorities on abdominal surgery—especially appendicitis—in his most forceful, striking way, that almost persuades all doctors to diagnose and operate *at once* for appendicitis, has this to say about the "King's Case"

(in *Philadelphia Medical Journal*, July 5, 1902):

His majesty's illness has been typical of an exceedingly common and neglected disease. The delay in his case is a most beautiful demonstration of what the active clinicians have so fully dwelt upon. The procrastinations of professors of the theory and practice of medicine and surgery, no less than of conspicuous teachers and authors, figure largely in the incomprehensible delay in his majesty's case. The acute symptoms, or the perforation, in all probability occurred on the 15th of June. The king should have been treated on that day as the fire department would have treated a fire at the royal palace. No one should ever die of appendicitis, and it is folly to consider varieties or longer to use the old nomenclature. Excessive medication of any kind is harmful and antiphlogistic treatment of any kind worthless. Delays result in perforations, pus accumulation or multiple pus accumulations, invasion of the right kidney, pelvic suppurations or a general peritonitis and resultant inflammatory products. In 1901 four hundred persons died in Chicago of appendicitis, and large numbers were not recorded, while in that city prominent teachers were strongly advocating freezing methods, cold applications, starvation and rectal feeding. If they knew anything about the natural history of the disease, they would know that the appendix was at that time, or soon would be, gangrenous or perforated.

The symptoms are commonly so prominent and so few that the most careless man practicing medicine ought to recognize them in the first hour. When a child, a poor little sufferer, will sometimes entreat its parents not to permit the approaching attendant to put his hand on the seat of pain, it seems strange that the diagnosis is not always made at once. The set muscle on the right, the pain and tenderness on the right are so characteristic that we can open the abdomen without an examination, simply reviewing a typical case, the sufferer making the diagnosis in our presence. I have never known any one to err in a typical case.

His majesty, like other prominent citizens travelling over Europe and the continent for health, carried a puddle of pus in his right iliac fossa for some days. I have known a good number of prominent citizens, and good physicians, to travel about attending to their business and profession with a puddle of pus and an ad-

vancing peritonitis. There is nothing extraordinary or new in his majesty's case. I always feel sorry for a sufferer when I hear he has fallen into the hands of a conservative teacher. At the best, the dirty little appendix is an anatomical cess-pool, and always unhealthy. The dirty little sinus would not be permitted at any other point of the body. If our fingers and toes were hollow and as filthy and infectious as we always find the interior of the appendix, amputations would be exceedingly common. Must it be taught all over again that the general surgeon's inflammatory wall is of as much use as a fire wall with fire on both sides of it, and that waiting for reaction or an internal operation is often waiting for death? We are dealing with a deadly little assassin, with no respect to sex or person. The great and small fall alike under its influence, and we should strangle it in its birth and not wait for what is so often a bubble to burst. This great calamity, which has come so suddenly, so unexpectedly, will, I am sure, save thousands of lives and will teach a great and needed lesson to those men who badly need to learn that in dealing with appendicitis we are handling a deadly enemy, to be destroyed as all other assassins should.

From report, Lord Lister says: "The doctors for weeks past have simply been trying to patch him up for the coronation, but to no avail." How that sentence must make many a man's heart ache who knows and understands what they were trying to do with what they were dealing. That a man as ill as his majesty should be allowed to hold a State dinner is pitiful in the extreme, as there must have been some sign, some symptom at that time which gave evidence of where and what the trouble was. Here in Philadelphia, where, I am sorry to say, we see many cases of perforative appendicitis and "green groin" (or gangrenous appendicitis), the diagnosis of appendicitis means a packed grip, the first train, an operation and a life saved. There should be but two things in appendicitis, a diagnosis, an operation. Surely there is not a more pitiful sight than the little child, sweating, tossing and dying, its abdomen an arch, its heart a high-pressure pump, on a chair by the bed a basin and bowl of cracked ice. To see this a few times makes the most conservative minds shudder and wonder. All over the world many prominent citizens are lost from appendicitis on account of the conservative methods taught, on account of delayed operations. Some

prominent teachers and operators have lost their own children by trials of worthless remedies and late operations. Foreign bodies in the flesh are commonly clean, not very infectious. Gangrenous and sloughing structures are infectious in the extreme. Good surgeons hasten to remove all foreign bodies and repair acute lesions.

parts. Yet it is a book that the practitioner rather than the student can read with profit. For the student, too much is left unsaid which the up-to-date practitioner can supply.

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## Book Notice.

**Eclectic Practice in Diseases of Children.** *For Students and Practitioners.* By WILLIAM NELSON MUNDY, M. D., Formerly Professor of Physical Diagnosis, Hygiene and Clinical Diseases of Children, Eclectic Medical Institute, Cincinnati, O., etc. Cincinnati: The Scudder Brothers Co. 1902. Cloth. 12mo. Pp. 631. \$2.50 net.

This book is especially interesting to one of the regular school of practice. It speaks in a dogmatic, authoritative way that reminds one of the good old family doctor of years ago, who prescribed blood letting, calomel, jalop, blisters, etc., with a confidence that was inspiring. Points of professional dispute and experimentation have been avoided, when possible. "The treatment is essentially eclectic—the therapy being based largely on our personal experience in practice. When vegetable remedies are named, as aconite, ipecac, rhus tox., etc., the *specific medicines* are understood—these preparations being the only plant liquids we use in our practice." Thus aconite gtt. or ipecac gtt., etc., means the plant *liquids*, and not the substance. It is held that the remedy should not be objectionable to the taste, and should be in solution or readily soluble in the gastric fluids. Hence the recommendation that "specific medicines" should be put in about four ounces of water, so that the proper quantity or dose will be contained in a teaspoonful. Thus a child's dose of digitalis is gtt. x to half dram, put into four ounces of water; dose, one teaspoonful every one or two hours. The principle for administration of drugs is that, "We have not yet specifics for any disease, but we have specifics for pathological conditions." Prescribed in the order in which these pathological conditions take precedence, "medicines offer a direct and very certain treatment for diseases." The description of diseases is practical, but it is wanting in points of laboratory diagnosis in many

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## Editorial.

### Preliminary Academic Education as a Prerequisite for the Study of Medicine.

We wish to call the attention of the medical profession to an article in this issue by Dr. R. S. Martin, of Stuart, Va., on "What Can Be Done to Regulate the Number of Young Men Studying Medicine?" The article contains a summary of the expression of opinion by many eminent doctors throughout the United States, and the suggestions, if adopted, will undoubtedly greatly elevate the professional standing, as well as "regulate the number of young men studying medicine." We look with especial favor upon the idea of having State Examining Boards for the purpose of *inquiring into the qualifications of applicants to enter medical colleges*, and we firmly believe that if our Legislature of Virginia can be persuaded to enact laws to such effect, it will accomplish a "world of good" in preventing over-crowding, at the same time giving us more competent men. New York has taken the lead in this matter, and finds the law a great advantage. Pennsylvania and Ohio have followed suit, and we trust that before long this State will have like requirements.

### The American Association of Obstetricians and Gynecologists

Will hold its annual session at Hotel Raleigh, Washington, D. C., September 15, 16, and 17, 1902. A reception to the Association and its guests will be given on Monday from 9 to 11 P. M., by Dr. Isaac S. Stone, 1449 Rhode Island Avenue, N. W. The place of meeting should assuredly encourage a large attendance of the profession from Virginia and Maryland, especially. Dr. Edwin Ricketts, of Cincinnati, Ohio, is President; Dr. Potter, of Buffalo, N. Y., Secretary. The wide influence, professional popularity and activity of the President will insure the best possible work and attendance. Scarcely any National Association is more popular than this.



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## Original Communications.

### REPORT ON ASIATIC CHOLERA FROM THE SANTA MESA CHOLERA HOSPITAL.

MANILA, P. I., May 20, 1902.

To the Commissioner of Public Health, Philippine Islands and City of Manila:

SIR,—In compliance with your letter of April 25, 1902, embodying a letter from the Hon. Secretary of the Interior, of equal date, I submitted on May 1st, a report on Asiatic cholera, as treated at the Santa Mesa Cholera Hospital, to April 30th, inclusive.

This report was necessarily incomplete, in view of the fact that forty-five cholera cases were then remaining under treatment, and others were admitted after that date.

The discontinuance of this hospital on May 11th and the removal of the convalescents to the San Lazaro Cholera Hospital, of which, also, I assumed charge, enables me now to complete the record of all cases transferred to the Santa Mesa Cholera Hospital from the date of its establishment, April 12th, to the date of its discontinuance, May 11th.

My report, submitted May 1st, embraces one hundred and eighty-one individual case records, which is now supplemented by five additional cases, making a total of one hundred and eighty-six cases recorded during the entire existence of the hospital.

In order to render this report complete within itself, much of the material considered at some length in my former report will be included, however, changing the percentages and summaries to suit the numerical increase and the final terminations.

#### SYMPTOMATOLOGY.

History of the premonitory diarrhœa has been obtained in 50 per cent. of cases; however, other prodromata, such as malaise, languor, depression of spirits, noises in the ears, etc., have only been obtained in 10 per cent. of cases.

Rice water stools, vomiting, suppression of urine and bile, shrinking of the soft parts, fallen cheeks, pinched nose, sunken eyes, shrivelled fingers, cold body surface, bedewed with a clammy sweat, respiration rapid and shallow, thready, weak and rapid pulse, voice sunken to a whisper, or entirely lost, and subnormal temperature, have been the usual run of symptoms. Few cases admitted to the hospital have complained of agonizing cramps in extremities and abdomen; however these latter symptoms have been well marked in cases seen by the writer shortly after the first symptoms appeared, and before removal to the hospital.

TREATMENT—*Benzoyl-Acetyl-Peroxide (Benzozone)*.—As per instructions from your office, benzozone has been administered as a germicide in all cases when practicable. It appears from the records that this drug in doses from .065 to .32 cc., though administered in double capsules, is a gastric irritant—producing almost invariably retching and frequently vomiting. When the capsule is ruptured by the teeth in the act of administration (which frequently occurred with natives), it was observed that the drug produced excoriation within the month and of the tongue, gums and lips, so that nourishment was seriously interfered with, necessitating nutrient enemata and a discontinuance of the drug. This appears to be, however, a fault of administration only.

It appears also that formerly this drug was administered in solution (1-1000) by mouth and rectal injections, but was discontinued by mouth by reason of gastric intolerance; however, by rectal injections beneficial results were claimed.

2. *Normal Salt Solution*.—The injection of 237 cc. of normal salt solution into the lower bowel of all adult cases on admission, and a proportionate quantity for children, has proven stimulating and advantageous.

3. *Saline Transfusion*.—The transfusion of normal salt solution into the larger veins, in from 30 to 50 cc. has been resorted to in a num-

ber of cases, and in collapse it has given the most gratifying results. It is believed that this is an advantageous and well-warranted procedure.

4. *Cardiac Stimulants*.—The use of strychnine hypodermically has proven more advantageous and responsive than digitalis, nitroglycerin, or spiritus frumenti; however, these are used as occasion demands.

5. *Sedatives and Astringents*.—Of the various drugs used with this view, opium, caffeine, chlorodyne and brandy, have given the best results.

6. *Diet*.—Concentrated liquid nourishment only can be employed, and this in quantities from 30 to 118 cc., as indicated by gastric toleration, frequently repeated. For this purpose milk, milk punch, egg-nog, soft boiled eggs, wine and beef extract have been best retained; however, gastric intolerance is a common symptom, and rectal enemas have been resorted to in all such cases. The diet of convalescence is confined to slops, shaped in appetizing forms, until a gradual return to heavier diet is warranted.

#### MORTALITY.

As appears from the records, the total mortality has been 82.16 per cent. However, of this, 4.33 per cent. died en route to hospital, and 18.37 per cent. were practically dead on arrival, and expired shortly afterwards in spite of vigorous stimulation.

By observing the cases reported it will be seen, (first), that 61 per cent. had suffered from cholera at least ten hours before admission to hospital, and the majority of cases had had no recorded treatment; and (second), the method of transportation employed, the distance to the hospital, and the rough roads must necessarily have been injurious factors, if not inducing fatality in many cases.

#### MORBID ANATOMY AND PATHOLOGY.

It is to be regretted that no facilities have been at hand to make post-mortem examinations, or laboratory in which to make pathological investigations.

All dead bodies were sent to the cholera morgue, and a report requested by letter through the Commissioner of Public Health, but as yet the request has not been complied with.

#### SUMMARY.

Total number cases recorded	186
Number cases cholera	185
Number cases not cholera	1
	— 186

Number deaths in hospital	144
Number deaths en route to hospital	8
Number discharged cured	34
Total	186
Total number of deaths	152
Total number of deaths under six hours	53
Total number of deaths over six hours	91
Total number of deaths before arrival	8
	— 152
	Per Cent.
Total death rate over six hours	49.79
Total death rate under six hours	28.04
Total deaths before arrival	4.33
	— 82.16

Total death rate

#### ADMISSIONS BY NATIONALITIES.

Americans—Men	4
Europeans—Men	3
Women	1
	— 4
Filipinos—Men	105
Women	33
Children	19
	— 157
Chinese—Men	20
Japanese—Men	1
	— 186

#### CHOLERINE AND AMBULATORY CASES.

No ambulatory cases, choleric or choleric diarrhoea, as recorded in observations, principally in India, have been observed.

#### CHOLERA SICCA.

Of the total number of cases seen by the writer, 1 per cent. only proved to be cholera sicca. In these cases the symptoms of vomiting and rapid collapse were presented, followed by death in from one to two hours, without purging or any attempt at reaction. On post-mortem, the rice water material, so characteristic of cholera Asiatica, was found in abundance in the bowel.

#### CHOLERA TYPHOID.

Only one case of cholera typhoid has been observed—this case being No. 2, an American, male, age 26. The usual typhoid symptoms were present when this patient entered on the stage of reaction, having previously presented a typical line of cholera symptoms. This case

made an uneventful recovery, and was discharged cured May 15th, just thirty-two days after admission.

#### SEQUELAE.

Of the thirty-four recoveries, the usual sequelæ observed have been anæmia and physical debility. Four cases, all of whom were children, developed parotitis, which resulted in abscesses.

Two adults developed bed sores. Ulceration of the cornea was observed in two cases, these also being children.

One pregnant woman, almost at term, died without premature labor, this being contrary to the recorded observations in India, and in the comparatively recent epidemic in Hamburg.

#### CONVEYANCE AND DISSEMINATION OF CHOLERA TOXINE.

It has been recognized for many years that cholera toxine, not unlike that of typhoid fever, is principally conveyed and disseminated through foods and drinks. The usual method of water contamination is evident and conclusive; however, with foods it has not always appeared so clear.

From certain well-marked cholera cases, occurring among the better classes during the first part of April, and under circumstances where every recognized precaution could and was thought to have been taken, the writer was led to investigate the probability of direct conveyance of infection to foods by means of the fly and mosquito. The reasons suggesting this possibility were that these insects were almost invariably observed around cholera cases and cholera infected localities, and particularly was the fly observed on the ground where cholera excreta had been thrown and in receptacles containing cholera fluids before disinfection. A number of mosquitoes and flies were caught from these localities and carefully examined under a magnifying glass. The legs, body, wings and cornua of the mosquito were apparently clean, but with the fly foreign matter of a gummy consistency was found adhered to the fuz on the legs, the web cups, claws and cornua. Portions of this was removed and a smear made upon a cover glass, stained by a watery solution of fuchsin, and under ☆ oil emersion, demonstrated an organism identical in morphological appearance to the cholera vibrio.

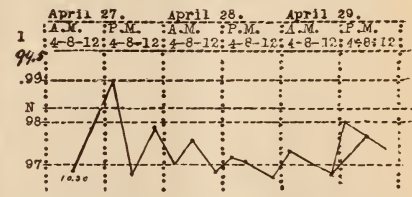
Cultures have been made by the writer, and colonies are being grown in the hopes that some

interesting facts may be deduced, at which time a more extensive report along these lines will be written. For the present it would appear reasonable to regard the fly as a probable means of direct conveyance of the comma bacillus to foods and drinks. The most pronounced precautions

#### TEMPERATURE CHART.

*Santa Mesa Cholera Hospital, Manila, P. I.*  
Board of Health for Philippines,  
April 27, 1902.

Name, Castar Vallensuela; sex, male; age, 18. Admitted April 27th, 10:30 A. M. Ward, 3; Bed, No 48. Diagnosis, cholera. Case No. 171. Died 11:30 P. M., April 29, 1902.



against this insect would, it seems, be well warranted, granting, primarily, that the proper precautions would be taken regarding the disinfection of all cholera fluids, both in cholera hospital and cholera infected houses.

#### CONCLUSIONS.

In making a summary of the foregoing it will be observed:—

1st. That the symptoms presented, the large mortality and the verification at the morgue and laboratory indicate that this type of cholera Asiatica is most virulent.

2d. Cases seen shortly after being attacked and properly treated at home or removed to hospital stand a reasonable chance for recovery.

3d. Cases not seen or treated for five or six hours after the attack begins almost invariably prove fatal, regardless of treatment.

4th. It would appear from the records that it would be better to treat cases in their homes, if practicable.

5th. If removal is necessary, and in most cases it unquestionably is, cases should be stimulated, moved quickly and comfortably, yet the shortest distance possible, and with the greatest care.

6th. The definite lines of treatment advocated from time to time have never proved of material service in true cholera. The eliminative treat-

ment of Johnson, the ice bag treatment of Chapman, the various antiseptic methods for the destruction of the vibrio in the intestinal canal, or the drugs designed to counteract the physiological effect of the cholera toxins, are not as yet conclusive. Practically, therefore, the only treatment of proved value is the purely symptomatic

and expectant one.

Respectfully,  
THOMAS R. MARSHALL,

Captain and Assistant Surgeon U. S. Volunteers, Surgeon in Charge; Formerly Adjunct Professor of Anatomy, Medical College of Virginia; Member Medical Society of Virginia, etc.

TABLE showing duration of illness of cases terminating in death, ages under one year, one to ten years ten to twenty years, twenty to forty years and over forty years, with corresponding death rate, percentages and totals.

AGE.	Total Cases.	Before 6 Hours Deaths.	Per Cent.	Before 12 hrs. Deaths.	Per Cent.	Before 18 hrs. Deaths.	Per Cent.	Before 24 hrs. Deaths.	Per Cent.	Over 24 hrs. Deaths.	Per Cent.	Total Deaths	Total Per Cent.
Under 1 year.....	2	2	100	0	00	0	00	0	00	0	00	2	100
One to 10 years.....	14	3	21.42	3	21.42	1	7.10	0	00	3	21.42	10	71.42
Ten to 20 years.....	20	2	10	0	00	4	20	0	00	6	30.	12	60.
Twenty to 40 years.....	115	29	25.21	21	18.26	9	7.82	7	6.08	28	24.33	94	81.73
Over forty years.....	35	7	20	6	17.14	1	2.85	3	8.57	17	48.57	34	97.14
Totals.....	186	43		30		15		10		54		152	

## Proceedings of Societies, Etc.

### MEDICAL EXAMINING BOARD OF VIRGINIA.

The Medical Examining Board of Virginia met in Richmond, Va., at Murphy's Hotel, 9 P. M., June 16, 1902.

Dr. R. W. Martin, president, presiding; Dr. R. S. Martin, secretary and treasurer, recorded. On roll-call the following other members were present: Drs. W. L. Robinson, Danville; E. T. Brady, Abingdon; O. C. Wright, Jarratts; C. W. Rodgers, Staunton; W. B. Robinson, Tappahannock; Samuel Lile, Lynchburg; H. M. Nash, Norfolk; J. E. Warriner, Brook Hill; E. C. Williams, Homeopath, Richmond. Dr. M. R. Allen, Homeopath, of Norfolk, was present during the examinations and rendered valuable assistance.

Minutes of the last meeting were read and adopted.

Dr. R. W. Martin, president, then declared the *old board dissolved, and that reorganization was in order.*

On motion of Dr. Samuel Lile, the secretary, Dr. R. S. Martin, was instructed to cast the ballot of the board for *Dr. R. W. Martin*, Lynchburg, Va., for *President*, and Dr. H. M. Nash, of Norfolk, for *Vice-President*. On motion of Dr. E. T. Brady, Dr. Samuel Lile was instructed to cast the vote of the Board for Dr. R. S. Martin, Stuart, Va., for *Secretary and Treasurer*, and they accordingly were declared elected.

The President appointed the following committees:

*Executive Committee*—Drs. E. T. Brady, Abingdon; H. M. Nash, Norfolk; and R. M. Slaughter, Theological Seminary.

*Legislative Committee*—Drs. J. E. Warriner, Brook Hill; A. S. Priddy, Marion; W. B. Robinson, Tappahannock, Va.; and E. C. Williams, Richmond.

Dr. Samuel Lile introduced the following resolution, which was adopted:

*Resolved*, That the Secretary and Treasurer, Dr. R. S. Martin, and Dr. R. W. Martin, President, be empowered to employ a stenographer and typewriter for such time as they deem it essential, and pay the bill out of the funds of the Board.

The following questions were read and adopted: Anatomy, Physiology, Medical Jurisprudence and Hygiene, Chemistry, Obstetrics and Gyneacology, Materia Medica and Therapeutics, Practice, Surgery, Histology, Pathology and Bacteriology.

The following was the order of the examinations:

*Tuesday*—Anatomy, Surgery, Materia Medica and Therapeutics.

*Wednesday*—Practice, Hygiene and Medical Jurisprudence, Histology, Pathology and Bacteriology.

*Thursday*—Obstetrics and Gyneacology, Chemistry, Physiology.

The by-laws, as codified by Dr. R. M. Slaughter, were adopted, and 200 copies ordered to be printed.

By request of Dr. Fenton B. Turck, of Chicago, Ill., the following resolution was read and adopted:

*Resolved*, That we are in favor of extending the courses in the medical schools of the United States so as to bring about practical teaching of the three subjects: Dietetics, Physico-Mechanical Therapeutics and Hydrotherapy.

Dr. E. T. Brady's resolution as to giving applicants both written and oral examinations, which was introduced at the last meeting of the Board, December 16, 1901, and reads as follows:

*"Resolved*, That each applicant before the Board shall stand an oral examination in addition to the usual written examination," was adopted to apply to the next meeting of the Board, December 15, 1902.

The President appointed Drs. O. C. Wright, J. E. Warriner, Samuel Lile, C. W. Rodgers, W. L. Robinson, and E. T. Brady committee to examine all applicants taking oral examination.

Drs. W. L. Robinson and E. C. Williams were appointed the auditing committee to examine books of the Secretary and Treasurer.

Board adjourned.

Board met for further consideration of business at Murphy's Hotel June 18th, 9 P. M. Dr. R. W. Martin, President, presiding, Dr. R. S. Martin, Secretary, recorded. Present: Drs. A. S. Priddy, J. E. Warriner, E. C. Williams, C. W. Rodgers, O. C. Wright, E. T. Brady.

On motion of Dr. Wright it was decided for the Board to meet in Richmond, Va., December 15, 16, 17, 18, 1902.

The Auditing Committee reported as follows: The Auditing Committee having examined the accounts of the treasurer find the same entirely correct.

E. C. WILLIAMS,  
W. L. ROBINSON.

The President appointed Drs. E. T. Brady, C. W. Rodgers and O. C. Wright a committee to formulate a plan for the *new mode of examination*, and report to the Secretary before the next meeting of the Board.

On motion of Dr. R. S. Martin, Dr. E. T. Brady was appointed a committee to draft resolutions of sympathy for Drs. R. M. Slaughter, Theological Seminary, and Robert Randolph, Boyce, Va., members of our body, detained at home on account of sickness.

Dr. Brady's report, which was adopted, reads as follows:

*Whereas* we have learned with deep regret of the illness of our colleagues, Drs. R. M. Slaughter, Alexandria, Va., and Robert Randolph, Boyce, Va.; therefore,

*Be it resolved*, That we tender them our sympathy in their illness, and hope for their speedy recovery, and that the Secretary is hereby instructed to send Drs. Randolph and Slaughter each a copy of the above resolution, and to spread the same upon the minutes of the Board.

There being no further business, on motion, the Board adjourned.

DR. R. W. MARTIN, President.

R. S. MARTIN, Secretary and Treasurer.

### Questions for Examinations.

#### SECTION ON PRACTICE OF MEDICINE.

Drs. E. T. Brady, Abingdon, Va., Chairman and Regular Examiner; E. C. Williams, Hot Springs, Va., Homeopath Examiner.

*Ques. 1.* Give cause, prognosis, and treatment of infantile spinal paralysis.

*Ques. 2.* A child aged 18 months is brought you. It has been fretful, restless, and averse to nursing or feeding for a week. Its breath is hot and disagreeable, tongue coated, both tongue and cheeks show dark red splotches, on which appear small white spots, some of which seem to be sluggish ulcers. It is this the parents seem most anxious about. Child has occasional nausea, tendency to indigestion, occasional slight diarrhœa, with sour, greenish stools. Some irritation about buttocks. Able to play about and looks bright. Temperature under 99½. No swelling from cutting teeth. State diagnosis, and outline treatment.

*Ques. 3.* Called during August to a patient, aged 45, with following history: First noted loss of appetite for several days, occasional nausea, slightly feverish at times, some diarrhœa. After three days diarrhœa increased, colicky pains about umbilicus were noticed. Constant tenderness and occasional severe pain over region of transverse and descending colon. A burning sensation in rectum and a feeling as if something were there which must be expell-

ed. This sensation not relieved by stool. Stools at first contained some fecal matter, next a grayish, tough, tenacious mucus, streaked with blood; now consist largely of very thin bloody serum, with occasional flakes of membrane, four or more stools per hour, very slight as to quantity, offensive and accompanied by straining. Patient has anxious expression, much prostrated, pulse feeble and rapid, tongue clean, dry and very red, urine scanty and high colored. Give diagnosis.

What medicaments would you prescribe? What non-medicinal remedies? And what would be your general instructions?

*Ques. 4.* A patient aged 50, after several days of scanty urination, following severe exposure or excesses, becomes suddenly chilly, has severe headache, dimness of vision, drowsiness, some nausea. Skin cool, temperature normal or less. Pupils equally but much dilated. Mind rapidly becomes dull. There is no sign of local paralysis. Stupor deepens into coma, with irregular but marked convulsions. Some œdema about ankles. Bladder empty. Respiration becomes sharp and hissing, but not stertorous. No distension of stomach or bowels.

Give diagnosis, prognosis and treatment.

*Ques. 5.* Patient presents himself at office. A book-keeper, aged 40. History good. Says he is not "sick," but "out of sorts," a general feeling of "malaise." Has frequent slight headaches, mild form of vertigo, vision occasionally blurred. Anorexia, and an aversion to food. Has a heavy yellowish coat on tongue. Bad taste on waking. Is constipated. Stools dry and dark. Has feeling of fullness over hepatic region. Hepatic dullness increased. Some sense of oppression in chest. Digestion not perfect, but not annoying. Pulse 65. Temperature normal. Urine scanty and high colored, no albumen. Sleeps well, is rather inclined to sleep too much. Able to

work daily, but mind acts less energetically than usual.

Give diagnosis, probable cause, treatment and advice.

*Ques. 6.* Define and give symptoms, prognosis and treatment of —(a) urticaria; (b) herpes zoster; (c) scabies.

*Ques. 7.* What is acute endocarditis? When is it usually found? Give symptoms and prognosis.

NOTE.—Answer six questions only. Sign by number only. Write briefly, but not too briefly, to render your meaning clear. Number each answer to correspond with number of the question. Sign pledge. After folding, place your number on outside of paper, as well as inside.

#### SECTION ON CHEMISTRY.

Dr. O. C. Wright, Examiner, Jarratts.

*Ques. 1.* (a) Give physical properties of elements.

(b) Into what two classes are elements divided?

(c) Define a metal.

*Ques. 2.* (a) What is dialysis?

(b) What substances are most apt to dialyze and which have no such tendency?

(c) Explain the difference in cohesion and adhesion.

*Ques. 3.* (a) Give chemical and physical properties of nitrogen monoxide and tell for what it is used.

(b) How many distinct compounds of nitrogen and oxygen are known?

(c) Give name and formula of each.

*Ques. 4.* (a) Give the properties of metals.

(b) What is an alloy and what an amalgam?

(c) By what process can metals be obtained from their oxides?

*Ques. 5.* (a) How is manganese found in nature?

(b) Mention the most important compound of manganese found in nature and for what it is used?

(c) Give a reliable chemical test for manganese.

*Ques. 6.* (a) What is glycogen, and where found?

(b) What are glucosides?

(c) How many and what preparations of creosote are sold in the markets?

*Ques. 7.* (a) What are ptomaines?

(b) Into what two classes are they divided?

(c) What are antitoxins?

*Ques. 8. (a)* Give two reliable tests for albumen in urine and what precautions are necessary in making these tests?

*(b)* Of what are urinary calculi generally composed?

*(c)* If given a specimen of fresh alkaline urine, show whether the alkalinity is due to a fixed or volatile alkali.

Answer any six blocks, and only six.  
Pledge.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Dr. W. B. Robinson, Tappahannock, Va.; Dr. J. E. Warriner, Brook Hill, Va.; Dr. E. C. Williams, Homeopath, Richmond, Va., Examiners.

*Ques. 1. (a)* Describe the physiological action of amyl nitrite.

*(b)* What indications show that the physiologic effect of belladonna or its alkaloid has been obtained?

*(c)* What is chlorinated lime and how used?

*Ques. 2. (a)* Compare the physiologic effect of alcohol, strychnia, ammonia, (1) upon the nervous system; (2) the circulatory system; (3) the respiration.

*(b)* Name the official bromides.

*(c)* In what portion of the alimentary canal is quinia most readily absorbed and why?

*Ques. 3. (a)* Describe ergot of rye and give its physiological action.

*(b)* What is the physiologic effect of cocaine on (1) the ocular conjunctiva; (2) the pupil of the eye; (3) the respiration, and how eliminated?

*(c)* Name the principal alkaloids of opium.

*Ques. 4. (a)* Give adult dose of sulphate of copper, creosote, elaterin, phosphorus, physostigma, podophyllum, potassium iodide, strophanthus, stillingia, oil sandal-wood, veratrum viride, zinc sulphate.

*(b)* Name the official preparations of iron.

*(c)* Give physiologic effect of the tincture of the chloride of iron on the kidneys.

*Ques. 5. (a)* Describe the physiological action of phosphorus.

*(b)* Give the antagonists to physostigma in its effect on respiration, heart and pupils.

*(c)* What are the alkaloids of pilocarpus

and how do they differ physiologically?

Answer four only.

SECTION ON THERAPEUTICS.

Dr. J. E. Warriner, Examiner, Brook Hill, Va.  
Dr. E. C. Williams, Homeopath, Richmond, Va.

*Ques. 1. (a)* Give average strengths of hydrochlorate of cocaine required for local anæsthesia, and state how many grains are contained in one ounce of a ten per cent. solution.

*(b)* What is maximum dose of cocaine for hypodermic use?

*(c)* What are the symptoms of acute cocaine poisoning?

*(d)* Give treatment of acute cocaine poisoning.

*Ques. 2. (a)* Name chief coal tar products in use as antipyretics and analgesics.

*(b)* What are the dangers in their use?

*(c)* How may ill effects be prevented and overcome?

*(d)* Give preparations, dose and therapeutic uses of gelsemium.

*Ques. 3. (a)* Describe the therapeutic uses of chloral hydrate.

*(b)* What are the dangers of chloral hydrate, and how does a toxic dose affect the body temperature?

*(c)* What is codeine; give its dose and advantages over morphine?

*(d)* Why is atropine combined with morphine when the latter is administered?

*Ques. 4. (a)* Mention the therapeutic uses of carbolic acid.

*(b)* What are the chemical antidotes for carbolic acid?

*(c)* What is salol? Give its dose and uses.

*(d)* Give the preparations and therapeutic uses of ergot of rye.

*Ques. 5. (a)* In what form is iodine most frequently administered internally, and what is the antidote for free iodine?

*(b)* State the name and the alternative dose of a preparation of mercury capable of producing acute poisoning and give chemical antidote for this preparation.

*(c)* What are the uses of nitro-glycerine in medicine, and by what other names is it known.

*(d)* Give general treatment and write a prescription for habitual constipation.

Answer any four sections, write pledge, and sign number only.

## SECTION ON HYGIENE AND MEDICAL JURISPRUDENCE.

Dr. A. S. Priddy, Examiner, Marion, Va.

*I. Hygiene.*

- Ques. 1.* (a) Define personal, industrial and prison hygiene.  
 (b) Classify the influences of occupation which are prejudicial to health.  
 (c) Briefly state the principal propositions which have been formulated by modern prison reformers for the promotion of health and morals of prisoners.
- Ques. 2.* (a) Describe the physiological effects of physical exercise and their relations to health.  
 (b) What are some of the results of over-exercise?
- Ques. 3.* (a) How are alimentary beverages classified?  
 (b) Name three of the most important of each class, and state the distinctive differences between them.
- Ques. 4.* (a) What is the difference between a contagious and an infectious disease?  
 (b) Give period of incubation of measles, small-pox, diphtheria, typhoid fever, mumps, scarlet fever, whooping-cough, and chicken-pox.

*II. Medical Jurisprudence.*

- Ques. 1.* (a) Define criminal abortion.  
 (b) What circumstances might justify a physician in producing abortion?  
 (c) What precautions should a physician take to justify such a procedure?
- Ques. 2.* (a) Give the common law definition of a legitimate child.  
 (b) Of a bastard.  
 (c) What limit after death of non-access, is fixed by most statutes for legal paternity?
- Ques. 3.* (a) In a careful medical examination for life insurance, to what points should the inquiry be especially directed?

## SECTION ON HISTOLOGY, PATHOLOGY AND BACTERIOLOGY.

Dr. R. M. Slaughter, Theological Seminary, Examiner.

- Ques. 1.* (a) Describe ciliated epithelium and state where it is found.  
 (b) Of what kind of tissue are the glands of Peyer composed?

- Ques. 2.* (a) What the difference between saprophytic and parasitic bacteria?  
 (b) State general influence of sunlight on bacteria.  
 (c) Name and describe the microbe causing gonorrhoea.
- Ques. 3.* (a) Define the term tubercular arthritis.  
 (b) Explain origin and nature of so-called cold abscess.
- Ques. 4.* Describe pathological anatomy of the bowel lesion in enteric fever.
- Ques. 5.* (a) Give macroscopical and microscopical changes in the liver in interstitial hepatitis.  
 (b) Give the nature, usual age of appearance, and most common site of the following tumors: Lipoma, neuroma and carcinoma.

## SECTION ON GYNECOLOGY.

Dr. W. L. Robinson, Danville, Va., Examiner.  
Dr. H. M. Nash, Norfolk.

- Ques. 1.* Diagnose uterine hemorrhage caused by cancer of the fundus, fibroid tumor and ectopic pregnancy. Give indication for operation in latter, and briefly describe the operation.
- Ques. 2.* Give causes and treatment of amenorrhoea, dysmenorrhoea and menorrhagia.
- Ques. 3.* Give chief causes of cystitis. Name two best modes of dealing with calculi in bladder, and describe technique of one.
- Ques. 4.* What are the principal causes of pelvic peritonitis. Detail treatment for same.
- Ques. 5.* What are the chief causes of sterility in the female. How best corrected.
- Answer four of the questions.

## SECTION ON OBSTETRICS AND GYNECOLOGY.

Dr. H. M. Nash, Norfolk, Va., Chairman.  
Dr. W. L. Robinson, Danville, Examiner on Gynecology.  
Dr. M. R. Allen, Homeopath, Norfolk.

- Ques. 1.* Describe the process of a normal parturition L. O. A.
- Ques. 2.* Define dystocia; its most frequent causes, both fetal and maternal.
- Ques. 3.* Describe briefly the most frequent pathological conditions incident to pregnancy.



*Ques. 4.* Why and how should an early diagnosis of the presentation and position be made?

*Ques. 5.* Give the prophylaxis of uterine hemorrhage, post partum.

Answer any four of these questions.

SECTION ON PHYSIOLOGY.

Dr. R. W. Martin, Lynchburg, Va.; Dr. R. S. Martin, Stuart, Va., Examiners.

*Ques. 1.* (a) Define osmosis, dialysis, metabolism, anabolism, katabolism.

(b) Give normal constituents of urine. Amount voided in 24 hours in health.

*Ques. 2.* (a) Name some factors (at least five) which influence gastric digestion.

(b) Give functions of bile. What is the action of ptyalin, trypsin, steapsin?

*Ques. 3.* (a) Describe deglutition.

(b) What are the constituents of normal blood? Describe each briefly. Function of red blood corpuscles and number as compared to white blood corpuscles.

*Ques. 4.* (a) What would be the effect of paralysis of the seventh cranial nerve (portio dura) on right side?

(b) State the function of the anterior and posterior roots of spinal nerves?

*Ques. 5.* (a) Of what does the circulatory apparatus consist?

(b) Describe the so-called portal circulation.

*Ques. 6.* (a) Name the layers of the skin, and state how they can be separated?

(b) Give the functions of the sudoriferous glands, and of the skin.

*Ques. 7.* Name and give the significance of organized deposits in urine?

*Ques. 8.* Give the functions of nerve cells and centres.

Answer any six, and six only.

SECTION ON ANATOMY.

Dr. C. W. Rodgers, Staunton, Va., Examiner.

*Ques. 1.* (a) With what bones does the superior maxillary articulate?

(b) Describe the acromion process of the scapula.

*Ques. 2.* Give location, structure, and relations of the œsophagus.

*Ques. 3.* Give the origin and insertion of the muscles of the anterior humeral region.

*Ques. 4.* (a) Give the relations of the femoral artery.

(b) Name the branches of the internal carotid artery.

*Ques. 5.* Locate (a) the fissure of Sylvius.

(b) Fissure of Rolando.

(c) Island of Reil.

*Ques. 6.* (a) What nerves unite to form the sacral plexus?

(b) What are the branches of the plexus?

*Ques. 7.* Describe the mammary gland of the female.

*Ques. 8.* (a) Name the lobes and ligaments of the liver.

(b) Locate the gall bladder.

SECTION ON SURGERY.

Dr. Samuel Lile, Lynchburg, Va., Examiner.

Dr. M. R. Allen, Norfolk, Va., Homeopath.

*Ques. 1.* (a) What is meant by healing by first and second intention? Describe the processes.

(b) What is aseptic fever, and in what cases does it usually occur?

(c) What is secondary wound fever? Give causes.

*Ques. 2.* (a) Define carbuncle and give treatment.

(b) What is rachitis, orchitis, meningitis and papilloma?

(c) What are the four most common causes of buboes? Differentiate them.

(c) What are the four common causes of buboes? Differentiate them.

*Ques. 3.* (a) Differentiate tubercular osteomyelitis from the syphilitic form.

(b) Give difference between a compound and a compound-comminuted fracture, and give treatment for both.

(c) Describe in detail the diagnosis and treatment of fracture of the femur in its middle third.

*Ques. 4.* (a) Give treatment of penetrating wounds of joints.

(b) What is ankylosis? Give treatment.

(c) Diagnose and treat a dislocation backwards of the hip joint.

(d) Give causes, diagnosis, prognosis and treatment of Pott's disease in the early stages.

*Ques. 5.* (a) What is a burn of the first, second and third degree? Define minutely.

(b) Name the different forms of intestinal obstruction. Give diagnosis and treatment.

- Ques. 6. (a) Describe two operations for hemorrhoids (ligations and cauterly).  
 (b) What is nephrography, nephrectomy, and nephro-lithotomy?

- King, David J., Williamsburg, Va., Buffalo Univ., N. Y., 1900.  
 Litchfield, G. V., Jr., Abingdon, Va., Johns Hopkins Univ., 1902.  
 Leake, J. J., Francisco, N. C., Univ. Col. of Med., 1901.  
 Lyell, R. O., Baltimore, Md., Univ. of Maryland, 1902.  
 Mears, John B., Jersey City, N. J., Univ. of Va., 1901.  
 Mallory, H. C., Richmond, Va., Phys. and Surg., Atlanta, Ga., 1902.  
 McClung, O. H., Fairfield, Va., Univ. of Va., 1902.  
 Mallett, E. P., Virginia Beach, Long Island Med. Col., 1889.  
 Morris, Garland L., Richmond, Va., Univ. Col. of Medicine, 1902.  
 Miller, C. E., Osceola, Va., Univ. of South, 1901.  
 Morton, J. T., Keysville, Va., Univ. of Georgia, 1900.  
 Noe, Wm. G., Atlantic City, N. J., Univ. of South, 1902.  
 Nelson, Lockhart, Norfolk, Va., Med. Col. of Ohio, 1890.  
 Nixon, E. J., Petersburg, Va., Univ. of Maryland, 1899.  
 Pinkerton, W. A., Coveseville, Va., Univ. of Va., 1900.  
 Pippin, H. L., Richmond, Va., Univ. Col. of Med., 1902.  
 Preston, B. S., Glade Hill, Va., Phys. and Surg., Baltimore, 1902.  
 Parker, T. A., Bon Air, Va., Univ. Col. of Med., 1899.  
 Quaintance, R. W., Richmond, Va., Univ. Col. of Med., 1901.  
 Robertson, Joseph A., Hot Springs, Va., Univ. of Texas, 1898.  
 Randolph, H. W., Richmond, Va., Univ. Col. of Med., 1902.  
 Rucker, T. E., Richmond, Va., Med. Col. of Va., 1902.  
 Strite, Clarence E., Hagerstown, Md., Baltimore Medical Col., 1902.  
 Scott, P. A., Newport News, Va., Howard Univ., 1901.  
 Stokes, Chas. H., Hayes Store, Va., Howard Univ., 1901.  
 Shields, R. T., Blackwell's Island, N. Y., Univ. Col. of Medicine, 1902.  
 Smiley, W. Macon, Richmond, Va., Med. Col. of Va., 1902.  
 Sandidge, E., Richmond, Va., Med. Col. of Va., 1902.  
 Talbott, R. S., Richmond, Va., Med. Col. of Va., 1902.  
 Trout, H. H., Staunton, Va., Univ. of Va., 1902.  
 Wolfe, Joseph R., Jr., Coburn, Va., Louisville Med. Col., 1891.  
 White, Wm. Henry L., Norfolk, Va., Univ. of Va., 1900.  
 Will, David Q., Moore's Store, Va., Md. Med. Col., 1902.  
 Wright, T. H., Jr., Portsmouth, Va., Univ. of Va., 1902.  
 Wilder, Chas. E., Richmond, Va., Leonard Med. Col., 1901.  
 Wood, H. Walton, Baltimore, Md., Univ. of Md., 1902.

ALPHABETICALLY ARRANGED LIST OF APPLICANTS FOR LICENSE TO PRACTICE MEDICINE, SURGERY, ETC., WHO PASSED SATISFACTORY EXAMINATIONS BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA DURING ITS SESSION JUNE 16-19, 1902, HELD AT RICHMOND, VA.

- Abbit, Jas. B., West Appomattox, Va., medical Col. of Va., 1901.  
 Anderson, Maury, Marmion, Va., Univ. of South, 1901.  
 Ardan, N. I., Richmond, Va., Univ. Col. of Med., 1902.  
 Black, A. S., Collierstown, Va., Med. Col. of Va., 1902.  
 Ball, Jau Don, Bedford City, Va., Univ. of Va., 1902.  
 Burkholder, A. J., Staunton, Va., Balt. Univ., 1902.  
 Booker, R. E., Farnham, Va., Univ. of Maryland, 1902.  
 Butts, C. S., Dayton, Va., Univ. of New York, 1889.  
 Bowen, Wm. D., Washington, N. C., Phys. and Surg., Baltimore, 1893.  
 Cauthen, R. Sydney, Kershaw, S. C., Baltimore Med. Col., 1902.  
 Carter, Henry R., Ashland, Va., Univ. Col. of Medicine, 1897.  
 Costenbader, Frank L., Richmond, Va., Univ. Col. of Medicine, 1902.  
 Collier, Geo. Kirby, Wilmington, N. C., Phys. and Surg., Baltimore, 1900.  
 Dickerson, L. C., Staunton, Va., Univ. of South, 1901.  
 Dabney, Virginius, Trapp, Va., Univ. of Va., 1902.  
 Dicks, Jas. L., Walkertown, N. C., Univ. Col. of Medicine, 1901.  
 Evans, Wm., Norfolk, Va., Phys. and Surg., N. Y., 1890.  
 Ellett, Andrew S., Christiansburg, Va., Univ. of South, 1901.  
 Frazer, J. D., Za, Va., Univ. Col. of Medicine, 1902.  
 Flegenheimer, Wm., Richmond, Va., Med. Col. of Va., 1902.  
 Green, Alpheus, Berkley, Va., Shaw Univ., 1902.  
 Gwin, J. M., Richmond, Va., Med. Col. of Va., 1902.  
 Gamble, Robert A., Petersburg, Va., Phys. and Surgs., St. Louis, 1896.  
 Graham, Jas. M., Floyd, Va., Maryland Med. Col., 1902.  
 Hackley, J. D., Purcellville, Va., Univ. of South, 1902.  
 Herbert, E. M., Hodge Ferry, Va., Phys. and Surg., Atlanta, Ga., 1902.  
 Jones, May F., Columbus, Miss., Woman's Med. Col., Baltimore, 1897.

Nos. of examination papers.	LIST OF INSTITUTIONS Whose Graduates were Rejected by the Medical Examining Board of Va., at its Regular Spring Meeting, June 16-19, 1902, With Percentage Marks of each.	Hygiene and Med. Jurisprudence.	Chemistry.	Anatomy.	Physiology.	Histology, Pathology, Bacteriology.	Obstetrics and Gynecology.	Materia Medica and Therapeutics.	Practice.	Surgery.	Total.	Average Percentage.
4	Medical College of Virginia.....	85	70	93	60	70	61%	75%	73	60	64%	72+
6	University College of Medicine.....	58	73	80	72	73	72%	73%	80	50	64%	72+
10	Baltimore Medical College.....	31	40	68	60	65	68	31	65	75	503	56+
13	Leonard Medical College.....	86	60	60	75	73	51	72	70	50	597	66+
18	Leonard Medical College.....	80	65	72	60	80	41%	48%	90	70	667	67+
19	Leonard Medical College.....	80	70	76	75	70	57	71	88	60	647	71+
43	Physicians and Surgeons, Atlanta, Ga.....	82	67	68	62	70	74	60	77	30	680	64+
72	Baltimore Medical College.....	75	70	56	46	67	61	69	75	50	569	63+
73	Leonard Medical College.....	84	90	61	78	79	64	64%	70	45	635%	70+
75	Howard Medical College.....	42	0	30	20	0	30	42	30	20	214	24
76	Leonard Medical College.....	82	67	68	62	70	74	60	77	30	680	64+
78	University of Virginia.....	82	75	72	60	90	58%	63%	75	70	640%	71+
95	University College of Medicine.....	95	80	76	65	50	71%	67%	70	65	640	71+
127	Medical College of South Carolina.....	88	75	83	75	80	76	69%	69	50	655%	72+
136	University of the South.....	75	87	29	75	96	0	77%	86	30	555%	61+
140	Baltimore University.....	78	50	45	60	60	62%	62%	76	40	382	39+
156	University of the South.....	75	75	70	75	70	75	80	60	60	650	72+

INSTITUTIONS REPRESENTED BY APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, SPRING SESSION AT RICHMOND, VA., June 16-19, 1902.	Total Number of Applicants from each College.	Total Number of Applicants Licensed from each College.	Total Number of Applicants Rejected from each College.	Partial Examination	Withdrew.	Incomplete.
Medical College of Virginia.....	9	8	1			
University of Virginia.....	9	8	1			
University College of Medicine.....	14	12	2			
University of Maryland.....	5	4	1		1	
Baltimore University.....	4	2	2			
Baltimore Medical College.....	2	2				
Maryland Medical College.....	1	1				
Woman's Medical College, Baltimore.....	3	2	1			
College of Physicians and Surgeons, Atlanta.....	1	2	1			
College of Physicians and Surgeons, New York.....	3	3				
College of Physicians and Surgeons, St. Louis.....	1	1				
University of the South.....	8	6	2			
Leonard Medical College.....	6	5	1			
Howard University.....	2	2				
Howard Medical College.....	1	1				
Shaw University.....	1					
Louisville Medical College.....	1	1				
University of Louisville.....	1	1				
Buffalo University, New York.....	1	1				
Long Island Medical.....	1	1				
Medical College of South Carolina.....	1		1			
University of Georgia.....	1	1				
University of New York.....	1	1				
Johns Hopkins University.....	1	1				
Medical College of Ohio.....	1	1				
University of Texas.....	1					
Non-Graduates taking partial examination.....	89			88		1
Total.....	171	63	18	88	1	1

INSTITUTIONS REPRESENTED BY THE APPLICANTS BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, FROM THE ORGANIZATION OF THE BOARD, JANUARY 1, 1885, TO JUNE 16-19, 1902.	Total Number from each Institution.	Total Number Licensed First Examination.	Total Number Rejected First Examination.	Licensed on Second Examination.	Rejected Second Examination.	Licensed Third Examination.	Rejected Third Examination.	Licensed Fourth Examination.	Rejected Fourth Examination.	Licensed Examination.	Rejected Fifth Examination.	Incomplete or Withdrew.	Partial Examination.
Total number before Board from organization to June 25-28, 1900.	1641	1187	426	85	60	18	21	2	21	1		30	18
Medical College of Virginia.....	44	22	6	16	2	1							
University of Virginia.....	34	21	2	10	1								
University College of Medicine.....	51	37	9	13	1								
College of Physicians and Surgeons, Baltimore.....	8	7				1							
College of Physicians and Surgeons, New York.....	4	4											
College of Physicians and Surgeons, Atlanta, Ga.....	4	1	2	2									
University of Maryland.....	16	12	1	2									
Baltimore University.....	5	2	3										
Maryland Medical College.....	8	3	3	2									
Woman's Medical College of Philadelphia.....	1	1											
Woman's Medical College of Baltimore.....	1	1											
Jefferson Medical College.....	15	4	1	7		2							
University of the South.....	17	10	7	2	1								
Leonard Medical College.....	8	5	3										
Howard Medical College.....	8	5	3										
Medical College of South Carolina.....	2	1	1										
Tennessee Medical College.....	1	1											
Vanderbilt's University.....	1	1	1		1	1							
Baltimore Medical College.....	4	2	3										
Georgetown College, Washington, D. C.....	1	1											
Columbian University, D. C.....	1	1											
Hospital College of Medicine, Louisville.....	1	1											
University of Louisville, Medical Department.....	1	1	1										
Howard University, Medical Department, District of Columbia.....	2	2	1										
University of New York.....	2	2											
University of Georgia.....	2	1	1			1							
University of Pennsylvania.....	2	2											
Louisville Medical College.....	1	1	1										
Johns Hopkins University.....	1	1	1										
Medical College of Ohio.....	1	1	1										
Shaw University.....	1	1											
Buffalo University, New York.....	1	1											
Long Island Medical College.....	1	1											
University of Texas.....	1	1											
Physicians and Surgeons, St. Louis.....	1	1											
College Unknown.....	1	1											
Non-Graduates taking partial examination.....	152											1	151
Total.....	3040	1307	482	143	65	26	24	2	21	1		\$2	174

## Analyses, Selections, Etc.

### Why the Restriction of Consumption is Retarded.

At the annual meeting of the Michigan State Board of Health, May 15, 1902, Hon. Frank Wells, in his presidential address, made some remarks which we would be glad to have read by every doctor and heeded by him. Among other things, he said:

"A century ago, Jenner discovered how small-pox could be prevented, and to-day it causes fewer deaths in a year throughout the world than consumption does every day. Twenty year ago Koch discovered the germ of tuberculosis and gave us the key to the prevention of this disease which causes more deaths than any other. What vaccination has done for the restriction of small-pox, the destruction of the sputum of those ill with consumption has done and is doing for the restriction of that disease.

"In both of these diseases obstructionists have endeavored to discredit and prevent the application of the measures which science and experience have shown most efficient for their restriction. Had vaccination and revaccination been general, there would not have been the present recrudescence of small-pox. Yet there exist those who, notwithstanding the fact that small-pox had been substantially made to disappear by means of vaccination, still object to the application of it as a preventive measure.

"There also exists those who, notwithstanding the fact that consumption is diminishing, refuse to co-operate in the only means for checking the progress of this disease, which experience has shown to be efficient. \* \* \* All that is required is that health authorities be furnished with the names and places of abode of persons suffering from consumption, in order that they may supply those victims with information of how they can best care for themselves and avoid infecting their families and friends with the disease.

"The knowledge of the names and habitations of consumptives is largely held by physicians. Some report this knowledge to the proper health officials, while many do not. Those who fail are avoiding both moral and legal responsibilities, and should realize that it is their inaction which is retarding the restriction and the eventual eradication of this disease, more than probably all other causes combined."

### Skin Grafting, in Blood.

Dr. C. W. Price, of Richmond, Me., has healed some very large, deep tubercular ulcers with bovine, and remarks that "as a dressing in old chronic leg ulcers, it has no peer." Such experience led Dr. T. J. Briggs, of Sound View Hospital, Stamford, Conn., to test it in skin grafting, and he reports several cases—some of which are of practical interest to the every-day doctor. An Irish woman, 60 years of age, had a large varicose ulcer over the tibia, which had existed nine years. Three times had it been skin grafted in the old way unsuccessfully. She entered hospital March 3, 1902, suffering severe pain. After regulation of the secretions, the ulcer was cleaned with a dermal curette and dressed for 24 hours with Thiersch pack. Then, the surface being thoroughly clean, a bovine-pure pack was applied and kept wet for 24 hours with bovine. Then he secured grafts from a callus on the small toe, which callus was thoroughly scrubbed, and the external layers scraped off. Then sections of the layers next to the true skin were secured with a very keen razor. Nine of these were deposited on the ulcerous surface, which measured  $3\frac{1}{2}$  by 2 inches. Over these were laid strips of perforated rubber tissue; then strips of plain bi-sterilized gauze saturated in bovine, and a bandage applied, and the dressings were kept wet with bovine pure for a week. Then the dressings were removed, when it was found that eight of the nine grafts were firmly adhesive and in a healthy growing condition; the ninth graft had become displaced and was removed. The wound was now dressed with bovine pure—the dressings being kept wet, and changed once a day. From the outset of the case a wineglassful of bovine in milk alternating with wine and beer every three hours, was administered. A week later, the patient was discharged cured—new healthy skin covering the entire surface. A point of interest in this case, and a usual one, is that from the day of the first dressing of the bovine up to the time the patient was discharged, she was relieved of all pain.

### Medical Examination in Cases of Rape.

The investigation of alleged cases of rape is among the most difficult and responsible with which the medico-legalist has to deal. Dr. Arthur Powell, the police-surgeon of Bombay, in a recent paper on this subject in the *Indian Medi-*

*cal Gazette* for June, offers many practical suggestions. He shows that an important point not mentioned in the text-books refers to the presence of smegma. If the glans be covered with a uniform layer of smegma the possibility of recent complete penetration is negated. He also insists that too much weight is usually given to the presence of semen on the clothes or person of the accused. The police should have instructions never to allow one accused of a sexual offence to wash his person or retire to a water-closet on any pretext before the surgeon has made his examination. Dr. Powell also shows that unfortunately in India, as in Europe, the superstition prevails that intercourse with a virgin is a certain cure for venereal disease.—*Med. Press and Circular*, July 23, 1902.

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## Book Notices.

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**Manual of Childbed Nursing.** With Notes on Infant Feeding. By CHARLES JEWETT, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. New York: E. B. TREAT & COMPANY, 241-243 West 23d street. 1902. Cloth. 12mo. Pp. 84. Price, 80 cents.

It is stated in the preface that this manual was originally prepared for the Training School for Nurses at the Long Island College Hospital. It was subsequently rewritten and adapted to general use. The object has been to help the trained nurse to remember the important practical teachings of hospital training. The book is intended not only for professional nurses, but also for mothers and others interested in obstetrics. There are many items of interest in this attractive little manual, and we believe it contains much which would be of profit to the doctor.

**Manual of Instruction in the Principles of Prompt Aid to the Injured.** *Designed for Military and Civil Use.* By ALVAH H. DOTY, M. D., Health Officer of the Port of New York; Late Attending Surgeon to Bellevue Hospital Dispensary, New York, etc. *Fourth Edition, Revised and Enlarged.* New York: D. Appleton & Co. 1902. Cloth. 12mo. Pp. 302.

Since 1889, when the first edition of this book was issued, it has been recognized as the

essential text-book for emergencies; so that every doctor should have a copy. Each edition is brought up to date—so far as the size and purpose would permit. All questions of theory are eliminated. What is the matter? and what is to be done in the emergency? are the two essential questions considered in the volume. It includes a chapter on "Hygiene and the Drill Regulations for the Hospital Corps, U. S. A." This fourth edition contains many changes and additions in keeping with the advanced state of medical and surgical practice. The chapter on disinfection has been entirely rewritten, in harmony with the results obtained by recent scientific investigations in that direction. The illustrations are all very practical—poisons and their antidotes, resuscitation of the apparently drowned or suffocated, etc., are all practically dealt with. It is an excellent book for every doctor.

**International Clinics.**—A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia, U. S. A. With the Collaboration of JOHN B. MURPHY, M. D., of Chicago; ALEXANDER D. BLACKADER, M. D., of Montreal; H. C. WOOD, M. D., of Philadelphia; T. M. ROTCH, M. D., of Boston; E. LANDOLT, M. D., of Paris; THOMAS G. MORTON, M. D., of Philadelphia; CHARLES H. REED, M. D., of Philadelphia; J. W. BALLANTYNE, M. D., of Edinburgh; and JOHN HAROLD, M. D., of London; With Regular Correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume IV. Eleventh Series. 1902. Philadelphia: J. B. LIPPINCOTT COMPANY. 1902. Cloth. Svo. Price, \$2.00.

This volume is the last of four—completing the eleventh series. The subjects included cover the entire field of medicine and surgery, and their allied branches, and give the latest views by the best authors. The eleventh series of four books has 1,221 pages, 110 articles, and 259 illustrations in colors and black and white.

The fourth volume contains 107 illustrations, 34 special formulæ, a table on infant feeding from one week to three years, and is written by 36 authors, the majority being widely known American teachers of the highest rank. Among the number are to be noted Drs. Norman

Bridge, Charles H. Burnett, Thomas D. Coleman, John B. Deaver, Wm. S. Gottheil, J. P. Crozer Griffith, A. Jacobi, J. Frank Lydston, John H. Musser, Frederick A. Packard, Nicholas Senn, Alfred Stengle, John Madison Taylor, and James J. Walsh.

The publishers claim that the books could not be sold at the price, \$2 per volume, but for the fact that many thousands are called for. There is no doubt but what they have a nice work, and a regular subscription to the series as they are issued would keep any doctor's library pretty well up-to-date.

**Practical Medicine Series of Year Books, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly.** Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Post Graduate Medical School. Vol. V. *Obstetrics*. Edited by REUBEN PETERSON, A. B., M. D., Professor of Obstetrics and Gynecology, University of Michigan, and HENRY P. LEWIS, A. B., M. D., Instructor in Obstetrics and Gynecology in Rush Medical College. April, 1902. Chicago: The Year Book, Publishers. Cloth. 12mo. Pp. 233. Price, \$1.25. Price of the Series of 10 Volumes during the year, \$7.50.

This Practical Medicine Series is well designed—the ten volumes of about 200 pages or more each being intended to cover the whole field of medicine. The present volume, like its predecessors, is thoroughly practical and up-to-date, and deals with the technique in a masterly way. There is very little of debatable matter in the book—for facts rather than theories are the bases of the work. The Series is intended rather as a systematic work for the practitioner, rather than as a student's text-book, unless he is a post-graduate.

**Diseases of Women. A Manual of Gynecology Designed Especially for the Use of Students and General Practitioners.** By F. H. DAVENPORT, A. B., M. D., Assistant Professor in Gynecology, Harvard Medical School. Fourth Edition, Revised and Enlarged. With 154 Illustrations. LEA BROTHERS & CO., Philadelphia and New York. 1902. Cloth. 12mo. Pp. 405. Price, \$1.75.

This is one of those convenient sized books which is intended should be ever near at hand for constant hasty reference for practical gynecological practice. It is not expected to take the place of the larger books on the subject, but tries to point out in as few words as possible—

not as a syllabus, but as regular easy reading matter—the chief etiology, symptomatology, diagnosis, treatment, etc., of the various common diseases of the female pelvic organs, together with a chapter on anatomy, and another on methods of examination. In this edition, as was the case also with the last (third) edition, the surgical features of gynecological diseases are included, and the volume is now considerably larger than formerly. Changes necessary to represent the latest views have been made, though unsettled theories are excluded. The illustrations are good, and sufficiently numerous to make plain the text.

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## Editorial.

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### Medical Society of Virginia.

The Thirty-Third annual session of the Medical Society of Virginia will convene at Newport News, Va., at 8 P. M., Tuesday, September 23, 1902. The *Annual Address to the Public and Profession* will be delivered by Dr. Robert Lee Payne, of Norfolk. This will be followed by the *Address of the President*, Dr. Richard S. Martin, of Stuart. After the *Report of the Committee on Nominations of Applicants for Fellowship*, Dr. Wm. D. Turner, Fergusson's Wharf, chairman, has been acted on, the *Annual Report of Officers and Committees* will be presented and disposed of—after which *business of a general character* may be introduced. At 10 A. M. of the *Second Day*, Fellows may make five minute reports of cases in practice of unusual interest, or of cases about which they may wish to receive advice as to diagnosis, treatment, etc. At 11 A. M. "the subject for general discussion"—*Puerperal Eclampsia*—will be called, Honorary Fellow, Dr. Herbert M. Nash, Norfolk, Va., *Leader*. Dr. Greer Baughman, Richmond, Va., will follow with *Remarks on the Pathology of Eclampsia, with Microscopic Illustrations*. If no other papers on the subject are announced before August 19th, a general discussion will follow—with concluding remarks by the *Leader*.

Up to the time of going to press about twenty papers have been promised for this session—some of them being by authors of experience and

recognized ability in their special fields of practice. All titles of papers must be in the hands of the Recording Secretary, Dr. Landon B. Edwards, Richmond, Va., by August 18th, to insure their proper appearance in the programme of the session, to be issued about August 25, 1902.

Beside the addresses and papers above referred to by Drs. Payne and Nash, of Norfolk, R. S. Martin, of Stuart, Va., and Baughman, of Richmond, the following is an alphabetically arranged list of other authors of promised papers, received to date:

Drs. Boshier, Lewis C., Richmond.  
 Claiborne, J. Herbert, Petersburg.  
 Henning, Thomas S., Winterpock.  
 Davidson, J. P., Richmond.  
 Henson, J. W., Richmond.  
 Hodges, J. Allison, Richmond.  
 Johnston, George Ben., Richmond.  
 Jones, Clarence Porter, Newport News.  
 Leigh, Southgate, Norfolk.  
 Lynch, Junius F., Norfolk.  
 Lyne, Wm. H., Somerset.  
 McGuire, Stuart, Richmond.  
 Stoakley, Wm. S., Cheriton.  
 Tompkins, C., Richmond.  
 Vaughan, Geo. Tully, Washington, D. C.

In addition, Dr. Edwin S. Ricketts, of Cincinnati, Ohio, Dr. E. W. Saunders, St. Louis, Mo., and Dr. Terry M. Townsend, of New York, N. Y., have favorably responded to invitations to be present and read papers.

The railroads, etc., are very generously responding to the request for the usual Convention reduction of rates, which will be announced in detail in the programme. The profession of Newport News is bending every effort to the proper entertainment of visiting doctors and their ladies. Arrangements are being made for attractive pharmaceutical and surgical appliance displays, etc. The number of applicants for Fellowship is unusually large so far in advance of the session, and every indication is that the attendance will be about the largest ever had. The outflow of doctors from Richmond, Petersburg, Norfolk and Portsmouth, added to those resident in and about Newport News, alone will make a large attendance; but there will be a large attendance also of members from other cities and towns and counties.

A matter of very general interest to be acted on is the *proposed Revision of the Code of Ethics* of the American Medical Association. A

copy of this Revised Code—to be finally acted on during the session of the American Medical Association to be held in New Orleans during May, 1903, was published in the June 27, 1902, issue of the *Virginia Medical Semi-Monthly*, page 138 *et seq.* As the Medical Society of Virginia is about the first of the State Medical Societies to meet since the adjournment of the Saratoga Springs session of the American Medical Association last June, it is probable that this will be a most important matter for consideration. To read it aright, to find the important changes, one should read the proposed revision in parallel with the Code still existing—copies of which latter can be had of the publishers of the *Journal of the American Medical Association*, Chicago, Ill., for a few cents each.

Some points in the proposed Revision of the Code are so adroitly worded as to leave loopholes for general misunderstanding. We call attention especially to Chapter II, Article IV, section 2, wherein it states that "any physician having a license to practice medicine conferred by a medical board *authorized by the State* may be aided in consultation." The adoption of such a clause destroys every tenet of our fathers with reference to consultations with irregulars and sectarian schools of practitioners, such as "homeopaths," "eclectics," etc., and we may even include a number of other irregulars in this category—such as "osteopaths," "Christian Scientists," etc., for we understand that some States give permits or licenses to such fakes or fakirs to practice their curious professions as if they were special schools of medicine.

An adroit wording of the sentence above quoted permits those of the regular school to respond to summons from the so-called "irregular" practitioners; but we are told that it does not permit the regular practitioner to call the "homeopath," or the "eclectic," etc., into consultation. On the contrary, we have been told that it would be "highly reprehensible" under the Revised Code for the regular practitioner to call into consultation one of an irregular school of practice. No question of social or race equality is to be considered in this proposition; it is one of *professional* equality. Whatever may be their State or National rights or their social relationships as citizens, how is it possible for the Jew, the Catholic and the Protestant to enter into profitable consultation with reference to the doctrines of their special tenets of religion? And yet none gainsay the equal State or Na-

tional rights of each Church to promulgate its own doctrines—however exclusive one or the other may be. Citizens must choose for themselves which religion they will adopt.

And, so as citizens, we are perfectly willing to concede to homeopaths, to eclectics, etc., the rights and privileges to practice medicine according to their own ideas of therapeutics—provided they show proper proficiency with regard to all the other branches of medicine—concerning which there is a common recognition of the facts of scientific research or experience. When the homeopath renounces his adherence to the doctrines of *similia similibus curantur* and of infinitesimal dosage, and of directing remedies solely to the relief of symptoms as the principles of practice, he renounces practically all that separates him from classification with scientific or so-called regular practitioners. And if he practices without regard to the tenets of his school, he is practicing a deception upon his profession and the public; and how dwelleth the love of the regular profession in him?

Then, again, we are told in the likewise adroitly worded succeeding section 3, of the same Article IV, "No physician who indicates to the public that his practice is based on a sectarian system of medicine shall be entitled to professional fellowship, or to recognition in medical bodies." At first blush, this clause would appear as if it "paralyzed" the sentence of the second section wherein it states, as already quoted, "any physician having a license to practice medicine conferred by a medical board authorized by the State may be aided in consultation." There is a very evident ambiguity in the clauses. What is "professional fellowship" if the homeopath may be "aided in consultation," and yet not be admitted "to recognition in medical bodies?"

It has been stated that this clause does not apply to certain specialists and even to surgeons of the regular profession. We have been boldly told that some surgeons of our State Society knowingly hold consultations with homeopathic physicians—although they live in communities where professed specialists and surgeons adhering to the homeopathic school are resident. Such surgeons of the regular school are still living under the old Code of Ethics, and are amenable to it, for the Revised Code has not yet been adopted.

There are at least two phases of the subject to be considered. In the first place, for the

regular practitioner of medicine or surgery to "aid" the homeopath or eclectic or other irregular in consultation under the provisions of the second section without giving the "regular" the privilege of inviting the homeopath or eclectic, or what not, into consultation is a professional discourtesy that should not be tolerated by medical legislation. It should be either "give and take," or else neither give nor take. In the second place, if special privileges are allowed to surgeons and specialists of the regular school, do not hew out the great bulk of the regular school of *physicians* from such equal privileges. Otherwise we will soon have a disrupted profession of surgeons and specialists, on the one side, and of physicians on the other.

The "regular" or "scientific" or "rational physician," as he is recognized, has the privilege, as we understand it, of using any agent in any dose which either reason or experience or observation has shown to be ameliorative of suffering or curative of disease—whether the remedy is vegetable or mineral or gaseous or even mental impression, intended to allay apprehension and to inspire confidence. Hence he may at times adopt what are known as homeopathic or eclectic medicines in doses peculiar to these schools. But the consistent so-called "irregular" is limited to the tenets of his creed. How can there be a cordial consultation between practitioners of such different schools under ordinary circumstances?

There can be no construction of personal animosities in what we have written. On the contrary, some of our warmest personal friends may be involved in the violations of the present Code to which we have referred. Our partial discussion of the subject has reference alone to the general good of the profession, as we understand it; and as a matter which is first to come up for decision by the Medical Society of Virginia, as to how it shall instruct its representatives to the next House of Delegates of the American Medical Association to vote on the issue.

Nor is there anything in our intention to interfere with the instincts of humanity in cases of emergency where immediate help is needed—without an opportunity for the homeopath or eclectic, etc., to call in one of his own school of practice in consultation, or *vice versa*.

#### Proposed Constitution and By-Laws for County Medical Societies.

During the session of the American Medical



Association, June, 1902, the committee, composed of Drs. J. N. McCormack, P. Maxwell Forshay and Geo. H. Simmons, was continued, with instructions to prepare a Constitution and By-Laws for County Societies in conformity with, and in continuation of the general plan of organization already adopted for the American Medical Association, and for the State Medical Societies. While the provisions contained in the proposed constitution are deemed essential to good organization, some of the provisions contained in the by-laws are only suggestive and educational in character, and may not be applicable to every county or section of the United States. In such cases, these may be omitted, or others more appropriate substituted for them. In any event, the high ideals for the individual physician, and the spirit of courtesy and kindness which should govern him in his dealings with his professional neighbors, as here set forth, are commended for thoughtful consideration.

From various quarters, we have received requests for a form of Constitution and By-Laws for local or county Societies. Hence the appropriateness of publishing the following in full, as emanating authoritatively from the Committee of the American Medical Association. Under the provisions of the reorganization, it will be seen that the doctors of various counties must organize themselves into County Societies, and must keep themselves in communication with their State Associations or Societies. Thus far, only about a half dozen counties of Virginia—including the Richmond Academy of Medicine and Surgery—have organized themselves as parts of the State Society. And while this is all right as to the composition of the meeting to be held at Newport News, Va., September 23, 24, 25, 1902, after that the physicians of every county in the State must have these organizations in order to have a direct recognition by the State Society or by the American Medical Association.

#### CONSTITUTION.

##### *Article I.—Name and Title of the Society.*

The name and title of this organization shall be the ——— County Medical Society.

##### *Article II.—Purposes of the Society.*

The purposes of this Society shall be to bring into one organization the physicians of this county; and by frequent meetings and full and frank interchange of views to secure such intel-

ligent unity and harmony in every phase of their labor as will elevate and effectuate the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that it may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it; and with other county societies to form the ——— State Medical Association, and through it, with other State Associations, to form and maintain the American Medical Association.

##### *Article III.—Composition.*

Every physician residing and practicing in ——— and legally registering as such, and who is in good professional standing, shall be eligible for membership.

##### *Article IV.—Meetings.*

Regular meetings shall be held monthly (or oftener) at such time and place as may be determined by the Society.

##### *Article V.—Officers.*

The officers of this Society shall consist of a President, Vice-President, Secretary, Treasurer and Delegates. These officers, except the Delegates, who shall be elected for two years, shall be elected annually for a term of one year, and until their successors are elected and installed.

##### *Article VI.—Funds and Expenses.*

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contribution. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

##### *Article VII.—Charter.*

The Society shall apply to the State Association for a charter at the meeting at which this constitution and by-laws are adopted, or as soon thereafter as practicable, and the charter shall be kept in the custody of the secretary.

##### *Article VIII.—Trustees and Incorporation.*

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem the same necessary.

##### *Article IX.—Amendments.*

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such

amendment shall have been read in open session at two previous regular meetings and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY-LAWS.

*Chapter I.—Membership.*

Section 1. The Society shall judge of the qualification of its members, but, as it is the only door to the State Medical Association and to the American Medical Association for physicians within its jurisdiction, every reputable and legally qualified physician in \_\_\_\_\_ county who is practicing or who will agree to practice non-sectarian medicine shall be entitled to membership.

Sec. 2. Applications for membership shall be made in such form as may be provided, and all elections for membership shall be by open ballot or by yea and nay vote, and a four-fifths majority of those present shall be necessary for an election.

Sec. 3. Any physician in the county who may feel aggrieved by the action of the Society in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council of the State Association.

Sec. 4. Any physician living near the county line, or for other reasons satisfactory to this Society, or upon the decision of the Council of the State Association, upon appeal, may hold his membership in another county society.

Sec. 5. When a member in good standing moves to another county in this or some other State, he shall be entitled to a transfer card to the society into whose jurisdiction he moves, without expense, upon payment of his dues to the date of his removal from this county.

Sec. 6. All members shall be equally privileged to attend all meetings and take part in all proceedings, and shall be eligible to any office or honor within the gift of the Society, so long as they conform to this constitution and by-laws, including the payment of the dues to this Society and to the State Association: provided, that no member under sentence of expulsion shall take part in any of the proceedings, or be eligible to any office until relieved of such disability.

Sec. 7. Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a

member, and the accused shall have opportunity to be heard in his own defense in all trials and proceedings of this nature.

*Chapter II.—Powers and Duties.*

Section 1. This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county.

Sec. 2. A meeting shall be held at \_\_\_\_\_ P. M. on the \_\_\_\_\_ in each month (or oftener). \_\_\_\_\_ members shall constitute a quorum. The officers and committee on programme shall profit by experience and by the example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Younger members especially shall be encouraged to do post-graduate and original research work, and to give this Society the first results of such labors. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

Sec. 3. Agreements and schedules of fees shall not be made by nor in this Society, but at least one meeting during each year shall be set apart for a full and frank discussion of the business affairs of the profession of the county, with the view of adopting the best methods of the most successful members as rules for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon, and that it suffers even more than the profession where this is not recognized.

Sec. 4. The Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

*Chapter III.—Officers.*

Section 1. The officers of the Society shall be elected at the (April) meeting in each year, which shall be known as the annual meeting.

Nominations shall be made by informal ballot, and all elections shall be by ballot. The vote of a majority of all the members present shall be necessary to an election.

Sec. 2. The President shall preside at all meetings of the Society, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county during the year, and it shall be his pride and ambition to leave it in better condition as regards both scientific attainments and harmony than at the beginning of his term of office.

Sec. 3. The Vice-President shall assist the President in the performance of his duties, shall preside in his absence, and upon his death, resignation or removal from the county, shall succeed to the presidency.

Sec. 4. The Secretary shall be the chairman of the Committee on Programme and Scientific Work. He shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter from the State Association. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a correct list of the members of this Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society, and it shall be his duty to send a copy of such lists, upon blank forms furnished him for that purpose, to the Secretary of the State Association, at the close of the annual meeting for the election of officers in each year. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating, when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the State Association his order on the Treasurer for the annual dues of the Society, of two dollars for each member in good standing.

Sec. 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members, and shall pay out the same only upon the written order of the Secretary.

Sec. 6. The Delegates shall attend and faith-

fully represent the members of this Society and the profession of this county in the State Association, and shall make a report of the proceedings of that body at the next annual meeting of this Society.

#### *Chapter IV.—Committees.*

There shall be a standing Committee on Programme and Scientific Work, of which the Secretary shall be chairman, a Committee on Public Health and Legislation, a Committee on Social Entertainments and Refreshments, each to consist of three members, and such special committees as may be deemed necessary.

#### *Chapter V.—Funds and Expenses.*

The annual dues for each member of this Society shall be (three) dollars, to be paid on or before the annual meeting for the election of officers in each year. (One) dollar of such dues shall be used to defray the expenses of this Society, and two dollars shall be forwarded by the Secretary, with his annual report, to the State Association. Any member who shall fail to pay his dues on or before the date named shall be held as suspended in this Society, and in the State Association, and his name shall be placed on the list of non-affiliated physicians in the report to the State Association for that year, and shall so remain until such disability is removed.

#### *Chapter VI.—Order of Business.*

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business.
7. Announcements.
8. Adjournment.

#### *Chapter VII.—Rules of Order.*

The deliberations of this Society shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by vote.

#### *Chapter VIII.—Amendments.*

These by-laws may be amended at any regular meeting by a two-thirds vote therefor, provided, that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

### The Tazewell County Medical Society

Was organized at a meeting of the doctors of Tazewell county, Va., Monday night, July 14, 1902. The membership numbers twenty. The following officers were elected: President, Dr. J. R. Gildersleeve, Tazewell, Va.; 1st vice-president, Dr. J. P. Haller, Pocahontas, Va.; 2d vice-president, Dr. J. H. Crockett, Tazewell, Va.; secretary, Dr. Charles T. St. Clair, Tazewell, Va.; treasurer, Dr. C. W. Greever, Tazewell, Va. It is the intention of the organization to be entirely in accord with the Medical Society of Virginia and the American Medical Association. A knowledge of the officers is sufficient guarantee that the Society will live up to its intentions, and will do much good work.

### Dr. Joseph Price, of Philadelphia, Pa.

Presented the Memorial Hospital, of Winchester, Va., with ten beds while on a visit to that city, July 21, 1902.

### Dr. Koch's Theory as to the Non-Transmission of Bovine Tuberculosis to Human Beings

Seems not to stand the test of time. Dr. Paul Garnault, a young French physician, in order to disprove such a theory, on June 17, 1902, inoculated himself on the arm with matter taken from a tuberculous cow. He has since written to the *Temps* that the inoculation has produced tuberculous tumors.

He again inoculated himself July 15th by inserting under the skin a fragment of tubercular matter from the liver of a diseased cow, because he feared that the tuberculosis of the skin resulting from the first would remain too long superficial.

The second form of inoculation, when performed on a guinea pig, causes death within eight weeks.

We called attention in the July 26, 1901, issue of this journal to this new theory of Dr. Koch's—advanced at the session of the British Congress of Tuberculosis, held in London July 23, 1901, and commenting editorially called attention to the fact that, if the theory was true, then "this specific pathogenic germ would not conform to one of the fundamental requirements of Koch's law—viz.: 'When introduced into healthy animals, it must produce the disease.'" Although Dr. Garnault by his experiment may possibly set at rest any such view as

that held by Dr. Koch, we believe such tests are uncalled for and foolish.

### The Illinois State Board of Health has Recently Won

In the Appellate Court in the case of Millard F. Bailey, a graduate of the medical department of the University of Tennessee of 1894, when the Board declined to issue a certificate based on his diploma because the Board had determined that the college was not in good standing during the year named.

The Appellate Court holds that the State Board of Health is possessed of discretionary power to determine whether a medical college is in "good standing," and its action is not subject to review by mandamus proceedings.

### New Medical Journals.

We have before us the first issue of *The Old Dominion Journal of Medicine and Surgery and American Gynecology*. The former magazine is under the control of the Alumni Society of the Medical College of Virginia. The editor-in-chief, associate editor, and business manager are elected annually by the Alumni Society, these respective offices being filled by Drs. Greer Baughman, A. B. Greiner and Charles R. Robins for the first term. The journal is to appear quarterly at first, but the managers shall have the power of increasing the number of issues per year if they think fit.

The first issue is neat in its appearance, and is printed on good paper with clear-cut type.

*American Gynecology* is the name given a new monthly published in New York city, and is to be devoted to the subjects of gynecology, obstetrics and abdominal surgery. Mr. Ernest W. Reynolds is manager-treasurer. The journal has an editorial board, as follows: Drs. Charles Jewett, editor-in-chief; J. Wesley Bovee, Robert L. Dickinson, Charles P. Noble, Reuben Peterson, and J. Whitridge Williams, besides a list of fifty-seven collaborators, all of them men of reputation.

### Our Medical Colleges.

The season has come when the young man or woman proposing to enter the profession of medicine shall select the medical college best suited to his or her needs.

The time has come when the College Associations have determined upon a compulsory four-

years' course of tuition; and with very few exceptions nearly all of the regular medical colleges of the United States have agreed to the demand. Certain States are requiring that those proposing to enter upon practice within their boundaries shall be graduates of reputable four-years' course colleges. And the disposition to make a similar demand is spreading in other States; so that we may safely predict that in a few years nearly all of the thickly populated States will establish this as a requirement.

Another growing demand is that the beginning student of medicine should have a sufficient degree of common school education to appreciate the scientific education as he approaches the subjects of chemistry, biology, bacteriology, etc. And it stands as a serious reflection upon the high standing of the profession of medicine when it is found that the doctor graduate cannot write grammatically or write intelligibly. So that the reputable medical colleges of the country are properly paying more attention than ever before to the preparatory education of those who are beginning the study of medicine.

Still another demand of the times is the proper equipment of the college proposing to be a graduating school of medicine. The anatomical room must be amply supplied with "subjects" to give abundant material for dissection and study, and provided with enough demonstrators of anatomy to render practical service to every student in the dissecting room. Likewise, the laboratories must be sufficiently supplied with apparatus and accessories to enable the student to do the work assigned him, under the guidance of qualified assistants in hematology, microscopy, chemistry, bacteriology, histology, etc. Thus the student who is to be considered fitted for the great work of healing the sick or diagnosing disease must be led step by step—not by jumps or by omitting this or that.

Then there is left ample field for the didactic lecturer. Not only is the student to be taught to do, but he must be a clever reader and a good listener: for there are necessarily things with which the student must be made acquainted by lectures and reading of properly-selected text-books, for opportunities do not every day occur to enable the student to learn by demonstration with a case before him.

Then there comes the clinical teaching. Here, it is presumed, that the professor is him-

self qualified to make practical demonstrations of the sciences related to medicine which enable him to make proper diagnosis, to apply means for its verification, and to adopt means for the cure of the disease or the relief of suffering. That school is best where the clinical professor is interested in his students, and brings them about the patient to let them see and learn.

This, of course, requires the advantage of dispensary and hospital facilities, and a sufficient number of qualified assistants in the clinical departments to take the class in sections to the bedside. The object must be kept ever prominent with the professor and his assistants, that they are there to teach, and not simply to display, in a dogmatic manner, what they presume they know.

Of course, it is presumed that the college and hospital and dispensary buildings are themselves properly built and ventilated, and kept in a hygienic condition.

Then the standard of graduation is to be kept in view. It is an awful hardship on the graduate, fresh from college walls, to show such incompetency as not to be able to stand before the respective State Boards of Medical Examiners, etc. While it is true that colleges of the highest merit sometimes have their graduates found disqualified for license to practice by the Board of Examiners, yet such things are not usual.

This issue of the *Virginia Medical Semi-Monthly* contains the advertisements of fourteen medical colleges of wide repute, and we believe that in their facilities for teaching, they are among the best of the country. Two of these are *Polyclinics*; the other twelve are colleges for graduating in medicine.

### The New York Polyclinic Medical School and Hospital.

The twenty-first annual announcement of this well-known post-graduate school (the oldest post-graduate school in America) calls attention to the distinctive features of excellency of tuition and personal contact of the student with the patient. An abundance of clinical material provides the medical and surgical examinations that are conducive to a good diagnostician. The amphitheatres are well lighted and so arranged that the minutest detail of any operation can be intelligently followed. A well equipped hospital in the school building enables the students to witness operations, without losing any time from the school work. The fall and win-

ter session begins September 15, 1902. Students may enter at any time.

### The New Orleans Polyclinic.

Physicians will find this Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. It is especially well adapted to those who locate in the Southern States, as diseases peculiar to that section are constantly found among its hospital and dispensary patients. The specialties are fully taught—including laboratory work, etc. Announcement of the sixteenth annual session (which opens November 8, 1902, and closes May 30, 1903), will be furnished, as also any further information, by addressing the New Orleans Polyclinic, P. O. Box 797, New Orleans, La.

In either of the two institutions, physicians who wish to "brush themselves up" a little, can gain practical ideas enough to serve them for years to come. It is a little curious to us that practitioners who recognize themselves as getting "behind the times," and who have dropped themselves into a rut of practice do not more often break loose from their surroundings at home and attend a session at one or the other of these Polyclinics where new ideas, abreast with the times, are given them, and where new lines of treatment are practiced, according to advances in the several branches of medicine.

But the non-graduate or his or her preceptor is more interested in the *graduating colleges*. We call attention to the claims of twelve of the best in the United States.

While several medical colleges are co-educational as to the sex of the student, we would most unreservedly advise young ladies desirous of studying medicine to attend a college specially set apart for their own sex. Of such institutions, undoubtedly the best is the

### Woman's Medical College of Pennsylvania, Philadelphia.

This is the oldest of all medical colleges in America devoted exclusively to the preparation of ladies for the medical profession. It possesses every advantage of laboratory equipment and clinical instruction claimed by the best of colleges set aside for the education of male physicians, surgeons or obstetricians, or any of the specialties of medicine. Wherever the graduates of this college have settled, they have taken

a prominent stand in the profession—not pressing themselves forward for the honors of societies, but impressing themselves upon the respect of others of the profession, because of their ability and faithful services to patients.

Turning now to the colleges intended especially for men, we take them up in the order of States. Beside the Woman's Medical College of Pennsylvania, there are three regular medical colleges in that State devoted to the tuition of men.

### Jefferson Medical College, of Philadelphia.

This is one of the oldest and best known medical colleges in this country. It was the college of graduation of our fathers in medicine before the Confederate war, and since that war it has lost none of its greatness. It is now in new buildings, and has modernly equipped laboratories, with extensive hospital opportunities. Its standard of graduation is high, and justly prides itself upon the general eminence of its alumni, in whatever State or position they may be found.

### Medico-Chirurgical College of Philadelphia.

While this college has regular graduating departments of dentistry and of pharmacy, it is with the department of medicine that we are now interested. The new announcement of this latter department of this college indicates that it is, as always, progressive, and that it is determined to hold the eminent position that it has attained in its short history. The magnificent new and thoroughly equipped laboratory building, just opened, combines with the college hall, fine hospital and beautiful clinical amphitheatre, with which many of our readers are familiar, to give material facilities to the teaching of a wisely planned and carefully graded course by a strong and able faculty and extensive corps of instructors. Special features are the free quizzes, small ward classes, clinical conferences and modified seminary methods of teaching, concerning all of which information may be had by sending for an announcement or by applying to the Dean, Dr. Seneca Egbert, 1703 Cherry St., Philadelphia, Pa.

### Western Pennsylvania Medical College, Pittsburgh.

Being the only medical college in a city of

about 325,000 population, and in a mining district, with an additional floating population of many thousand laborers, it possesses unusual advantages for clinical instruction. While in thoroughly honorable competition with all the other medical institutions of the land, it is remote enough from them to save itself from the petty annoyances of a jealous college in its own community. This college is doing excellent work—its graduates taking a leading rank in the profession wherever they locate. Its buildings are new and commodious, and its laboratories and apparatus modern and extensive.

#### **University of Maryland, School of Medicine, Baltimore.**

This school of medicine was organized for the tuition of medical students in 1806. It furnished surgeons who attained eminence in their profession in the war of 1812, in the war with Mexico, in the Confederate war, and in the American-Spanish war. It has been consistently regular in all its dealings. It has taken an advanced stand in every effort to advance the education of American doctors—providing its laboratories with improved apparatus as rapidly as their utility has been demonstrated. Its clinical advantages are unsurpassed. Its professors and lecturers are earnest, able and conscientious teachers, and the standard of its graduates is high.

#### **College of Physicians and Surgeons, of Baltimore, Md.**

This college, organized in 1871, has taken advantage of the lessons taught by experience and observation to bring itself into the very front rank of reputable colleges. Its corps of teachers—professors, lecturers and assistants—adopt the plan, as far as practicable, of close association with the student in the laboratories, dispensaries, hospitals, lecture rooms, etc., in order that they may the more directly impart instruction just on the points where it appears to be specially needed. Its laboratories are complete with apparatus and material—including the anatomical room, etc. Its arrangements for dispensary and hospital clinics cannot be surpassed.

#### **Baltimore Medical College (Maryland).**

This college continues the old preliminary fall course of three weeks—beginning Sep-

tember 1st, and ending with the commencement of the regular winter course on September 25, 1902. Attendance upon this preliminary course is thought to be useful in preparing the student for the regular courses, as most of it is consumed in practical instruction of side issues which are scarcely dealt with in the text-books or by the professors in their courses of lectures, for want of time. At the same time, the students are becoming acquainted with each other and their surroundings. In every respect, the Baltimore Medical College is thoroughly equipped for the teaching of the advanced student—both in the laboratories and in the clinic wards of its capacious hospitals.

#### **Columbian University, Medical Department, Washington, D. C.**

The new and enlarged buildings for the Columbian Medical School and Hospital will be ready by the fall term, 1902. Four large lecture halls, with seating capacity of 350 students, elegant, well lighted laboratories, for all branches, recitation and students rooms, will make the facilities for work as attractive as possible for the students and equal to any in the country. The work of the chairs of practice and therapeutics have been provided for, by the selection of Dr. Walter Reed, U. S. A., the authority on yellow fever, as professor of General Pathology; Dr. Sterling Ruffin, Professor of Practice of Medicine, and Dr. Thomas Claytor, Professor of Materia Medica and Therapeutics, two of the ablest practitioners in Washington. Drs. H. B. Deale and H. W. Hawkes, Professors of Clinical Medicine; Dr. James Carroll, a yellow fever expert, has also been elected Associate Professor of Pathology and Bacteriology. Students of Columbian, therefore, have in addition to all facilities for practical and theoretical work, opportunity of receiving instruction from world renowned men in medicine. The largely increased facilities of the new medical school building and the addition to the hospital will be of great importance in the further work of the school.

#### **Georgetown University, School of Medicine, Washington, D. C.**

This is the medical department of Georgetown University, and was organized in 1850. A large corps of teachers in proportion to the number of students makes instruction more di-

rectly personal and adapted to the special needs of the individual. The clinical facilities of the University Hospital and other city and government hospitals are ample, and the laboratories are well equipped. Special attention is invited to the educational advantages of the national capital, with its unrivalled libraries, the Army Medical Museum, the Museum of Hygiene, and the various scientific libraries which are open to students.

### Medical Department, University of Virginia, Charlottesville, Va.

The medical department of this University has had a very successful and honorable career. A statement of the success of the graduates before the Navy Examining Board is interesting. During 1891 there were fifty-two applicants before the Examining Board of the Medical Department of the United States Navy; of these, nineteen were accepted, and of these successful ones, the University of Virginia had seven out of a total of eight applying—that is, all the rest of the world had twelve successes out of forty-four applicants, while the University had seven successful candidates out of eight applicants.

### University College of Medicine, Richmond, Va.

The four-year system will go into full effect at the beginning of the coming session, which will open September 30, 1902, with the four classes complete. The faculty interpreted the demand for a four-year course to mean that it should give more thorough drilling in the fundamental branches, especially in laboratory work, and yet leave the student ample time for practical and clinical study, the facilities for which should be greatly enlarged. Well considered plans were therefore made to render the additional year of greatest value to the student, and these have been gradually carried into effect, so that the announcement is made that all things are now ready. The Hunter McGuire Memorial Annex to the Virginia Hospital, which was erected exclusively for the clinical teaching of this college, has been in operation a year, and provides abundant facilities for bedside instruction. The number of laboratories has been increased to eleven, and their equipment has been augmented from time to time. A very large outlay this summer for this purpose will render the facilities for laboratory

teaching equal to every requirement. The equipment for both didactic and clinical instruction may be said to be complete. The course of study has been carefully arranged, and the result is a well-graded curriculum, having many points of original merit. The aim of the faculty is to provide a course of study which, while it is essentially a unit, and is graded properly from start to finish, has ample provision for the specialties, and admits of an unusual degree of concentration upon each subject as it comes up. In teaching work the motto is:

“Unity—therefore, strong courses;  
Concentration—thereby, strong teaching;  
Method—therefrom, strong students.”

### Barnes Medical College, St. Louis, Mo.

Centenary Hospital, adjoining the college, which supplies in great part the hospital clinical material, as well as the college itself, are the largest and best equipped medical institutions west of the Mississippi river. This college has been doing good work, and with its present new arrangements it will do even better. To those who may be interested, we would call special attention to the advertisement, which makes special concessions to sons and daughters of physicians and the clergy, and to graduates of dentistry or pharmacy. The college is thoroughly equipped for teaching in every department of medicine, with laboratories and anatomical rooms provided with every necessary for teaching.

### National College of Law, Nashville, Tenn.

This institution provides for the advancement of legal education, in succoring innocence, punishing guilt, and in the solution of the great legal, constitutional and diplomatic questions which are being evolved in the ever varying affairs of life, and the banishment of anarchy from American soil. The college charter confers upon the corporation a franchise to found, establish, endow, maintain, control and conduct a legal training institution of learning, or college for education of both sexes, with full authority to maintain courses of instruction and study in law and related sciences and arts. It has both a day and a night school. This college of law seems to be in every way worthy of the patronage of students of law. Refer to the advertisement after reading matters pages for further information.



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## Original Communications.

### A BRIEF RESUME OF THE TREATMENT OF TUBERCULOSIS.\*

By GEORGE E. MALSARY, M. D., Cincinnati, O.,

Assistant to the Chair of Practice, Medical College of Ohio. Medical Department of the University of Cincinnati.

In this communication there will be included the treatment of that composite picture, phthisis, in which a septicaemia is superimposed upon a tuberculosis.

To discuss intelligently the treatment of a disease, we must consider our knowledge of the nature of the morbid process and what is to be accomplished.

Tuberculosis is a common disease.<sup>1</sup> As a rule, in man tuberculosis does not remain a pure tuberculous infection. Secondary infection soon occurs. It is well known by laboratory men that a culture of the tubercle bacillus in a test-tube must be carefully protected from contamination from without in order to preserve it pure. It is not strange that the process does not remain a pure tuberculosis in the bronchial tubes, where there is constant exposure to contamination. Animals injected with tuberculous sputum often die in a short time from sepsis. Cornet, in his experiments, used the sputum of chronic cases in preference to that of phthisis florida, because he found the former

\*Read before the Academy of Medicine of Cincinnati, May 12, 1902.

<sup>1</sup>In the early part of the past century, Laennee declared that pulmonary tuberculosis existed in one-third of the cases in the hospitals of Paris. About ten years ago, Cornet declared that at least one-third of all mankind are or have been affected with pulmonary tuberculosis. This statement did not cover tuberculosis of other parts of the body, as of the bones, joints, skin, glands, etc. In Breslau, 1893, about one-third of the cases showed gross microscopic lesions of tuberculosis—i. e., 1,393 cases in 4,250 autopsies. Brouardel, in the Paris morgue, found gross lesions of tuberculosis in 75 per cent. of his cases. Schlenker, in the careful naked eye examination of one hundred bodies of adults and children, found gross evidences of tuberculosis in sixty-six cases.

less frequently caused the death of the animal from sepsis.

Secondary infection is due to the pyogenic micro-organisms, especially the streptococcus pyogenes, the micrococcus pneumoniae, and the staphylococcus pyogenes aureus and albus. In the majority of cases the irregular temperature is caused by the streptococcus; hence, the saw-saw record, characteristic of the hectic of tuberculosis, has been called by Koch the streptococcus curve.

The disease under consideration is at first, possibly, a pure tuberculosis, but soon it becomes complicated with pulmonary sepsis, which combination will be designated as phthisis pulmonalis.

Inheritance is of practical importance only in so far as one may inherit a weak lung, just as one may inherit a weak heart or weak eyes. Almost any deformity may be inherited. But there is no predisposition peculiar to phthisis.

#### PROPHYLAXIS.

The prevention of tuberculosis becomes comparatively simple when we remember that nothing about the patient is infectious except the excretions from the tuberculous tissue. In tuberculosis of the lungs, infection is conveyed by the sputum. Hence, in prophylaxis, supreme importance is attached to the destruction of disinfection of the sputum. The best disinfectant is fire. The sputum should be burned as soon as practicable. The patient may be instructed to receive the sputum in a cup. The sputum cup is best made of a water-proof container retained in a metal frame, so that at least once a day the container may be removed and burned. The cup may be filled with wood-wool, which rapidly absorbs the sputum. When such a sputum cup may not be obtained, recourse may be had to the use of an ordinary cup, of such shape that it may not be readily upset, which is preferable to the ordinary cuspidors or boxes.

Boxes filled with sawdust should never be used, and it would be better if Americans could

dispense altogether with the use of the ordinary cuspidor, which, with its open mouth and wide flange, acts only as a target and resting place for infectious material, forming a true depot of infection. When it is necessary to expose a cuspidor for use, it should be partly filled with water to prevent, as far as possible, the dissemination of the infectious material. When the ordinary cup is used it is better to place water in it.

It is a good rule to have the patient always expectorate into water. When a disinfectant is desired, crude carbolic acid may be used, or, better, lysol,<sup>2</sup> or crude solutol.<sup>3</sup> The last two named are better than carbolic acid, in that they do not coagulate the sputum, but fluidify it. All cups, cloths, etc., which come in contact with the sputum and that cannot be burned should be thoroughly scalded or boiled. Bedding, clothing, furniture, etc., that cannot be burned or boiled or steamed, may be sterilized with formaldehyde, the odor of which may be later removed by subjecting them to the vapor of ammonia. The thorough use of formaldehyde renders largely unnecessary further disinfection of the room that has been occupied by a tuberculous patient. All worthless articles should be burned.

Papered walls may be rubbed down with bread or with one of the common cleaners, and the crumbs should be burned. Tinted walls may receive a new coat. Oil painted walls should be washed with carbolic acid (5 per cent. solution), or with calcium carbonate, which should be washed off in a couple of hours. The woodwork and furniture, including the lamps, door handles, gas pipes and chandeliers, may be washed thoroughly with a solution of carbolic acid (3 per cent.), and the floors may be scrubbed with the same solution, or with calcium carbonate, which latter should be washed off in two or three hours.

The question of the conveyance of *tuberculosis from animals to man* may be considered *sub judice*; so we will not enter into the consideration of that subject further than the opinion that tuberculosis is much more likely to be conveyed by the articles of food and drink, such as meat and milk, being handled by careless tuberculous individuals, than through any transmission from tuberculous animals. If it is ne-

cessary to use infected milk or meat, resort should be had to thorough sterilization, which may be readily secured by the proper application of heat.

#### SPONTANEOUS CURE.

It has for a long time been known that tuberculosis is often completely cured spontaneously, and that even more frequently the disease becomes latent and quiescent. Hippocrates recognized that phthisis, if treated early, "acts well." Caswell, a distinguished English physician, wrote in 1838: "Pathological anatomy has never, perhaps, given a more decided proof of the cure of a disease than of phthisis." (Brouardel.)

In the cases examined by Schlenker, tuberculosis was found to be latent in over 40 per cent. of cases. Loomis reported 763 autopsies, with 71 cases of "cured" tuberculosis, in which death was due to some other disease. But that the cure was not complete in all these cases is evidenced by the fact that the tubercle bacillus was found in three cases out of twelve that were examined. Brouardel, in the Paris morgue, found healed tuberculous lesions, in the form of chalky transformation or fibrous cicatrization, in about one-half the cases that had been in Paris for ten years. This, he believes, shows that the individuals have been strong enough to resist the ravages of disease, notwithstanding often deplorably dirty habits. Brouardel states that these changes represent, in the majority of cases, not initial lesions, but large foci or cavities that have become completely healed. Hence, everything possible should be done to cure the tuberculous patient, *for he can be cured*. Even bad cases may recover spontaneously. It is this fact of the spontaneous cure of tuberculosis that lends hope to therapy.

#### CHEMICALS.

It is much easier to destroy the tubercle bacillus in the sputum cup than after it has gained entrance to the body. We know of no chemical that will cure a tuberculous animal.

Those substances that act best in inhibiting the growth of the tubercle bacillus in the body, according to Koch, are the essential oils, the aromatics—like beta naphthol, parotoluidin, certain aniline colors, fuchsin, methylene blue, gentian violet, and auramin; and next—the mercurial vapors and the combinations of gold and silver with hydrocyanic acid.

#### SERUM THERAPY.

The lack of absolute immunity to tuberculosis

<sup>2</sup>A saponaceous coal tar preparation, consisting largely of creosote.

<sup>3</sup>Solutol is described as an alkaline solution of sodium cresylate in an excess of cresol, containing 15 per cent. of free cresols.

argues against the value of serum therapy—*i. e.*, the injection of the blood-serum of an animal refractory to tuberculosis, or the blood-serum of a tuberculous animal. Organo-therapy is still in an experimental stage. Good results have been claimed from the use of Brunet's sue pulmonaire, and also from Hofman's extract of the bronchial glands.

In this way use has been made of the blood-serum of the dog (Hericourt and Richet) and of the goat (Pieq and Bertin) under the impression that these animals are immune from human tuberculosis. That belief is now known to be erroneous. Hericourt has shown that dogs, which are refractory to aviary tuberculosis, but not to human tuberculosis, when "vaccinated" with aviary tubercle bacilli, become immune to human tuberculosis and their blood serum then possesses anti-toxic power against human tuberculosis.

Blood serum from dogs, asses or horses treated with the toxins of tuberculosis has been used by Maragliano, of Genoa, with asserted good results. Good results have also been claimed by Paquin, of St. Louis, from the use of the blood-serum of the horse. It is probable that such results are to be attributed to the general bactericidal or anti-toxic property of the blood-serum.

#### IMMUNITY CONFERRED BY ANOTHER DISEASE.

Experiments in the laboratory have shown that a certain immunity may apparently be conferred by other diseases. In the laboratory it has been found that the life of guinea-pigs inoculated with tuberculosis may apparently be prolonged by the inoculation of *erysipelas* (Solles). Nannotti and Grazi observed what seems to have been a spontaneous cure of a tuberculous knee-joint affected with recurrent *erysipelas*. The observation was so striking as to lead Nannotti to make experiments upon guinea-pigs and rabbits, which, however, showed that there is apparently no antagonism between the *erysipelas coccus* and the tubercle bacillus.

Cattle and rabbits vaccinated against *charbon*, become almost immune to tuberculosis (Perroucito).

In pulmonary tuberculosis, the disease is apparently mitigated by inoculation with *cow-pox* (Winogradow and Tyndale).

Experimental attempts to vaccinate animals against tuberculosis by inoculation with tuberculous sputum, which had been filtered and

putrified, were claimed to give favorable results by Kostjerin and Krienski, while no appreciable results were obtained in similar experiments by Daremberg. Believing that putrefaction destroyed the virulence of bacilli, Cantani employed the inhalation of liquid cultures of the bacterium *termo* in cases of tuberculosis. This method was known as "bacterium therapy." It is now known that the bacteria of decomposition, as well as the pyogenic microorganisms, may grow in culture with the tubercle bacillus. "Bacterium therapy" has been abandoned. Any good effect produced by such treatment may be attributed to the inhalation of the vapor of water.

#### TUBERCULIN.

Of more practical value is the use of tuberculin. In the way of specific medication, the new tuberculin of Koch (T. R.) is of the greatest value.

Tuberculin R. comes in solution containing 10 mg. of solid substance to the cubic centimeter. From this the proper strength for use is obtained by diluting with the physiological salt solution. The solution keeps better if glycerine be added. Carbolic acid should not be used. The initial dose is 1-500 mg., or in very susceptible cases, 1-100 mg. The injections are repeated about every second day, and the dosage increased so slowly as to avoid any rise of temperature. It is rarely necessary to give larger doses than 20 mg., and in such cases it is better to give the injections at longer intervals. Tuberculin, of course, has no control over the sepsis of phthisis, but in the treatment of pure tuberculosis, tuberculin is a drug with which no other can compare.

#### NUCLEIN.

The nucleins have been employed in the treatment of tuberculosis by Vaughn and Huber.

Nuclein is a term applied by G. See to a series of colorless or yellowish albuminoid substances (insoluble in water and alcohol; soluble in alkalis), extracted from the pulp of the spleen, and more recently from yeast. Doses of two or three grammes cause an increase of leucocytes almost to the point of actual leucocytosis. The nucleins have been used in the diagnosis of latent tuberculosis, two or three grammes causing an elevation of temperature possibly to 104° F., for two or three days, with an increase of the physical signs, fine rales, etc.

Thiosinamin was used and recommended by H. von Hebra,<sup>4</sup> but has fallen into disrepute.

#### UREA AND URIC ACID.

The victims of gout, gravel and calculi are rarely tuberculous. This fact, with the well-known value of animal food in tuberculosis, has led to the hope that by saturating the tuberculous patient with urea or uric acid, a combination may be formed with the body fluids that will be antitoxic to the tubercle bacillus. Henry Harper<sup>5</sup> has reported some good results from the use of pure urea, twenty grammes four times a day, and a diet consisting largely of liver, kidney and brain substances rich in urea.

#### CANTHARIDES, ETC.

Cantharides, cantharidin, and the cantharidates of potassium<sup>6</sup> and sodium, have been used upon the theory that the extravasated serum about the capillaries at the diseased points would kill the tubercle bacilli, but their use has been abandoned, because they produce albuminuria, hematuria and cystitis.

#### CREOSOTE.

Creosote is so generally used in the treatment of tuberculosis that it is difficult for us to realize that it was discovered in 1832, and that it has been continuously used for only twenty-five years. As is true of many remedies of undoubted value in therapy, we do not know how creosote acts; but the profession is well satisfied, from clinical experience, that it does act favorably in the treatment of tuberculosis.

<sup>4</sup>Hebra (H. von Hebra, Internat. Klin. Rundschau, September, 1892), used thiosinamin by injection into the back, in doses of 0.3 to 0.45, employing a 15 per cent. solution in alcohol and making the injections every third or fourth day. In lupus, Hebra reported a reaction after the injections with the subsequent absorption of the exudate. Old corneal opacities were also observed to disappear.

<sup>5</sup>Henry Harper, Lancet, March 9, 1901 (nine cases), and June 15, 1901 (five cases). In some instances gouty symptoms became prominent, necessitating a lessening of the animal food and an increase of the green vegetables.

<sup>6</sup>Potassium cantharidinate is a potassium salt of cantharidic acid,  $C_{10}H_{12}O_4 + H_2O$  which is apparently a compound of cantharidin  $C_8H_6O_2$  and water.

Liebreich's cantharidal solution consisted of two decigrammes of cantharidin and four of potassium hydrate dissolved with heat in 20 cc. of water, and the subsequent addition of water sufficient to make 1000 cc.

The cantharidal pitch plaster, *empiastrum picis cantharidatum*, the so-called "warming plaster," has been used in phthisis and a number of chronic diseases attended with inflammation or an inflammatory tendency, catarrh, asthma, chronic rheumatism, hepatitis, pertussis, and the sequelæ of pleurisy and pneumonia.

Many theories have been advanced. Thus, it has been supposed to neutralize toxins, a theory that is difficult to either prove or disprove. It is known that creosote diminishes fermentation in the stomach, and thus it may favorably influence nutrition, and in that way be of value in increasing the patient's resistance to disease. It probably also has a more direct antiseptic action upon tissues involved in the disease, rendering the soil less suitable for the growth of the seed. At any rate, the fact remains that creosote is of very great value in the treatment of tuberculosis.

Creosote has been given by the stomach, by the rectum, by inhalation, by intratracheal injection, by intra-pulmonary injection, and by subcutaneous injection. Revillet uses the following formula for *rectal administration*: Pure creosote, 2 to 4 grammes; dissolve in oil of sweet almonds, 25 grammes; emulsify with the yolk of one egg, and add 200 grammes of water. Some gum may be added to make the emulsion still finer. When given by the rectum the remedy is best administered in the evening, upon retiring, when it is better retained. Evidence of absorption is soon furnished by the taste of creosote in the mouth and by the urine becoming colored greenish-black.

Grasset uses the following formula for the same purpose: Tincture of opium, 3 grammes; creosote, 30 grammes; and olive oil, 300 grammes. A teaspoonful of the mixture is rubbed up with the yolk of one egg and 100 grammes of water, and injected morning and evening.

*Inhalations of creosote* in the pneumatic cabinet give no special benefit, beyond a strong psychic effect. For the purpose of inhalation, creosote may be added to boiling water, as in the vapor *erosoti* (Br. Ph.), or the creosote may be inhaled from a sponge or absorbent cotton, best with the addition of equal parts of chloroform and alcohol. The best method is the use of a fine spray of creosote (creosote, 1 to 2 minims; menthol, 4 grains; liquid alboline, 1 ounce).

*Intratracheal injections* were made by Dor of a 5 per cent. solution of creosote in olive oil. In this way Dor claimed to be able to treat the disease locally. But it is known that the local application of pure creosote has apparently little or no effect in the treatment of external tuberculosis, where such applications may be readily made.

*Intra-pulmonary injections* were employed by

Lepine and Truc, of Lyons, and by Gougenheim, of Paris. No particular result was secured.

*Subcutaneous injections* were entertained by Bouchard, 1875, and peptized creosote was injected subcutaneously by DuCâstel, in 1882, but the subcutaneous use of creosote was really introduced by Gimbert, in 1886. Gimbert used a solution of 1 part of creosote to 14 parts of oil of sweet almonds, and injected slowly, drop by drop (intermitting occasionally to avoid pain) up to 15 to 22 grammes, an equivalent of 1.0 to 1.5 grammes of creosote. Burlureaux, soon after this, injected creosote, in 400 cases, in much larger amounts, using on an average 50 grammes per day, and in some cases injecting daily as much as 100, 180, 200, and even 220 grammes.

Creosote may be given pure, or better, with equal parts of nux vomica, or where strychnia is contraindicated, the creosote may be combined with equal parts of tincture of gentian, administered in a teaspoonful of whiskey and a tablespoonful of water, three times a day after meals or after a glass of milk. Pure creosote may be given in cod-liver oil, or emulsion, or in milk or water, or in capsule, upon a full stomach. The remedy should be increased a drop a day up to twenty drops, or, if necessary, up to tolerance (usually sixty to ninety drops per day), the whiskey and water being increased at the same time.

Kahn, of Wurzburg (*Medical Annual*, 1894), has found that patients apparently tolerate creosote better when given with myrrh, a solution of equal parts of myrrh and oil. Dose:  $\frac{1}{2}$  grs. creosote with 3 grs myrrh, to be taken in capsules.

The hypodermatic use of creosote is harmless, but has no special advantage over the internal use of the remedy.

The essayist would use creosote by the rectum only very exceptionally, when it may not be taken by the mouth because of great repugnance.

For *internal use* he prefers, as a rule, the carbonate of creosote, *creosotal*,<sup>7</sup> which contains 92 per cent. of creosote, and may be given in much larger doses. He begins with ten drops of creosotal three times a day, and gradually increases

<sup>7</sup>Creosotal is a mixture of the phenol-carbonates of the several constituents of creosote, which, it is said, is obtained by the action of carbon oxychloride upon the phenol sodium compounds of creosote. It may be administered, like creosote, in whiskey and milk, in cod-liver oil, in capsules, or in emulsion dissolved in wine. Creosotal has also been used hypodermatically.

the dosage to a teaspoonful three times a day, or up to tolerance. It is reported that as much as fifteen drachms per diem have been given without unpleasant symptoms.

*Tanosal*, creosal, a tannic acid ester of creosote, containing 60 per cent. of creosote, has been reported<sup>8</sup> to be well tolerated by the stomach and to act as well as any other preparation of creosote. Dose: 15 to 60 grs.: The commercial solution contains grs. xv to the tablespoonful. For children, about a teaspoonful per day for each year of age.

*Guaiaicol*,<sup>9</sup> one of the important constituents of rectified creosote, of which it constitutes 60-90 per cent., has been used as a substitute for creosote because of the instability of that drug. Many preparations have been employed. It has been used hypodermically, sometimes in combination with iodoform, but has not proven superior to creosote.

*Duotal*,<sup>10</sup> the carbonate of guaiacol, in the form of powder up to 6.0 per day (Seifert and Holscher); *benzosol*,<sup>11</sup> benzoyl-guaiacol, guaiacol benzoate, a combination of benzoic acid and guaiacol, in the form of powder up to 3.0 per day (Walzer); *styracol*,<sup>12</sup> guaiacol cinnamate, a cinnamic ether of guaiacol (advised by Hass),

<sup>8</sup>Dr. G. Kestner (*Therapeutische Wochenschrift*, November 22, 1896), reports using tanosal in thirty-three cases of pulmonary tuberculosis and in a number of cases of other diseases.

<sup>9</sup>*Guaiaicol*, methyl procatecin, mono-methyl ether,  $C_9H_6 \begin{cases} O H \\ O C H_3 \end{cases}$ , was first isolated in the distillation of the resin of guaiac, by Saint Claire Deville, but is now obtained by the fractional distillation of beechwood creosote.

<sup>10</sup>*Duotal*.  $CO_3 (C_6H_4 O C H_3)_2$ , or  $CO (O C_6H_4 O C H_3)_2$ , contains 91 per cent. chemically pure guaiacol and 9 per cent. carbonic acid. It is one of the best preparations of guaiacol for use in tuberculosis. It is described as a "neutral white crystalline powder, having slight taste and odor, insoluble in water and cold alcohol, soluble in ether, chloroform, benzine, and boiling alcohol, slightly soluble in fixed oils and glycerine."

<sup>11</sup>*Benzosol*,  $C_6H_5 \begin{cases} O C O C_6H_5 \\ O C H_3 \end{cases}$  was recommended by Walzer and Hughes (*Deutsch. Med. Woch.*, 1891), and excellent results have been reported by Summerbrodt. The dose ranges from gr. iii-viii, repeated up to gr. xv-xiv per day. The remedy may be given in powder, tablets or capsules. The drug is not without danger and should be given with caution.

<sup>12</sup>*Styracol*,  $C_6H_5 \begin{cases} O C_6H_4 O \\ O C H_3 \end{cases}$  is supposed to be broken up in the intestine into cinnamic acid and guaiacol. Hence it is of value in phthisis, and especially in chronic catarrh of the gastro-intestinal and genito-urinary tracts.

and *thiocol*,<sup>13</sup> potassium guaiacol sulphonate recommended especially by C. Schwarz) up to 13.0 per day, all have the advantage of being almost tasteless and well tolerated by the stomach.

The following additional *derivatives of guaiacol* may be mentioned:

*Guaiacol benzyl ether*, pyrocain, resembles guaiacol therapeutically.

Guaiacol biniodide,  $C_6H_2I_2 \left\{ \begin{array}{l} O\ H \\ O\ C\ H_3 \end{array} \right.$  recommended as a local application (Vicario).

*Guaiacol bisulphonate of quinine*, guaiacuin,  $(C_6H_4O_2\ C\ H_3H\ S\ O_3)_2\ C_{20}\ H_{24}\ N_2\ O_2$ , contains 44.26 per cent. of quinine and 54.74 per cent. guaiacol sulphonic acid, equivalent to about 33.38 per cent. of guaiacol. Dose: Gr. iii-x, three times a day.

*Guaiacol ethyl* is probably not more effective than guaiacol. As an analgesic, it is of especial value, as a local application, in the presence of neuralgia and neuritis. It has been used hypodermatically in 10 per cent. solution in pure glycerine.

*Guaiacol iodoform*, a solution of iodoform in guaiacol, has been used hypodermatically, 3 c. c. diluted with 16 parts of olive oil.

*Guaiacol phosphate*, phosphoric guaiacolate, is split up in the intestine, and is, therefore, well tolerated by the stomach; but it is less active and not so certain in its effect as guaiacol.

*Guaiacol phosphite*, phosphite of guaiacolate, phospho-guaiacol,  $P\ (O\ C_6H_4O\ C\ H_3)_2$ , contains 92.25 per cent. of guaiacol.

*Guaiacol-salol*, salicyl-guaia,  $col, C_6H_4OC_7H_5O_2OCH_3$

Dose: 1.0 at intervals, up to 10.0 per day.

*Guaiacol valerianate*, gesote, the valerianic acid ester of guaiacol, is used much like the carbonate of guaiacol. Gr. xv-xxv may be given daily, in capsules, for months, without unpleasant effects. It may also be used locally in tuberculosis of bone.

*Guaiaperol*, piperidine guaiacolate, may be given in doses of gr. v-x, three times a day—best in capsules after meals.

*Guaethol*, thanatol, ajacol, pyro-catechinmonoethyl-ether,  $C_6H_4\ O\ C_2H_5(1),\ O\ H\ (2)$ .

<sup>13</sup>*Thiocol*,  $C\ H_3 \left\{ \begin{array}{l} O\ H \\ O\ C\ H_6 \\ S\ O_3\ K \end{array} \right.$  has been recommended especially by C. Schwarz (Klin. Therap. Wochen., 1898). It contains about 60 per cent. of guaiacol, and may be given in doses of gr. xlv three times a day, up to gr. cc per day. It is best given to children in a ten per cent. solution with the addition of some syrup.

But none of the preparations of guaiacol are of so much value as pure cresote in the treatment of tuberculosis.

#### VOLATILE ESSENCES AND BALSAMS.

When taken into the body these are eliminated partly through the organs of respiration, and have long been supposed to have a favorable influence upon tuberculosis. As a rule, they are not well tolerated by the stomach.

Among the balsamic fumes and vapors that have been recommended are ammoniacum, assa-fetida, benzoin, cinnamon, copaiba, colt's-foot, cubeb, frankincense, galbanum, Peruvian balsam, and styrax. At the present time styrax is seldom used, except as a constituent of the compound tincture of benzoin. The cinnamic acid obtained from styrax was highly recommended by Landerer.

Inhalations of the *essence of peppermint* were recommended by Braddon. The drug was strongly endorsed by Carasse, of Geno, who claimed marvellous results in forty-eight cases treated with inhalations of peppermint combined with the internal administration of the essence of peppermint with cresote. The remedy was tried in seventeen cases by Rotman, and in ten cases by Whittaker, without benefit.

*Menthol* has been recommended for inhalation by Rosenberg, and has been used internally, 0.10 to 0.15 daily; and also by intra-tracheal injection, 1.15 in oil, and by intra-pulmonary injection. Turpentine may be added to hot water, for inhalation. The following is a good mixture for use in an inhaler: Turpentine, gtt. i-v; glycerine, oz. i; and cherry laurel water, oz. i. But the use of turpentine should not be continued over too great a length of time.

*Cetramine*, a volatile oil derived from abies canadensis balsamica, has been recommended as a stimulant, expectorant and diuretic. It has been used also subcutaneously in the treatment of tuberculosis and lupus.

*Terpin*, used by G. See, resembles turpentine in its influence upon the mucous membranes and nervous system.

*Myrtol* has been recommended by Eichhorst, and is sometimes exceedingly useful, especially in cases of putrid bronchitis. Dose: Five grains in capsule two or three times a day.

Inhalations of *camphor* dissolved in acetic ether, 1:10, acts as a soothing and anodyne expectorant, and has been used especially in advanced septic cases, in the Berlin Institute for Infectious Diseases.

*Gomenol*, obtained from the distillation of the leaves of *Melaleuca viridiflora* (New Caledonia), has been used especially by the French physicians, injected hypodermatically, 1 to 20 c.c., gradually increased, diluted with olive oil, 1.15.

*Oil of garlic* is one of the best remedies of this class. The essayist has secured good results by the use of gtt. i-x, with an equal quantity of oil of cinnamon, internally, in capsule, three times a day, after meals, and hypodermatically once a day, injected with sterilized olive oil.

*Eucalyptus* has been used by inhalation of the vapor of the essence, by Roussel, of Geneva. Equal parts of terebene, creosote, eucalyptol and chloroform have been recommended for inhalation. Roussel recommends the subcutaneous injection of eucalyptol dissolved in vegetable oil or liquid vaseline, 0.25 to 0.50 daily.

*Thyme* has been recommended by Onimus. The essence of thyme vaporized from an incandescent plate over an alcohol lamp discharges ozone and suppresses any bad odor that there may be in the room.

*Thymol*, prophylmethylphenol, has been used internally, in powder, capsule and emulsion, and especially in combination with other agents, as a local application and as an inhalant, gr. ss-v: ʒi. It is also used as a disinfectant for the sputum.

Vapors of the *essence of canella* have been used by Daremberg.

*Peanut oil* has been recommended.

*Oil of cloves* may be given internally, gtt. v-xl, the amount being increased daily until the limit is reached or until the odor becomes apparent upon the patient's breath. It is better tolerated by the stomach than cinnamon acid.

*Ichthyol* is of far less value than creosote. It is sometimes used combined with creosote, and is of especial value in the cases presenting mixed infection.

Frankel employs a mixture of equal parts of ichthyol and water, gtt. xx-xl four times a day. To this mixture a little peppermint may be added, if desired. LeTanneur (*Journal de Médecine de Paris*, August 9, 1896) found a 2 per cent. solution retarded the development of the tubercle bacillus, and a 5 per cent. solution caused absolute sterility. LeTanneur found good results (relief of gastric disturbances and diarrhœa, liquifaction of the sputa with improvement of cough and dyspnea, and a change of the sputum to the normal color and relief of the congestion of the bronchial tubes) from the

administration of ichthyol in gr. iv capsules, four to twenty-four per day.

*Ichthalbin* is better tolerated by some patients. Where expense is an important item, it has been suggested that ichthyol may be substituted by kalagua, gr. iv-viii three times a day.

Numerous mixtures have been used, but time forbids entering into their consideration. The following mixture has been used by Delthil: Essence of turpentine, 350.0; essence of aspic, 100.0; iodoform or iodol, 8.0-10.0; sulphuric ether, 20.0 grammes. The inhalations are practiced for fifteen to twenty minutes several times daily from the mixture contained in a large bottle.

#### REMEDIES GIVEN TO CAUSE CHANGES THAT WILL LEAD TO A NATURAL CURE.

*Cinnamic Acid*.—Landerer sought to imitate the natural cure of tuberculosis by connective tissue encapsulation, by causing an aseptic inflammation about the tuberculous mass. For this purpose he introduced the balsam of Peru directly into the veins of rabbits, whereby he was able to cause the disappearance of the bacilli and a shrinkage and calcification of the caseous masses.

Balsam of Peru has long been used internally, for which purpose it may be taken in small doses upon a lump of sugar, or in larger doses, ʒss, it may be prescribed in water with addition of sugar and the yolk of an egg or gum arabic. It is a good stomachic and expectorant.

Good clinical results were also reported, but better results were later secured by the intravenous injection of cinnamic acid,<sup>14</sup> the efficient constituent of balsam of Peru. The best preparation for this purpose is a 5 per cent. solution of hetol, sodium cinnamate,  $C_6H_5CHClO_2Na$ , in water. The solution should be sterilized before use, best by placing in a water bath for five minutes, and the preparation should be tested for alkalinity (for it should always be alkaline), with red litmus paper. It is probably unnecessary to dwell upon the importance of thorough asepsis in making the intra-venous injections.

Usually the best results are obtained by the injection of small quantities (0.1 to 0.2 cc.) every other day. Gluteal injections have also been used, and in surgical tuberculosis it may be injected into the part. The treatment should be continued from three months in very light cases, to nine months or longer in advanced

<sup>14</sup>Landerer: Die Behandlung der Tuberculose mit Zimmtsäure, Leipzig, 1898.

cases. A better rule is to continue the treatment until four months after the disappearance of the bacilli from the sputum. Krompfeher<sup>15</sup> in experiments upon rabbits, found no immunity was conferred by sodium cinnamate, and that animals inoculated with virulent tubercle bacilli died from tuberculosis when treated with sodium cinnamate as rapidly as the control animals that were not treated after inoculation.

Hodlmoser<sup>16</sup> used intra-venous injections of cinnamic acid daily for one to six months in eighteen cases of tuberculosis, sixteen of which were cases of pulmonary tuberculosis, one tuberculosis peritonitis, and one tuberculosis of the lungs and joints. Improvement was noted in about 22 per cent. of the cases, but it is not known how much this was influenced by the use of cinnamic acid. Kuhn<sup>17</sup> found the use of cinnamic acid harmless, but was able to secure only such slight benefit in the patient's condition as might well be attributed to the improved mode of life. Mann,<sup>18</sup> of Denver, tried the remedy upon himself and attributes to it good results. Mann uses sodium cinnamate by intravenous injection in doses of gr. 1-100 to 1-50, gradually increased to gr.  $\frac{1}{4}$  to  $\frac{1}{2}$ , and has had no bad results in 800 injections. Gidionson<sup>19</sup> found no advantage from the use of sodium cinnamate in twelve cases, but, instead, an actual loss of body weight. Fraenkel<sup>20</sup> found no benefit from the use of sodium cinnamate in experimental tuberculosis of the eye in rabbits. But Fraenkel<sup>21</sup> reported improvement in 90 per cent. of cases, and Weismayer in 74 per cent. Whittaker tried the remedy in six cases. Two incipient cases were benefited temporarily; the chronic cases were apparently unaffected.

Zinc chloride has been used by injection by Lannelongue in the treatment of tuberculosis of

the skin and bones. In the treatment of tuberculosis of the lungs in two infants, one or two drops of a solution of zinc chloride, 1.40, was injected through the second intercostal space. These injections produced only a little cough. In adults it is recommended to inject three minims every three or four days for five or six times.

Calcium chloride has been recommended to assist in the calcification of tubercular deposits and to hasten the cicatrization of ulcerating cavities. A good preparation is the liquid calcium chloridi (Br. Ph.) freshly prepared and given in doses of five to fifty drops *ter die*. It should not be used continuously too long—probably not longer than three weeks without interruption—because of the possibility of causing calcareous deposits in the arteries.

Carbonic-acid gas was used by Weber in the treatment of tuberculosis under the assumption that this gas is the agent used by nature to protect the lungs against the bacillus tuberculosis. Support is lent to this view by the well-known fact that diabetes seems to favor the development of tuberculosis, for, according to Ebstein, there is a defective development of carbonic-acid gas in diabetes. The apparent improvement of tuberculosis often observed during pregnancy has been attributed to the increased production of carbonic-acid gas due to the presence of the fetus. With the expulsion of the fetus the carbonic-acid gas is reduced in amount and the tubercle bacillus grows more readily. Heart disease that produces hyperemia of the lungs, and thus causes a comparative increase of carbonic-acid gas, seems to confer a certain immunity to tuberculosis. Emphysema gives a similar immunity. It is stated that workers about lime ovens are comparatively exempt from tuberculosis. These considerations led Traube to try to cause the formation of carbonic-acid gas in the stomach in the treatment of tuberculosis. To that end he recommended his patients to take, half an hour before meals, twelve drops of hydrochloric acid in a glass of water, followed by a teaspoonful of sodium bicarbonate. Under this treatment improvement was noticed even in severe cases. Later Traube gave the following, half an hour before meals:

Aque aurantii floris .....	{ aa 20.0.
Acidi hydrochloridi .....	
M. S. gtt. 25 in a glass of water three times a day.	

This was followed by—

Ferri oxidii saccharat, solub.....	20.0
Sodii bicarbonatis .....	100.0

M. S.—A heaping coffee spoonful three times a day in a cup of cold, previously boiled, milk.

<sup>15</sup>Ann. de l' Inst. Pasteur, November 25, 1900.

<sup>16</sup>Zeitschrift für Heilkunde, No. xi, 1900.

<sup>17</sup>Kuhn: "Clinical Experiences with Intravenous Injections of Cinnamic Acid in the Treatment of Tuberculosis of the Lungs." *Munchener medicinische Wochenschrift*, March 19, 1901.

<sup>18</sup>Mann: "The Management of Pulmonary Tuberculosis with Special Reference to Treatment by Sodium Cinnamate," *Medical Record*, February 4, 1899; "Treatment of Tuberculosis by Sodium Cinnamate," *Philadelphia Medical Journal*, December 1, 1900.

<sup>19</sup>Gidionson: "The Treatment of Chronic Pulmonary and Laryngeal Tuberculosis with Injections of Hetol," *Deutsches Archiv für klinische Medizin*, Bd. lxxix, hft. 3 u. 4.

<sup>20</sup>Fraenkel: "The Treatment of Tuberculosis with Cinnamic Acid (experiments on rabbits)," *Deut. Archiv f. klin. Med.*, Bd. lxxix, hft. 3 u. 4.

<sup>21</sup>Cited by Hodlmoser.



In four cases treated by Whittaker according to this method no improvement was noted.

*Sulphur* has been used for a long time. Balsam of sulphur, oleum lini sulfuratum, the oleum of the old Edinboro Pharmacopœa, was formerly used in tuberculous in doses of gr. v-xxx, but it is no longer used internally, because of its acrid properties. Galen recommended his patients to go to Vesuvius both for the sea air and for the sulphur. It was demonstrated by Claude Bernard that sulphuric acid injected into the rectum is eliminated through the lungs. The injection of sulphuric acid is irritating, and this fact led Bergeon, 1886, to propose to the French Academy the injection of hydrogen sulphide. This treatment does not influence the tubercle bacillus nor the fever, night-sweats or laryngeal ulcers, and the method has fallen into desuetude. But the treatment does do some good, and the injection or insufflation of sulphuretted hydrogen obtained from some strongly impregnated water is still advocated. The remedy acts as an expectorant, diminishing cough and favoring sleep.

*Lignosulphite*, obtained as a side-product in the manufacture of cellulose, has been used by inhalation. The liquid is vaporized in the room occupied by the patient, by making it trickle over some needle trees, such as firs, or by the use of a suitable apparatus. The beneficial effect of lignosulphite is ascribed to sulphurous acid, the dangerous and irritating properties of which are modified by aromatic and volatile substances.

*Gold cyanide* was probably first used by Chretien, of Montpellier, but was almost forgotten when it was again brought into use by Oesterlein, who used the remedy in pastilles, in doses of 0.004-0.016 two to four times per day. Oesterlein also used gold trieyanide in the form of tablets. Gold has been used, combined with sodium chloride, by hypodermatic injection, in doses of 0.002-0.02 grammes.

*Injections of camphor and oil*, 1:10 to 1:4, have been made by Alexander, Bouchard, Fauro-Miller, and a number of other workers; 1.0-2.0 of the solution may be injected daily for a week, and then the injections should be stopped for a few days, to avoid intolerance. The essayist has used these injections with very pleasant results, especially in advanced cases with cardiac weakness.

Fernet injected *camphorated betanaphthol*, 0.15 twice a week, in the first or second intercostal space.

*Intra-pulmonary injections* have also been made of many other substances, such as bichloride of mercury, carbolic acid, thymol, but without good result.

#### REMEDIES THAT IMPROVE NUTRITION.

Daremberg declared that "the therapy of pulmonary tuberculosis had doubled its power since the authorities have readopted the doctrines of Hippocrates and Galen, who showed that regime and hygiene are the great curative agents."

*Climate*.—If the patient's pecuniary circumstances will permit, he should be directed to seek a high dry climate, where at the same time the comforts of life may be obtained. Strong cases, especially purely tubercular and catarrhal cases, receive more benefit from a cold climate. Feeble, weak patients, especially pneumonic cases, may be sent to a warmer climate. As a rule, the stronger patients may be advised to go to Colorado or New Mexico, when a change of climate is advisable and practicable. Occasionally patients prefer more moderate elevations, which may be secured in Asheville, N. C.; Aiken, S. C.; or in the Adirondacks. When a warmer climate is desirable, it may be found in Lower California, the Bermudas or the Bahamas, as at Nassau.

*Exercise*.—Horseback exercise, long ago recommended by Sydenham, is probably the best. Walking is good and the use of the bicycle in moderation is often beneficial. The use of the automobile is more modern. Pulmonary gymnastics in the form of gentle respiratory exercises are often of the very greatest value. Above all, the exercise should be taken in the open air, especially in advanced cases. All exercises should be taken in moderation.

The use of the pneumatic cabinet is sometimes of value, before there is much softening or the formation of cavities. Diseased or occluded air-cells may be opened up by the inspiration of condensed air and expiration into rarefied air.

*Oxygen* has been used locally in the treatment of tuberculous lesions.<sup>22</sup> Inhalations of oxygen are sometimes justifiable for palliative purposes. They act as a stimulant, and relieve dyspnea, and assist in "smoothing the way to the grave" in fatal cases. The oxygen may be diluted with one part of pure air, or with two parts of nitrogen monoxid.

*Ozone* has been found beneficial in early cases by Caille, and in advanced cases by Ransome,<sup>23</sup> who found, under its use, that patients ate and

<sup>22</sup>Stoker, *Medical Press and Circular*, April 17, 1895.

<sup>23</sup>*Medical Chronicle*, Vol. VIII, page 37; X, p. 97.

slept better, and gained in weight. There are many discrepancies in the statements as to dosage and the best method of administration. Ransome used inhalations, for ten or fifteen minutes, of oxygen containing 9 per cent. of ozone. This would seem near the limit of safety, since large animals may be killed by a 10 per cent. mixture.

*Open-Air Treatment.*—Sanatoria afford an opportunity for the institution of the open-air treatment, and the carrying out of proper dietetic and hygienic measures. Patients who enter a sanatorium or change climate are often more willing to avail themselves of the open air, and this very fact alone would sometimes suffice to make a stay in a sanatorium, or even a change of climate, advisable. For the cases that must stay at home nothing better can be recommended than the open-air treatment.

*Alimentation.*—The value of food in the prevention of tuberculosis is well known. Since the days of antiquity attempts have been made to overcome the waste and emaciation of phthisis by forced feeding. Debove reported some excellent results obtained in this way by what he termed suralimentation. The chief objection to the method is that it, sooner or later, disturbs the organs of digestion. When using gavage, or forced feeding, especially when large quantities of food, such as warm milk, plain or peptonized, and broths or thin gruels, are introduced through the stomach-tube several times a day, it is best to wash the stomach out at least once a day. In all cases the patient should, if possible, lead an active out-door life to prevent the accumulation of imperfectly oxidized products in the body. Weir Mitchell employed massage with increased diet, which forms a valuable combination in the treatment of certain cases. In tuberculosis the digestive power usually exceeds the appetite.

*What should the tuberculous patient eat?* The foods, in the order of preference, should be: Proteids, fats and carbohydrates. Preference should be given to animal food, but not to the exclusion of vegetables and fruits. Raw meat, while not a cure for tuberculous, as alleged by Richet, is an important contribution to the dietary of the tuberculous patient. Scraped meat, properly seasoned, is usually well tolerated.

*Pancreatic emulsion*, an emulsion of beef-fat and pancreatic juice, resembles lard in appearance, and is recommended when the power to digest fat is weak. The emulsion is given in

milk, about an ounce of the emulsion to a pint of milk daily. It is sometimes tolerated better than cod-liver oil; to some patients it is repulsive.

The carbohydrates are usually not well digested; so that the tuberculous patient, as a rule, should avoid starchy, farinaceous and saccharine foods. However, sugar of milk has been strongly recommended in cases with extreme irritability of the stomach.

As to fruits the "grape cure" need not be mentioned, in which excellent results have been secured by the use of ripe grapes exclusively or with the addition of moderate amounts of food containing little or no fats or starches. At the same time the ordinary rules of hygiene, such as regular hours, abundant exercise in the open air, etc., etc., should be observed.

Tropon<sup>24</sup> has been highly recommended by Knopf, and somatos<sup>25</sup> has been used with advantage by Traube.

*Phospho albumen*, "dioleylecithin," has also been commended as a tonic and reconstructive. The dose is a tablespoonful after eating, one to three times a day.

Pure milk is one of the best foods, but it should not be given in such excessive quantities as to damage the heart. Lime-water may be added to the milk, one-fourth to one-third, in the presence of diarrhea; or seltzer-water, one-third to one-half, to prevent constipation. Milk may be given in various forms—sweet milk, sour milk, buttermilk, with the addition of cream, or in the form of malted milk, koumiss, kefir, or matzoon. The use of butter should be unstinted. Eggs, from one to twenty or twenty-four per day, are highly recommended by Osler, and form an excellent article of diet when well borne.

At any rate, the patient should receive an abundance of nutritious food, and the character of the food should be adapted to the requirements and digestive and assimilative ability of the individual patient.

*Hygiama*, a proprietary preparation consisting of condensed milk, cereals and cocoa deprived of its fat, has been recommended by von Noorden. It is said to contain of albuminous matter, 20.4 per cent.; fat, 10 per cent.; and carbohydrates, 63.4 per cent. (*Berliner klin-*

<sup>24</sup>See the article by Finkler, *Deutsche Medicinische Wochenschrift*, November 17, 1898.

<sup>25</sup>See *Lancet*, February 2, 1895, and the *Wiener Klinische Wochenschrift*, December 29, 1895.

*ische Wochenschrift*, No. 20, 1896; and *Deutsche Medicinal Zeitung*, May 21, 1896.)

*Eucasin*, a nutrient preparation made by the action of ammonia upon casein, has been recommended by A. Cohn. (*Centralblatt für innere Medizin*, July 11, 1896). A teaspoonful of eucasin with a little salt may be added to a plateful of mush of oatmeal or rice two or three times a day. There is also on the market a chocolate preparation containing 20 per cent. of eucasin.

*Alcohol*.—It is a grave question whether alcohol does more good than harm, or more harm than good, in this disease. At any rate, alcohol should be used with very great care and discretion, and never in excess. In favor of its use the essayist has, sometimes, found that it may be tolerated, and, apparently, used as a food with advantage, and often it contributes to the patient's feeling of well being, comfort, warmth and strength. Sometimes alcohol acts well as a stimulant, but it is not a reliable stimulant. The chief value seems to be in the treatment of the pulmonary sepsis, that occurs as a secondary infection in phthisis. On the other hand, its use frequently proves absolutely detrimental through causing disturbance of the stomach. Hemoptysis and gastritis are contra-indications to its use. When alcohol is used, good strong Rhine and Hungarian wines are preferred. A teaspoonful of fine old cognac may be given every hour in some cases. In this country whiskey is used, largely because of its greater purity, in doses of half an ounce to an ounce for an adult.

*Cod-liver oil* is generally recognized as one of the best foods. The weight increases under its use, but an increase of the weight does not necessarily mean a cure of the disease. The use of cod-liver oil is of the greatest value as a supplement to other treatment, but should not be used to supplant other treatment. It is not well tolerated in the presence of dyspepsia or fever. Children and dyspeptics may prefer an emulsion, especially a good egg emulsion. When this fails, resort may be had to a preparation of gaduol, an alcoholic extract of cod-liver oil. If necessary, the cod-liver oil may be replaced by olive-oil or glycerine.

Olive oil may be taken with celery or lettuce salad or upon bread a day old.

Glycerine may be taken, 40 grammes per day (Jaccoud), and is made more palatable by the addition of a drop of the essence of peppermint and a little (10 grammes) of cognac or rum.

*Sesame oil*, oleum sesami (U. S. P.), has been used in daily doses of two or three tablespoonfuls up to twice that amount, by R. Stuve, in von Noorden's clinic (*Centralblatt für die gesammte Therapie*, June, 1896). Sesame oil sometimes causes palpitation, nausea, and vomiting, and exceptionally diarrhœa, but it is usually well borne and is one of the most easily digested of fats. It is a good substitute for cod-liver oil, especially in cases of obstinate diarrhœa, which it usually relieves.

*Malt*, in various forms, such as maltzyne, malt extract, and maltine, has been largely used in combination with cod-liver oil, which it readily emulsifies. In summer the combination with the hypophosphites is often advantageous, especially for young people and children. Many of the preparations of malt are inactive.

*Arsenic* is no longer believed to be a specific, but under its use the weight often increases and the patients show improvement. See explained the action of arsenic by a diminution of the waste of the body. Peter attributed to it the stimulation of assimilation, and Darnberg declared that it probably acted through the trophic nervous system. The chief contra-indications to its use are extreme intestinal trouble and hemoptysis. Arsenic may be given in the form of mineral water; in this country we prefer the Roncegno or Leviso waters. A favorite prescription is the Asiatic pill. Probably the most common method of administration is in the form of Fowler's solution, liquor potassæ arsenitis.

*Phosphorus*, especially in the form of the phosphates and hypophosphites, is largely used. An eligible preparation is the compound syrup of hypophosphites prepared with an extra amount of strychnia. The glycerophosphates of calcium, sodium, potassium, magnesium and iron, have been recommended (Robin, Cornet, and Delage).

The following combination was recommended by Marfan, and is excellent when well tolerated:

Cod-liver oil . . . . .	300.0
Creosote . . . . .	15.0
Phosphorus, 1:0000 . . . . .	30.0

M. S. Desertspoonful after meals.

The phosphates most commonly used are those of ammonium, calcium, iron, potassium and sodium.

It has been suggested that the hypophosphites probably act beneficially by supplying the loss through phosphaturia. The good results observed from the ingestion of milk have been at-

tributed to the calcium phosphate contained in the milk. In the same way the administration of common salt, sodium chloride, has been recommended to supply the loss through the sputum and urine. At any rate, it is a clinical fact that the use of salt is of value.

*Phosphergot*, a combination of ergot and sodium phosphate, has been proposed by A. Luton, of Reims (Union med. du Nord-Est; Jour. des praticiens, August 24, 1895), as a stimulant. The usefulness of the remedy is largely curtailed by the fact that it may not be continuously used for a long time. It is said to be of value to tide the patient over critical periods. The dose is about gr. xv of ergot and gr. xx of sodium phosphate, once a day before breakfast. It may be given internally in mixture, powder or pill, or it may be used hypodermatically.

*Spermin*, by subcutaneous injection, recommended to increase the tone of the nervous system, probably acts largely if not entirely through suggestion. Under its use there has been observed an increase of appetite, relief of night-sweats and improvement of strength. But the disease remains uninfluenced.

#### CARE OF THE SKIN, MOUTH, ETC.

The skin, which is developed with the nervous system from the epiblast in the embryo, has been aptly described as the terminal expansion of the nervous system. The value of massage in tuberculosis has been attributed to the excitation of a trophic action of the nervous system. At any rate, clinical experience has demonstrated the value of daily massage, which may be employed in conjunction with the cold douche, especially in early cases of tuberculosis in the absence of fever. Massage improves the circulation and thereby favors the nutrition of the tissues; and the cold douche stimulates respiration and all the organs of the body.

The care of the mouth, especially of the teeth, is of great importance. The teeth should be kept clean. Inasmuch as caries of the teeth may be tubercular, and may impair digestion even when not tubercular, the services of a dentist may be demanded. The mouth should be washed occasionally with some mild antiseptic solution. For this purpose, a good solution is oil of cinnamon in alcohol 5i: ʒi, added to water as a mouth wash.

#### SURGICAL TREATMENT.

Parenchymatous injections were probably first made by Wilhelm Koch, 1873. Later the aspiration of cavities and the injection of anti-

septics was practiced by Mosler and others. Cavities were opened and drained by Pepper and Fenger. Experimental resections of the lungs of dogs were made by Gluck, 1881, and by Schmidt. Thereupon tuberculous lungs in man were resected by a number of surgeons (Block, Kaenlen, Ruggi, Tuffier). Unfortunately, the tuberculous process is never entirely circumscribed at the apices, and reinfection occurs from the bronchial glands and other depots of the disease.

#### MISCELLANEOUS TREATMENT.

The following remedies have been recommended, but deserve only to be mentioned at this time:

*Methylic alcohol* (introduced under the incorrect name "naphtha") (Dr. John Hastings, London), probably acts as a narcotic sedative.

*Ammonium borate*, ammonium baborate, has been recommended in phthisis (Lashkevich, 1887). It may be given, gr. v. three times a day, preferably with some other sedative, such as codeine, for the purpose of relieving expectoration and reducing fever.

*Ammonium carbonate* is probably eliminated partly through the lungs and acts as a stimulant to the respiratory centres, and is sometimes of value, especially in advanced cases, to aid in the expulsion of the sputa. Gr. v. may be given every two hours in a mixture.

*Anacahuite wood*, *Cordia Boissieri*, was imported into Germany from Mexico in large quantities in 1860, but soon lost its reputation as a remedy for phthisis.

*Anthriscus cerefolium* has been recommended as a remedy for phthisis. It is chiefly used in broths.

*Asafetida* has been used as an expectorant and antispasmodic. It may be given in pill or emulsion in gr. x doses, or in the form of the tincture. J. W. Wood has recommended for children the syrup, containing about gr. ii to the teaspoonful.

*Asclepias*, the root of *asclepias tuberosa*, has been used, especially in the South, in the form of powder, gr. xx-ʒi several times a day. It is said to act as an expectorant and gentle tonic.

*Benzeugenol*, benzoyl eugenol, C<sub>7</sub>H<sub>6</sub>O<sub>3</sub>, has been used as an antiseptic.

*Chaulmoogra oil*, oleum gyncardiae, has been used both internally and by innunction. The remedy is probably of more value in leprosy than in phthisis.

*Chicory*, *chicorium dutybus*, succory, has been

used in decoction, ʒiii: Oi. Sometimes the use of coffee contributes to the nervousness of weak tuberculous patients. Coffee may then be advantageously substituted by chicory, or, better, by one of the cereal preparations.

*Chinosol*, quinosol,  $C_9H_8O$  No S  $O_3K$  Aq., potassium oxyquinoline sulphonate, has been used internally and by local injection in tuberculosis and as a substitute for iodoform, mixed with boric acid, in the local treatment of tuberculosis. As a local application, a solution of 1:500-1000 may be used one to three times a day. Caution is advised in the internal use of the drug. F. Hooday found the limit, in experiments upon cats, to be gr. 1-16 per pound of body weight.

*Cimicifuga*, black cohosh, black snake root, has been used and found of little or no value. Dose: powder ʒi-5i; fluid extract, fʒss-i, three or four times a day in water. *Cimicifugin*, or *macrotin*, an impure resin obtained by precipitating a saturated tincture with water, is used by the so-called "eclectics" in doses of 1 to 2 grains.

*Cocillana bark* resembles the action of ipecac as an expectorant, but it is more stimulant. Dose: M.x-xxv of the fluid extract; fʒss-ii of the 25 per cent. tincture, repeated every three or four hours.

*Colombo* is sometimes useful as a tonic, especially in combination with other remedies.

*Comfrey*, *symphytum officinale*, a so-called "domestic" remedy, possess demulcent properties like marshmallow.

*Copper Salts*. See the review of the monograph by M. Lutton, *Rev. internat. de bibliog. med.*, July 10, 1895.

*Drosera*, Sundews, *Herba Rorellæ*, *Rosolis*, *Rosee du Soleil* (Fr.), *Sonnenhau* (Ger.), *Drosera rotundifolia* and *Drosera longifolia*, has been recommended, but is probably of no value.

*Gelsemium*, yellow jasmine, is said to benefit the hacking ineffectual cough of phthisis. Dose: M.ii-v of the fluid extract; gr. ss-ii of the alcoholic extract; m.v-xx of the tincture, repeated every two or three hours. The alkaloid *gelsemine* and its hydrochloride may be given in doses of gr. 1-60 to 1-20, but these are uncertain preparations and possess no practical advantage over the officinal preparations.

*Herb Robert*, *Geranium Robertianum*, *Herbe a Robert* (Fr.), *Ruprechtskraut* (Ger.), has been used internally and as a gargle.

*Iodoform* has been used internally, gr. i-iii in pill or capsule three or four times a day.

*Ammonium iodide* has been used (B. W. Richardson, London) in incipient phthisis. Dose: Gr. i-iii. It is said to be of most value in affections of the glands.

*Lungwort*, the leaves of *pulmonaria officinalis*, has been used in phthisis, but is of doubtful value.

*Palladium chloride* has been used by Cohen as an oxidizing and antiseptic agent because of its affinity for hydrogen. The dose, internally, is gr. iii-v of a 3 per cent. solution, well diluted.

*Petroleum*, especially the crude semi-solid product known as "rod wax," has been recommended internally. A similar product, *huile de Gabian*, has been used for a long time by the French. It is probable that the drug acts only as a feeble laxative.

*Piscidia*, Jamaica dogwood, may be used as a cough sedative in doses of fʒss-i of the fluid extract. It has the advantage of not interfering with expectoration.

*Pleurisy root*, *aselepias*. (See above).

*Potassium chlorate* was at one time used in phthisis, but it is of no value.

*Potassium sulphocyanate*. Some experiments by Martinotte are recorded in the *Riforma Medica*, February 13, 1896; *British Medical Journal*, April 11, 1896.

*Quaillaia*, soap bark, has been recommended as probably stronger and better than senega as an expectorant.

*Saw palmetto* is said to be sedative, diuretic, tonic and expectorant. Dose: fʒi-ii of the fluid extract.

*Scarlet pimpernel*, *Anagallis arvensis*, has been used internally. Dose: Gtt. xx-xxx of the tinctura *pimpinellæ* (Ger. Ph.) to be taken on sugar.

*Sodium benzoate* has also been used internally, ʒi-ii per day, in divided doses.

*Taraxacum*, the root of the dandelion plant, has been recommended in phthisis, upon which it has been supposed to have a favorite effect through its action upon the stomach, liver and intestines. The dried root may be used as a substitute for coffee.

*Water avens* has been used as a popular remedy in the debility of phthisis. The dose of the powdered root is iʒ-5i, three times a day; of the decoction ʒi:Oi, one or two fluid ounces.

*Water hemlock*: The seeds may be given in water gr. v-vi at a time, up to ʒi per day.

*Wild cherry*, *Prunus Virginiana*, produces little or no appreciable effect in phthisis.

## INUNCTIONS.

*Iodine:* Lawrence Flick has used inunctions of various iodine compounds, such as iodoform, europhen, iodol, and aristol, dissolved in olive oil or cod-liver oil. Flick prefers the solution of europhen, from which he claims good results.

*Silver:* So-called soluble silver, *argentum solubile*, contains 97.2 per cent. of silver, and has been recommended by inunction by Crede—3.0 daily. The essayist's experience with this drug has led him to believe that it is almost, if not entirely, inert.

Among the so-called "domestic" remedies may be mentioned the local application of *petroleum*, of *croton oil*, and of *Burgundy pitch*, for the production of moderate irritation of the skin.

## INHALATIONS.

*Belladonna:* Fresh belladonna leaves, infused in a strong solution of opium, and dried, have been smoked with alleged benefit.

*Benzoic acid* has been used internally and by inhalation of a spray (5 per cent.) without any real benefit.

*Boric acid*, in saturated solution, may be used as a spray when there is profuse expectoration. It has also been used internally, gr. x, three times a day, from which some slight benefit has been claimed.

*Hydrocyanic acid* (Koritschow).

*Hydrofluoric acid* (Garcin).

*Ammonium fluoride*, 2:1000 solution.

*Hydrogen* (Beddoes).

*Nitrogen* (Betances).

*Nitrogen monoxide* has been used by inhalation, in the terminal stages, to relieve cough, promote sleep and prolong life.

In the selection of diggers of nitre earth, in the saltpetre caves, preference has often been given those with diseased lungs, for humanitarian reasons, because of the improvement often observed in such cases. Fifteen tubercular patients that took up their abode in Mammoth Cave, found that the proximity of *potassi nitras* did not counterbalance the lack of sunshine, and the experiment proved as dismal a failure as did the attempt of these poor unfortunates to grow flowers about their huts in the cave, away from the sunlight.

*Osmic acid* (Valenziella).

*Picric acid* (Hue).

*Sugar:* The vapor of boiling cane-juice has been highly recommended by Dr. S. A. Cartwright.

*Tar:* Inhalation of the vapor of tar has some influence in allaying cough.

*Helenin* (Korab). This is a camphor-like principles of *Inula*. The dose is gr. 1-6 to 4 three times a day.

*Chlorine* (Gibbes and Shurly). Chlorine has been recommended (Gannal, Elliottson, Christison), in minute doses, by inhalation, four to six times a day. For the purpose of inhalation, the inhaler is partly filled with water containing gtt. xx-xxx of chlorine water, or a solution of chlorinated lime may be used, to which a drop or two of sulphuric acid must be added before use. Dr. G. A. William reported good results from the use in an atomizer of the Sharon Springs water, an alkaline water containing chlorine. In some cases, which the essayist treated under the direction of Professor Whitaker, chlorine was used internally, and also by inhalation and intra-pulmonary injection. The chlorine gas was freshly prepared, well washed, and used suspended in water. Some improvement was noted. The inhalations should not be used in the presence of laryngitis, and it is always better to use mild solutions to avoid too great irritation. After intra-pulmonary injection, the odor of chlorine could be recognized upon the patient's breath almost immediately, and the patient did not complain of any discomfort.

*Chlorophenols*,  $C_6H_4Cl.OH$ , are formed by the action of chlorine upon phenol, which produces a mixture of ortho and parachlorophenol, and finally trichlorophenol,  $C_6H_2Cl_3.OH$ . The chlorophenols are said to be more active than carbolic acid, a 2 per cent. solution having greater antiseptic power than a 5 per cent. solution of carbolic acid. A 2 per cent. solution was found by Girard to be irritating to wounds, but Simanoffski used a 20 per cent. glycerine solution upon mucous membranes without irritation. A 10 per cent. glycerine solution of parachlorophenol was used in the larynx by Spengler without irritation and with good effect upon the tubercular laryngitis, besides the production of an anesthesia that lasted for several days. Monochlorophenol has been used as a spray for inhalation and by local application to the larynx in 5 per cent. to 20 per cent. glycerine solution.

*Chlorosalols*, the salicylic esters of chlorophenols, have been used (Passerini) by inhalation with asserted good results.

*Carbolic acid*, phenol, has been used as a spray, gr. i-v to an ounce of water, and by intra-pulmonary injection in 1 per cent. solution.

*Chloroform* (Despres). Inhalation of chloroform, as from a phial, will afford temporary relief in cases of pulmonary and laryngeal tuberculosis.

*Copper arsenite*, Sechele's green, was recommended by Dr. Auide in the form of a spray or vapor, in incipient cases, in conjunction with the hypodermatic administration.

*Iodine*.—Notwithstanding the remarkable results claimed for the inhalation of iodine vapor, it is seldom used at the present time. To lessen the irritating properties of the vapor, Seudamore adds the tincture of conium to a solution of iodine and potassium iodide, for use in an inhaler. (*Conium*, hemlock, has been used in combination with cod-liver oil, in the treatment of phthisis; and the use of its chief alkaloid, *coniine* or *conine*, has been both recommended and condemned. The alkaloid is unstable and is better used in the form of one of the salts, such as the hydrobromide, hydrochloride or benzoate.) To avoid the irritating effect of iodine, the use of *iodized camphor* has been recommended (Barrere). It is used like snuff and at first produces some smarting in the nostrils, but a refreshing sensation is experienced when the vapor reaches the lungs. The inhalation of *ethyl iodide*, hydriodic ether, has also been recommended (Hutet). Gtt. xv may be inhaled for five minutes from three to six times a day. Prolonged inhalation may cause vertigo. Ethyl iodide has a marked sedative action, in addition to the effect of the iodine.

*Aniline oil* (Kremiansky).

#### INTRATRACHEAL INJECTIONS.

*Menthol* (Downie, Coley). Injections are made through a tube, with the use of the laryngoscope, of about a teaspoonful of a 10 per cent. to 15 per cent. solution of menthol in olive oil or vaseline.

*Thyme, eucalyptus and cinnamon*. T. M. Murray treated forty cases with tracheal injections of Mandell's solution, oil of thyme, oil of eucalyptus, and oil of cinnamon, ana, eighty minims in sterilized oil  $\frac{5}{3}$  iiss. Of this solution 45 minims were injected into the trachea, through a curved cannula, three or four times in succession. Cough was relieved for four to eight hours, and the expectoration became reduced in quantity and less offensive.

#### INTRA-PULMONARY INJECTIONS.

*Methylene blue and pyoktannin* (Petteruti, Mirto and Althen). Pyoktannin injections

have been followed by a reduction of temperature and a disappearance of the tubercle bacillus. The injections, however, may injure the kidney.

#### SUBCUTANEOUS INJECTIONS.

*Aristol* has been used hypodermatically, 1-3 cc. daily of a 1 per cent. solution in oil of sweet almonds. Under such treatment there has been noted a diminution of cough and night-sweats in six or seven days and an increase of weight in twenty to twenty-five days (Nadaud).

*Iodipin*, an iodine addition-product of sesame oil, containing 10 per cent. of iodine, has been used hypodermatically by Crofton.

*Methyl-violet* (Boinet).

*Sodium formate*,  $\text{NaCHO}_2 + \text{H}_2\text{O}$ , may be used subcutaneously, gr.  $\frac{1}{4}$ -i at intervals of a week to ten days.

*Rectal Injection*.—Blood (Whittaker).

*Transfusion*.—Blood (Carmalt Jones).

#### ELECTRICITY.

Transfusion of antiseptics (formaldehyde, iodine, mercury) by means of static currents of high and low tension (Grotte).

Electrization of the cervical sympathetic (Liebermann).

Faradization of the thorax (Soupinsky).

Laryngeal electrolysis (Gruenwald).

Electric light, trans-illumination of the larynx, use of the blue rays, and the use of the electric arc light in pulmonary and laryngeal tuberculosis.

*Roentgen Rays*.—J. Rudis-Jieinsky treated twenty cases with the X-rays with results that he claims are encouraging, although the improvement noted must have been at least largely attributable to the fresh air, good food, and hygienic surroundings.

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## Analyses, Selections, Etc.

### Treatment of Epilepsy.

During the recent session of the American Medical Association Dr. Daniel R. Brower read a paper on this subject, of which the following abstract is taken from the August, 1902, number of *The Medical Standard*:

The want of success in the treatment of epilepsy arises from a variety of causes: (1) The speculative character of the pathogenesis of the disease; (2) want of careful study of individual cases and failures to differentiate the various forms of the disease, such as the primary, essential, the toxic, the traumatic, the accidental, etc.; and (3) there is soon established in the epileptic a habit, and this habit, once established, is not removed by the simple removal of the originating cause of the disease.

The hygienic treatment is of the greatest importance, and in the primary idiopathic cases it should be disciplinary, pedagogic, and dietetic. Patients, who have by inheritance a neurotic diathesis upon which epilepsy has been engrafted, should from the very beginning be taught self-control, restraint of passions and appetites. They are, as a rule, strongly inclined to indulgence in tobacco, alcohol, etc. These should be eschewed by them *in toto*. Their sexual organs are early brought into activity, and they should be warned against the evils of masturbatory and sexual excesses. Their pedagogic training should be carefully directed. The educational training should include physical culture, which should be emphasized in every case. Through active muscular exercise they should find an outlet for their surplus nervous energies that otherwise might escape in their peculiar convulsive movements.

The dietary in all cases of epilepsy should be arranged with care, and each case carefully studied as to digestive capacity. The animal proteids should be entirely cut off, although the consumption of this form of nitrogenous food, as of all nitrogenous foods, should be minimized. But there are very few epileptics who are not really benefited by one meal of meat per day. Epileptics usually have a voracious appetite; they eat their food with rapidity, and without proper mastication. This must be corrected, and from the dietary all pastry, fried foods and coarse vegetables should be excluded. Experience has taught that sodium chlorid and

sugar should always be minimized. Salt starvation results in a more perfect assimilation of the bromids; for I have conclusively ascertained that less of the bromids will control the paroxysms with the salt practically eliminated; also lessened sugar consumption resulted in better digestion of nitrogenous foods.

Careful attention to elimination should be the foundation of the treatment of every case. Insufficient renal elimination is not infrequently present. Elimination by the skin must be promoted by the use of baths, hydrotherapy and massage. Intestinal elimination and intestinal cleanliness are of great importance. The diet should be so regulated as to produce a minimum amount of intestinal fermentation. Of the intestinal antiseptics, may be mentioned salol and aspirin as probably the best. The use of lavage and of colonic flushing, thereby cleansing both ends of the chylipoitic viscera, are not to be overlooked in any case, and the aloetic laxatives, with occasional doses of blue mass or calomel, are aids to intestinal elimination and asepsis.

As to the aura, I recall a patient who wore around his wrist a bracelet of silk, which was so arranged that on the first approach of the aura it could be quickly tightened, and this suddenly applied irritation was usually sufficient to prevent the development of a convulsive seizure. Anything that will produce a sufficiently powerful impression upon the sensory end organs of the place from which the aura seems to proceed will sometimes answer the purpose. The aura should always be inquired into and never overlooked, if present, as an important means by which treatment can be instituted, which will prevent the formation of an epileptic habit in recent cases and assist in breaking it up in chronic cases. Pearls of nitrite of amyl are advised at this stage.

The most generally useful remedy for internal use is the bromids. These afford relief in at least eighty per cent. of the cases. But there is a percentage of cases, not less than ten per cent., in which experience has taught me that the bromids not only afford no relief, but do harm. Of the bromid salts I prefer the bromid of sodium, and have failed to see any particular benefit from a combination of the various bromids, nor any particular advantage from the use of bromid of strontium. The bromids should be administered in some one of the mint waters, changing the vehicle from time to time, in order



that distastefulness for the combination may not be established in any case. In children give a grain for each year of their age. In adults a dose of twenty grains, three times a day, is rarely exceeded, and in every instance it is advised that the bromids be taken after eating. If the dose specified fails to relieve, I add the fluid extract of *solanum carolinensis*. In cases where there is cardiac enfeeblement, the fluid extract of *adonis vernalis* in from a half to five minim doses is added, with advantage to this combination, and relief is obtained without pushing the bromids beyond the sixty grains per day. If this combination fails to relieve the patient, and the other important aids to treatment have been carefully attended to, some one of the coal tar analgesics may be added to the treatment, as acetanilid, phenacetin or antipyrin, and if these several combinations fail to effect the desired result, with the bromid and *solanum carolinensis* treatment, belladonna may also be tried. The anemia of epilepsy should be combatted with the bromid of iron, or with liquor ferri et ammonie acetatis, and sometimes the correction of the anemia will make the treatment, otherwise unsuccessful, satisfactory. The anemia of these patients may sometimes also be combatted by the use of cod liver oil.

In one case the use of antipyrin, with attention to renal elimination, was productive of satisfactory results where the bromids were harmful. Santonin has been used in a limited number of cases where the bromids disagreed with the patient, with some satisfaction; further trial of this drug is urged.

The syphilitic cases of epilepsy require in addition to the moderate use of bromids the most vigorous administration of the iodids that is compatible with the general nutrition of the patient, together with the hypodermatic administration of mercury. Some of the rebellions cases are benefited by the use of nitroglycerin, using a one per cent. alcoholic solution, and giving from two to ten minims, morning and evening.

The surgical treatment of epilepsy is very discouraging. There is nothing whatever in the records of sympathectomy, in ligation of the vertebrae, that will justify recommending them, and trephining is of value only in recent cases with localizing symptoms.

### New Method of Treating Aneurisms.

During the June 14, 1902, meeting of the Orleans Parish Medical Society, of New Orleans,

La., Dr. R. Matas described the method of treating aneurisms in his clinic.

The operation proposed is applicable to all aneurisms in which there is a distinct sac, and the cardiac end of the main artery of supply can be controlled. It can be briefly described as follows:

1. Control of the circulation in the sac by means of the Esmarch bandage and constrictor, or by a tourniquet. Prophylactic hemostasis may also be obtained, but less satisfactorily by temporary compression of the parent trunk at a point close to the cardiac pole of the tumor; this temporary compression may be effectively applied by a provisional traction loop passed under the artery or by the finger of an assistant, or by properly adjusted clamps which will not exercise an injurious pressure upon the tunics of the artery.

2. Free incision into the sac extending from one extremity of the tumor to the other, and evacuation of all clots, so as to expose all the openings or arterial orifices which open into the sac.

3. Obliteration of these orifices by continued or uninterrupted sutures with chromicized catgut or fine kangaroo tendon introduced with a curved round needle on the Lembert plan.

4. Reinforcement of the first plane of sutures by an additional row of sutures; preferably continued and applied on the Lembert plan, so as to protect against leakage and also to reduce the capacity of the sac.

5. Inversion or infolding of the walls of the sac together with the overlying skin so as to completely obliterate the cavity by bringing the walls in perfect apposition with the floor of the aneurismal space. The skin, which is usually relaxed after the evacuation of the aneurism, forms two flaps, which are adherent to the sac, and are readily sutured to the bottom of the cavity by uninterrupted catgut sutures.

In large aneurisms, the obliteration of the cavity is further effected, and the formation of dead spaces between the inverted sac walls is prevented, by deep chromicized catgut or silk worm sutures, which are passed through all of the walls of the sac, including the skin, and are tied over small rollers or pads of aseptic gauze. When the operation is completed, the aneurismal cavity is entirely obliterated without disturbing, in any manner, the sac from its bed or interfering with its relations, or with the collateral circulation. At the site of the bulging tumor which previously existed there is a depression

varying in depth according to the size of the original sac and presenting the appearance of an inverted hollow cone or ovoid. As no exposed or raw surfaces are left in view and the apposition of the skin is complete, there is no need for drainage, and union per primam can be confidently expected, thus greatly abbreviating the duration of the after treatment. A simple sterile dressing is applied and the limb is immobilized with plaster of Paris, if the wound is at the flexure of a joint, or by a suitable splint after a sufficient padding had been applied to protect the parts from undue pressure or exposure to cold.

In applying this modified procedure, two distinct varieties of aneurismal sacs must be kept in mind. In one type the most frequent, the sac is elongated, fusiform or ovoidal in shape and shows on opening two main orifices, which correspond with the inlet and outlet of the main artery. These openings are usually separated by a short interspace of variable length, which is frequently grooved and represents the continuation or floor of the parent vessel. In this variety of aneurism the sutures entirely obliterate the openings, together with the floor of the sac, as the continuity of the artery has been lost by merging with the walls of the aneurism.

In the second type, the true sacular aneurisms, the sac is simply grafted upon a nearly complete artery. In this type the main artery communicates with the sac by a single opening, which is either circular or ovoidal in shape. In this class of cases it is quite possible in dealing with the larger vessels, such as the iliac, femoral or popliteal, axillary, brachial, subclavian, or carotid, to obliterate the orifice of communication by suturing its edges, leaving the lumen of the vessel still open and pervious. This is an ideal mode of restoring the artery to a comparatively normal state, because the aneurismal lesion is simply eliminated by obliteration without interfering with the circulation of the arterial trunks which supply it. The larger the calibre of the diseased or injured vessel, the greater the chances of obtaining this ideal restitution, which should always be borne in mind in applying this method.

Dr. Matas' experience with this operation is limited to four cases, which illustrate the most common types of peripheral aneurism: two of the brachial, one femoral and one popliteal; all successful and all terminating in uneventful recoveries.

The advantages claimed for this operation over the classical procedure are:

(1) It greatly simplifies the technique and by confining the intervention to the interior of the aneurismal sac reduces the risk of traumatism to a minimum.

(2) It eliminates the ligature altogether, and does not endanger the nerves and veins and other structures in intimate relation with the aneurismal sac.

(3) It does not disturb the collateral circulation, and thus reduces the danger of gangrene to a minimum.

(4) It is capable in favorable cases of obliterating and curing the aneurism without obstructing the circulation of the main artery with which it is connected by simply suturing the orifice of communication.

(5) As it simply obliterates the aneurism by lining the cavity with the overlying skin, it favors prompt healing per primam and thus greatly abbreviates the period of convalescence.

#### Malignant Case of Laryngeal Diphtheria Successfully Treated by Massive Doses of Antitoxin.

Dr. L. G. LeBeuf, New Orleans, La., during the April 26, 1902, meeting of the Orleans Parish Medical Society, reported this case to emphasize the fact that in desperate cases of diphtheria, and specially laryngeal diphtheria, we should have no fear of using first a good preparation of serum, and secondly using it frequently and in large doses, until the antitoxin has apparently neutralized the effect of the poison in the subject.

John Streck, aet. 3 years, white male child, well nourished, in vigorous health previously, was seen by me March 5th, for the first time. It was his third day of illness. The little patient was suffering with a dreadful cavernous cough, his respiration came as a stridulous whistle, and each paroxysm of cough seemed to exhaust him in his vain efforts to regain his breath. His throat was a mass of thick, adherent whitish membranes—they covered the tonsils, posterior pillars, velum palati, and seemed to extend down the larynx as far as superficial examination without laryngeal mirror would allow me to see.

The exudate appeared adherent and thick, apparently dipping well into the mucosa beneath, and was of a whitish gray appearance. A cotton swab and a strong spray of peroxide did not

seem to disturb this pseudo-membrane in the least. The child was in profound dyspnea. Inspiration and expiration both loud and labored, and with each inspiratory movement the epigastrium would sink way under the xiphoid cartilage and all the intercostal muscles and the accessory muscles of respiration seemed to be brought violently into play. Child's voice was husky and his cough dry, cavernous, croupy. His face was anxious, and after each paroxysm he seemed prostrated or in a restless, tossing sleep. Pulse 144, temperature  $100^{\circ}$ , and respiration 32. I immediately made a culture of membranes, and as this visit was late at night, I ordered P., D. & Co.'s anti-diphtheritic serum, 3,000 units, for use next day. In the interval, I used very hot turpentine stupes around the neck, strychnia dosimetric granules  $\frac{1}{2}$  milligram every four hours, and a preparation containing tinct. digitalis, bromide of potash, and syr. pruni Virg.

March 6th, patient no better. I injected him in lumbar region with 3,000 units. Pulse 140, temperature (per rectum)  $104.4^{\circ}$  respiration 28. The *tirage* of the abdominal muscles was intense. He seemed to have to bring into play every accessory muscle of respiration. He was dull and inclined to sleep; still, as his color was good, it was judged better to wait for intubation until his condition became more desperate. He was seen that night by a competent laryngologist, with the view to intubation if the condition appeared to justify it. This first injection (March 6th) was performed at 4 P. M. Other sustaining treatment was continued with spraying of peroxide and internal administration of milk, milk punches, and Duero's Elixir every hour.

March 7th, child very much in the same condition, pulse ranging between 132 and 148; temperature (per rectum)  $100^{\circ}$  to  $99^{\circ}$ ; respiration 24 to 28. Abdominal *tirage* a little less, but pulse quite bad, at times markedly irregular and compressible. The child had a diaphanous perspiration and all this day seemed on the verge of death. He was drowsy and semi-unconscious. The appearance of the membranes was just the same. The lymphatics of the neck became involved and his neck was quite swollen. His breathing all that day was very labored and could be heard in the yard as you went up to the house. On this day I injected him three times more, using each time 3,000 units of No. X P., D. & Co.'s antitoxin, always boiling my needle

first and thoroughly disinfecting and scrubbing parts. I alternated first one side and then the next, being very careful to go well through skin into loose alveolar cellular tissue. At no time was there the least unpleasant reaction or the least erythema of any kind of disturbance caused by the serum.

I injected child at 3:10 P. M., at 7 P. M., three hours and fifty minutes' interval, and at 10:45 P. M. that night, making, together with injection of previous day, a total of 12,000 units in less than 32 hours. During this time, child was apparently in extremis and frequent injections were given as a *dernier ressort*. During his coughing spells and when sprayed, he began towards evening expectorating shreds of the exudate, but the mass of the pseudo-membrane was still tenaciously adherent. *Tirage* became a little less and cough was a little softer; still child was very croupy. I received that day a positive report of the culture from the Board of Health bacteriologist, Dr. P. E. Archinard.

On morning of March 8th, child was certainly much better and expectorated after a most violent strangulation fit of coughing, nearly a perfect cast of his pharynx and larynx with three long flat grayish digitations at the bottom, no doubt part of some larger bronchi casts also.

This cast, as we may certainly call it a cast, was, as far as I could see from the piece preserved by the nurse for my inspection, peculiarly shrivelled and burnt-like on the edges. I wish I could better describe this. It seemed to be entirely dried up, coagulated like, if I may use the expression, and the edges shrivelled and dark yellowish. I have no doubt that this appearance was due to the action of the serum on the exudate.

The child also swallowed a large piece of these membranes. Immediately after this his entire condition improved, though at times his pulse was still a little irregular. An examination of the throat showed that it was entirely free of exudate, except at the angles of the tonsils. As the child had stood the antitoxin so well, I decided to again inject it with the serum, to be positive of getting every particle of exudate out of his throat and run no risk of later auto-infection with resulting diphtheritic myocarditis and paralysis. So I injected him again at 7:30 that night, making a total of 15,000 units altogether in a little over forty-eight hours in a child less than three years of age. After membranes were all cleaned out of throat, I changed per-

oxide to weak solution of bichloride of mercury, 1 to 3,000, instructing the nurse to mop every few hours.

The only reaction which seemed to take place in this case, after all this heroic dosage, was a profuse diaphoresis which appeared to weaken our little patient a little, but which answered to sponging and stimulants.

All through this day and preceding day I gave him small doses of calomel of 1-10 of a grain for catharsis, and also as an intestinal antiseptic. Pulse after diaphoresis reached to 111, temperature 100.4°, respiration 22.

March 9th, child doing very well, cough still a little croupy; no pulmonary lesion. Throat entirely clear. Even accumulations on tonsils of day before entirely gone. Pulse ranging from 98 to 126. Temperature (per rectum) 99°; respiration 19. Pulse still irregular at times.

March 10th, child began to nourish quite well and was allowed bouillon (chicken broth) and milk and whiskey. All that day and night perspiration still free. Pulse 108; temperature 99.4°; respiration 20. Intermission of pulse not so pronounced. Croupy cough not entirely gone, but child had regained color and is considered out of danger.

March 11th, pulse still intermittent, but strong and full, not compressible. Child awake and bright; called for food and wanted to get up. Pulse ranged from 80 to 100; temperature 98.4°; respiration 18.

All during March 11th and March 12th, child had still quite an intermittent heart; when most intermittent, it was much faster. When not intermittent, pulse about 84; temperature and respiration normal. After this date intermission disappeared entirely, and on March 15th child was convalescent and taken out of room so as to allow disinfection of premises. He subsequently recovered completely.

REMARKS.—Our former administration of this most potent agent has been revolutionized within the last four or five years. At first used by Von Behring and others, it was administered only in 500 units, or 3,000 units at the most; and it was very rare that a case was injected a second time. To-day the experience taught by my case shows conclusively that if heroic doses had not been used, and used repeatedly, I would have lost my case. Undoubtedly, when aseptic methods are used in its administration and the Parke, Davis & Co.'s serum is used, we have an agent which causes very little reaction and seems

to work the greatest good when administered most fearlessly. It is believed to explain this benignity, that the antitoxin enters directly into combination with the specific toxin it is to neutralize. Hence it is made to combat it without danger to the patient, because probably a neutral salt is formed in the system. It is alleged that there is more danger of unpleasant effects, and of causing reaction, when an injection has been made in a case which was not truly diphtheria. We can easily believe this, if Behring and others are right regarding this thermic action. In spite of such splendid results and in spite of the great reduction of the mortality rate since the use of the horse serum, we must not abandon our other treatment, both local and constitutional. Outside of cases which can always be traced to a bad serum (like the tetanus infected serum of St. Louis), we rarely even have disagreeable results from the most excessive use of the antitoxin. I think that it is admitted that the only real change taking place in the system is the diminution of the red blood cells in the blood. Though our text-books recommend only from 1,000 to 6,000 units, McCallum, in Boston, has repeated 4,000 units, until 80,000 and 100,000 have been given, specially in the infantile paralysis following diphtheria.

A. Zamboni reports two serious cases of laryngeal croup cured by intravenous injections of antitoxin. Since my recent experience with this I may say nearly desperate case of laryngeal diphtheria, I have been especially impressed by an article in Osler's "Practice of Medicine," in which he quotes J. H. McCallum, of Boston, who advises to go on using it until the characteristic effects are produced, whether you use 4,000 or 70,000 units. In severe cases of diphtheria, he does not believe that there is any way of estimating the amount of toxins generated by the exudate, hence his conclusion is to go on administering it until the membranes are shrivelled and the improvement of the patient tells when to stop.

Dr. Guthrie asked whether the most concentrated of the P., D & Co.'s serum had been used.

Dr. LeBeuf replied that the serum used was the single X.

#### Vaginal Section for the Relief of the Uncomplicated Symptom of Sterility.

Dr. J. Riddle Goffe, Professor of Gynecology at the New York Polyclinic, etc., read a paper on this subject during the session of the Ameri-

can Medical Association at Saratoga Springs, N. Y. One of the objects of the paper was to discuss: "Is it justifiable to enter the peritoneal cavity" for the sole purpose of relieving uncomplicated sterility?

The desire for offspring is one of the most powerful instincts that dominates the human breast, either of man or woman, and in the disappointment that attends the failure to realize one's hopes in this direction we have the pregnant source of unhappiness, not only to woman-kind, but the cause of frequent rupture of the marriage ties.

An inscrutable mystery has always shrouded the beginnings of life, and the unfortunate woman doomed to barrenness has been wont to rely on the use of charms, amulets and other marks of superstition to eradicate the curse. Penetrate as we may into the processes of nature, the mystery of life remains a mystery, and the causes of sterility are in many instances beyond our ken.

*Cases of Sterility in the Male.*—Certain facts, however, are within our grasp. We know that the prerequisite of procreation is contact of the sperm cell of the male with the germ cell of the female, and that in them both must exist sufficient vitality to light up by their contact and coalescence the spark of a new life. It is apparent that the responsibility for a barren marital life may rest equally on the man and the woman—i. e., each must contribute the healthy requisite conditions. The reproductive power of the man can be more easily determined than that of the woman, and it behooves any gynecologist who undertakes to solve the problem of sterility in a married couple, before resorting to any serious procedure upon the woman, to make sure that the man is competent to perform his part. It is coming to be realized more and more as this subject is investigated, that many men, through the indiscretions of early life, are responsible for the barrenness of their marital relations, either through the disease existing in themselves or communicated by them to their wives. Careful investigation demonstrates that in many instances the seminal fluid is either devoid of spermatozoa or contains these elements of reproduction in so feeble a form as to be incompetent. The responsibility of the male in this respect as compared with that of the woman is placed by various investigators as varying from one to ten, to one to three. Abram Brothers reports a series of 250

cases. Among these were 72 healthy women, whose husbands were examined. Of these 72 men 22 were pronounced healthy as far as the elements of potency and fructification were concerned; the other 50 were held responsible for the barren wedlock. In other words, one out of every five husbands in the 250 cases was responsible for the sterility.

This author pertinently remarks in this connection: "If we add a certain number of women with pelvic disease—say endometritis, salpingo-oophoritis, pyosalpinx—and if we were able clearly to trace these conditions to latent or active gonorrhœa presented to the innocent brides on their wedding night, how, indeed, would the mighty fall, and the lord and master of creation still further tumble down from his high pedestal!" It is no easy matter, however, to locate the responsibility upon the man. Conscious of his past life and the possibility of its inevitable consequences fastening the unfortunate consequences of the barren wedlock upon him, he fights shy of investigation and with a lofty air insists that the responsibility must be placed upon the woman. For even if no latent gonorrhœa be present and the seminal fluid be fertile with spermatozoa, the sneaking consciousness of the guilt of the wife's incapacity makes him chary of too minute investigation.

*Cases of Sterility in the Female.*—Granting, then, that the husband passes investigation satisfactorily, or insists that the physician accept his statement that all is well with him, what are the conditions in the woman that militate against fecundity or effectually prevent it? From the standpoint of location the causes of sterility in woman may be divided into two classes: 1, the extraperitoneal; 2, the intraperitoneal; or, in other words, 1, those that can be reached without entering the peritoneal cavity, and 2, those that can only be reached by penetrating the peritoneum.

Among the former we recognize such mechanical causes as imperforate hymen, vaginal bands, vaginismus, obstructing tumors, uterine polypi, contracted external os, lacerated cervix, infantile uterus, anteflexions and retrodisplacements, and such pathologic conditions as endometritis, endocervicitis and gonorrhœal inflammation. All of these are important and should have efficient surgical attention in every case subjected for treatment. These conditions are all within easy reach, involving no procedure that is necessarily attended with danger, and

are susceptible for the most part of absolute cure. This has long been recognized, and it has been my custom from the beginning of my practice to declare to any woman seeking relief for sterility, that the cause was to be found in two classes of conditions, one of which, embracing those conditions already enumerated, lay within my power to relieve, and the other involved conditions associated with the ovaries and tubes in a forbidden land; in some instances both conditions might exist. With this explanation and with the full understanding that my efforts as far as they went would be effectual, but might not relieve, I have dilated the cervix, curetted the endometrium, replaced malposed uteri, sewed up lacerations, amputated the cervix, and run the whole gamut of these operative procedures. In many instances success has attended my efforts, and on the whole the results have been satisfactory. Still, there have been a certain number of cases, dotted all along through my twenty-one years of practice, in which, after months of patience and forbearance on the part of the patient, and conscientious, devoted effort on the part of the attendant, the work has been futile and the patient remained sterile.

*Is Sterility not Relievable?*—Herein lies the one reproach and opprobrium to gynecology. Writing on this subject in 1878, Reeves Jackson, of Chicago, said: "Although the uterus is more frequently than any of the others the affected organ—and fortunately more accessible than some of them—we must not forget that the ovaries and Fallopian tubes are likewise very often the incapable ones, but they are, as previously stated, beyond our reach. \* \* \* \* \* One of the most frequent causes of sterility is the frequent presence of undetected disease and malformations of the ovaries, Fallopian tubes and neighboring organs and tissues, which prevent healthy ovulation and the transmission of the ovule to the uterus."

But still the process of fecundation is shrouded in mystery. In every man's experience cases are constantly obtruding themselves in which instances of pregnancy occurred only after many years of unfruitful married life. Cases are not uncommon in which husband and wife have lived together for periods varying from fifteen to twenty years without children, and then suddenly a child appears. And there are cases in which thousands of sexual connections are barren, and again a single one, under

apparently similar circumstances, is fruitful. Cases are also on record in which a man and woman have lived together for years without issue, and suddenly, when otherwise mated, each has become fertile. Many cases also present themselves in which the husbands are suffering from active gonorrhœa and their wives from pus tubes, in which a most unfavorable prognosis has been given, and yet, to the surprise of all concerned, conception has occurred and children have been born.

With these facts before him, after relieving all the apparent obstructions, the gynecologist has stood helpless, not daring to invade the peritoneal cavity unless prompted by the presence of palpable disease. If disease of sufficient extent to be palpable to the examining fingers be present it usually gives evidence of its presence by symptoms more or less annoying and pronounced, such as dysmenorrhœa, backache, etc. Cases, however, do arise in which the general health and resisting power of the patient are such that these pathologic conditions do not declare themselves, and the woman presents herself for the relief of the simple symptom of sterility.

The question then arises, is the surgeon, after making sure to a degree of reasonable probability that the fault does not lie with the husband, and that the extraperitoneal causes do not exist or have been eliminated, justified in invading the peritoneal cavity as an exploratory procedure for the purpose of setting right whatever may be wrong?

*Obstructions About the Adnexa.*—The function of the ovaries and tubes may be defeated by the most trivial mechanical interferences, such as cobweb adhesions surrounding the ovaries or restraining the fimbriæ and binding the tubes in tortuous and constricting positions. These conditions are in many instances the result of remote simple infection from a chronic nonspecific endometritis, and such conditions are not always palpable. On the other hand, cystic degeneration of the ovaries may exist, or a hydro-salpinx, or a pus tube of one side, complicated by adhesions upon the other, and, indeed, all forms of disease known to the laparotomist. Any obstruction, mechanical or pathologic, that prevents the union of the two essential elements of procreation is an efficient barrier to conception and a cause of sterility that must be removed to effect a cure.

Acting upon these considerations, in four in-

stances, during the past three years, I have deliberately invaded the peritoneal cavity through the anterior vaginal fornix, and in connection with dilatation and curettage of the uterus, I have dealt with conditions of the ovaries and tubes for the express purpose of relieving sterility. In three of these four cases I have been successful and have had the satisfaction of having children born to the happy parents.

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## Book Notices.

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**The Diagnosis of Surgical Diseases.** By Dr. E. ALBERT, Late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized Translation from the Eighth Enlarged and Revised Edition. By ROBERT T. FRANK, A. M., M. D. With Fifty-Three Illustrations. New York: D. Appleton and Company. 1902. Cloth. 8vo. Pp. viii-419.

This volume, as explained in the translator's preface, presents to the practitioner and to the student the problems in surgical diagnosis which confront them at the bedside. Theoretical classifications are not adhered to, but instead, diseases are grouped according to similarity of symptoms and points of general resemblance. The subjects considered cover the entire field of general surgery, and are written in such a clear and entertaining fashion that we find the book hard to put aside. It does not seem to have been the intention of the author to make use of the microscope as an aid in the diagnosis of the conditions dealt with, as we see no mention of it. The publishers have used good heavy paper and large type, except here and there having used smaller print in referring to cases, or making explanatory notes.

**Abbott's Bacteriology.**—A Practical Manual of Bacteriology for Students and Physicians. By A. C. ABBOTT, M. D., Professor of Hygiene, University of Pennsylvania. New (6th) edition, revised and enlarged. In one 12mo volume of 636 pages, with 111 illustrations, of which 26 are colored. Cloth, \$2.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1902.

The first edition of this manual was published during December, 1901. We have before us now the sixth edition, which is nearly three times as large as the first—of little more than ten years ago. The gradual increase in size of each of these volumes shows in successive stages

how steady has been the progress in this important branch of medicine, each revision of the work having enabled the author to include the advances made in the interim. Since the fifth edition was issued—in 1899—many important developments have been made, and attention is called to the sections regarding the recent findings as to the causation of cerebro-spinal meningitis and dysentery; also to the "lately revived investigations in tuberculosis, and the discovery of the new group of micro-organisms, which appear to be so closely allied to the bacillus tuberculosis, and the very considerable additions that have been made to our knowledge of the mechanism of infection and immunity, etc." As every detail of work to be done is thoroughly gone into, Abbott's Bacteriology will please the beginner as well as the staid bacteriologist.

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## Editorial.

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### Medical Society of Virginia.

The programme of the thirty-third annual session of this Society, to be held at Newport News, Va., September 23, 24, and 25, 1902, is filled with an unusual number of interesting papers by authors of recognized national ability. Dr. R. L. Payne, of Norfolk, Va., will deliver the address to the Public and Profession; Dr. R. S. Martin, of Stuart, Va., will follow with the address of the President. The subject for General Discussion is Puerperal Eclampsia, with Dr. Herbert M. Nash, of Norfolk, as leader. Dr. Greer Baughman, of Richmond, will follow with a paper on the Pathology of Eclampsia with Microscopic Illustrations. Dr. John F. Winn, of Richmond, will consider the treatment of Puerperal Eclampsia, after which the subject will be opened for general discussion. No speaker will be allowed more than five minutes in ex tempore discussion.

*Papers will be called in the order named:*

1. Puerperal Appendicitis—Before and After Delivery. By invited guest, Dr. Edwin Ricketts, Cincinnati, Ohio.
2. Importance of the General Practitioner Giving More Attention to the Recognition of Accidents Incident to Parturition, Laceration of the Soft Parts, and their Sequela. By Honorary Fellow, Dr. Joseph Price, Philadelphia, Pa.
3. Accouchment Force. By Dr. Christopher Tompkins, Richmond, Va.

4. Special Paralysis and Cerebral Palsies in Children Contrasted. By Dr. J. Allison Hodges, Richmond, Va.

5. Case of Volvulus with Torsion of the Entire Mesentery—Operation—Recovery. By Dr. George Tully Vaughan, Washington, D. C.

6. Curettement of the Uterus. By Honorary Fellow, Dr. George Ben. Johnston, Richmond, Va.

7. When and How to Drain in Abdominal Surgery. By Dr. Stuart McGuire, Richmond, Va.

8. Plea for Mothers and Their Offspring. By Dr. Thomas S. Hening, Winterpock, Va.

9. Gant's Femoral Osteotomy for Correction of Hip Deformity. By Dr. A. R. Shands, Washington, D. C.

10. Public Care and Treatment of Inebriety. By Honorary Fellow, Dr. Thos. D. Crothers, Hartford, Conn.

11. Necessity for Reduction of High Temperature Before the Administration of Pilocarpin. By invited guest, Dr. E. W. Saunders, St. Louis, Mo.

12. Report of Case of Secondary Hemorrhage following Tonsillectomy—Measles. By Dr. Clarence Porter Jones, Newport News, Va.

13. Sarcoma of Larynx. By Dr. Wm. F. Mercier, Richmond, Va.

14. Remarks on Causes and Symptoms which Indicate the Necessity of Wearing Glasses. By Dr. John P. Davidson, Richmond, Va.

15. Cretinism, with Report of a Case, and Treatment. By Dr. S. T. A. Kent, Ingram, Va.

16. Operation for Stone in the Kidney. By Dr. Southgate Leigh, Norfolk, Va.

17. Some Cases of Recurrent Intestinal Obstruction, Deceptive in Symptomatology, and Unique in Causative Agency. By Honorary Fellow, Dr. Wm. L. Robinson, Danville, Va.

18. The Webster-Baldy Operation for Retro-Displacement of the Uterus. By Dr. Chas. R. Robins, Richmond, Va.

19. Appendicitis. By Dr. James W. Henson, Richmond, Va.

20. Subcutaneous Injection of Paraffine for Correction of Deformities—with Report of a Case. By Dr. Junius F. Lynch, Norfolk, Va.

21. Contracted Bladder. By invited guest, Dr. Terry M. Townsend, New York, N. Y.

22. New and Original Stitch Devised for Closing Incisions in the Abdominal Wall. By Honorary Fellow, Dr. Jacob Michaux, Richmond, Va.

23. Some Practical Remarks Concerning Material and Immaterial Man, Which We, as Physicians, are Called Upon to Treat in Disease. Dr. Wm. S. Stokley, Cherriton, Va.

Reading and discussion of papers the titles of which were not received in time for assignment in this programme.

Honorary Fellow, Dr. John Herbert Claiborne, Petersburg, Va., uncertain about title.

Honorary Fellow, Dr. Joseph Taber Johnson, Washington, D. C., will take part in discussion of a gynaecological or abdominal surgery paper.

Honorary Fellow, Dr. J. Wesley Bovee, Washington, D. C., will send title of paper about September 10th.

Dr. Wm. H. Lyne, Somerset, Va., has not forwarded title of paper promised.

Dr. Edward McGuire, Richmond, Va., has failed to hand in title of paper promised.

Dr. Lewis C. Boshier, of Richmond, Va., sent in as the title of his paper, The Advantages of Bladder Drainage as Illustrated by Some Recent Cases. Afterwards fearing he would not be able to finish this paper in time, he requested that his name be withdrawn. After the issue of the official programme, he suggested that the title of his paper remain as given, as he may be able to complete the paper during his vacation.

Since issue of the programme, Dr. G. W. Drake, of Hollins, Va., has announced as the title of a paper, "The Famous Neanderthal Skull."

### State License to Practice Medicine, Etc.

The *Bulletin of the American Academy of Medicine* for August, 1902, gives a condensation of a report presented to the American Academy of Medicine at its meeting at Saratoga Springs, N. Y., June 7, 1902, relative to this matter. The report, in its condensed form, covers 48 pages of the *Bulletin*, and gives practically a statement of the laws of each State with reference to the licensing of practitioners of medicine, surgery, etc. A great deal of useful information is to be found in this report—especially valuable to young college graduates and to those proposing to move from one State to another, etc. It also records the percentage of failures and successes of various colleges of the United States, etc. Before each State Board as recorded, the University of Virginia, at Charlottesville, and the University College of Medicine, at Richmond, show an enviable record even in comparison with the best endowed institutions of the country.



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## Original Communications.

### WHOLESALE POISONING FROM THE PTOMAINE OF MILK.

By T. M. BAIRD, M. D., Sweet Springs, West Va.,

Late Superintendent and Surgeon in charge of the Hot Springs (Ark.) City Dispensary; Late Editor Hot Springs Medical Journal; Resident Physician Sweet Chalybeate Springs, Va., and Sweet Springs, W. Va.; Member of Medical Society of Virginia, etc.

During the past week I have been through a severe ordeal, and think by reporting the matter to the medical profession at once, further mischief of the same sort may be prevented.

On Monday, August 18th, at about 12:30 A. M., I was hurriedly called to see three patients in the same family at the "Old Sweet," who were supposed to be suffering from an attack of cholera morbus; and from that hour until 3 A. M., I was kept busy seeing patients suffering from the same malady; in all, I saw that night twelve persons. The night previous for supper nearly all of the affected persons ate either sardines or berries and drank milk. As the milk at this place is of a fine quality, and the dairy woman, to my personal knowledge, is cleanly and careful, I did not suspect the milk alone, but thought the fish and milk combined caused the trouble.

All of the patients did well under the ordinary treatment for cholera morbus, and were up and about the following afternoon.

Again, on Wednesday morning at about 10 o'clock, I commenced to be called to see patients suffering in the same manner, except the disease was of a more severe type. This time twenty-one of the guests and sixteen negro employees were attacked—some only slightly, others to an alarming degree. I was positive this time that ptomaine poisoning was the cause of the trouble, and recommended that no one should drink milk until the cause had been ascertained, but had no time that day to look into the matter.

The day following eight people were attacked from drinking buttermilk for dinner, and suffered in the same manner as the ones previously affected.

On Thursday, having a few minutes that I could call my own, I went on a tour of inspection. Dr. Ennio G. Williams having just arrived from Richmond, I gladly availed myself of his offer of assistance, which I found valuable and was much appreciated. We inspected the kitchen, but could find no plausible cause of the trouble there; we then went to the cow lot and inspected the cows, which are a fine lot, and seemed perfectly healthy, all of them having healthy calves. Next, we went to the dairy, which we found beautifully kept and scrupulously clean. The manager of the farm and Dr. Williams drank some of the buttermilk, and declared it to be delicious, but I thought that under the circumstances I could not afford to take the risk. The milk made Dr. Williams quite sick in about six hours, while Mr. Beckner, who drank more than a quart, was not affected at all.

The only thing about the dairy we did not like was that the milk was kept in metal vessels, which we condemned as the cause of the trouble. A family of twenty-four people, outside, and about ninety young children at the springs got milk from the same dairy, and were not affected at all, but they got the milk fresh from the cows before it was allowed to stand for any length of time in metal vessels, proving that the milk was pure, but when allowed to stand over night in metal vessels fermentation took place and ptomaines made their appearance.

For twenty-three years the dairy has been kept in this manner, and this is the first appearance of any trouble. Doubtless there are hundreds of dairies in this State alone that keep milk in metal vessels. On our recommendation the "Old Sweet" dairy at once secured earthenware vessels, and no further trouble need be apprehended. That there were no fatal cases is remarkable, although the sensational newspapers

throughout the country reported many deaths and many other exaggerations.

I would recommend that physicians give this matter some attention, and advise their parishioners to use earthenware instead of metal vessels for milk. I know of a large dairy in the State of Virginia that sends cream all over the State in metal vessels. There has never been a wholesale poisoning from this dairy, but I think it more than likely that ptomaine poisoning has occurred from the use of this cream, but the cause of the trouble was never definitely ascertained.

The manager and about fifty guests of the Old Sweet Springs have gone through a severe ordeal, but their sufferings may prove a blessing in disguise if this report of their sufferings will cause other hotels as well as private families to take timely warning.

In conclusion, I will quote the following from *The Annual of Universal Medical Sciences, 1900*: "The ptomaine of milk is treated by Delfin, and his conclusions are, that milk may, during its fermentation, give rise to a large number of alkaloids, which are possessed of very toxic properties, and that milk, and, in fact, all albuminoid substances, may undergo such changes by digestion that may produce the same effects as if a pathogenic bacterium had been injected, and that the use of metallic vessels hastens this process."

### ABSENCE OF APPENDIX VERMIFORMIS IN TWO CASES.

By JACOB MICHAUX, M. D., Richmond, Va.,

Ex-President and Honorary Fellow of Medical Society of Virginia,  
Professor of Obstetrics, University College of Medicine, Richmond, Va.

I wish to report two cases of absence of the appendix vermiformis occurring in my practice during the last eight months.

*Case I.*—Mulatto girl, age 24; well made, strong and rather fat, weighing about 145. Sudden and severe pain referred to the region of the caput celi, rigidity of abdominal muscles over the painful area, and temperature 103°. Diagnosis, appendicitis. Operation was advised, but declined. After a week of suffering with aggravation of symptoms, operation was consented to and performed promptly. The cæcum was loosely attached, unusually so, and was withdrawn from the incision and carefully scrutinized, but no appendix was found, and not

the faintest trace of one. Nor was there any trace of former inflammation, adhesion or remnant upon the cæcum. The search was continued to a point far beyond the ileo-cæcal junction, but with no better success. A hard mass was found under the colon and behind the peritoneum, extending down to the ileo-cæcal junction, which proved to be a peri-nephritis abscess. This abscess ruptured during the examination. A large rubber drainage tube perforated along the sides was passed through the abscess cavity and carried through the body through the lumbar region. After several weeks, during which the patient improved rapidly, the tube was withdrawn, and under an anesthetic, the opening in the rear was enlarged and the kidney was examined, and found healthy, and the cavity explored and drained from the rear. Recovery was rapid, the cavity closed up, and the patient discharged.

*Case II.*—White girl, age 15; hysterical and in bad physical condition. Pain was referred to the region of the cæcum, with slight elevation of temperature and rigidity of the overlying muscles. Diagnosis, appendicitis, with ovarian trouble. Operation was advised and performed at once. Upon careful examination of the cæcum no appendix was found, and not the slightest trace of one and no trace of former inflammation, adhesion or stump. The incision was extended downward and inward, and the ovaries examined. The left one was found to be sound and left undisturbed; the right one was degenerated and converted into cyst of the size of an English walnut. This was removed. Recovery was uneventful.

I have not looked up the subject, but know personally of no other cases in which there was complete absence of the appendix either in my own work, now amounting to about 90 cases, or in that of any of my acquaintances. It may be, if I may venture into the field of the evolutionist, that man is slowly becoming an appendixless animal, and that nature, in consonance with her law, is evolving an appendixless race. The evolution theory (or rather fact) appears to throw more light upon the existence of this useless organ than any other yet brought forward—viz., that in his former lower animal state man or his progenitors, of the lower Simian orders, or, perhaps, orders even lower still, had uses for this organ, which in his higher development have ceased to exist.

323 E. Franklin St.

## Analyses, Selections, Etc.

### History of Anatomy.

The *Cincinnati Lancet-Clinic*, September 6, 1902, gives a few condensed statements from the Sixth Edition of J. A. Fort's *Descriptive Anatomy*, Paris, 1902, that merits a full English rendition from the text.

FIRST PERIOD.—*Up to the Time of the Dissection of the First Human Body.*

Although this period comprehends nine or ten centuries, it is relatively short, owing to the defective knowledge of men given to the healing art, who were, moreover, priests operating especially by suggestion. We find in Portal lines that others, more skillful than we, can explain: "After the deluge anatomy made rapid progress. They commenced to seriously study the entrails of death's victims." According to this, then, they knew some anatomy before the flood. Hippocrates, who lived 456 years before Christ, was, in his day, a great physician, but a wretched anatomist, for he never touched a cadaver, although he had the desire, probably, to dissect it.

SECOND PERIOD.—*Herophilus and Erasistratus.*

During many ages no one dared dissect the human body; it was Herophilus who inaugurated an era, short it is true, but consecrated to anatomical work.

Herophilus, pupil of Praxagoras, was born forty years after Aristotle, at Chalcedonia, city of Bithynia, about the 109th Olympiad, 344 years before Jesus Christ. (This date is claimed by Torue to be uncertain; according to Servus, it was 280 before Christ.) This was an epoch at which people renounced war and conquest, and gave themselves generously up to the sciences, letters and the arts.

Like the physicians who preceded him, Herophilus had a great desire to dissect human bodies. He had the good fortune to meet a sovereign friend to the sciences, Ptolemy Sotor, and from him obtained permission to dissect. It is even said that Ptolemy himself did not disdain to study anatomy. It is estimated that six hundred bodies were dissected under the permit, which is evidently an exaggeration. Celsus and Tertullian pretend that Herophilus even dissected living persons, those condemned to death being given him. This accusation shows how much reserve must be held when one reads an-

cient works, that are most often exaggerated. There is no need for sentiment to ask if Herophilus did well or wickedly; it is well to reflect an instant. We cannot add faith to such a legend, because the dissection of a living man is absolutely impossible; the blood from divided vessels would immediately inundate the part operated on. Let us, however, give a few notes to prove how far this idea has been spread.

Erasistratus obtained from Salencus Nicanor and Antiochus, his son, surnamed Sotor, the bodies of executed criminals. He did more, according to some authors. He had so much firmness and zeal for anatomy that he demanded that several of these criminals should be handed over to him alive; he dissected them alive, hoping to discover by this means things that could not otherwise be solved. "Erasistratus and Herophilus," says Celsus, "dissected living criminals condemned to death that the king took from prison and sent them." (Portal, "*Histoire de l'Anatomie*," tome i, p. 46.)

"A tradition that it is easier to contest than refute, for it reposes upon the testimony of Celsus, a previous author, one well informed and judicial. He accused Herophilus of having opened the bodies of criminals given him by the King of Egypt, and opened their living entrails to discover the secrets of life. Erasistratus, too, according to the same authority, did the same thing, so that the names of these two men became inseparable in the history of the anatomical art." (Guardia, "*Histoire de la Médecine*," 1884, p. 10.)

"It was necessary, said the Dogmatists, to open human bodies, and one cannot too much praise Herophilus and Erasistratus for having the courage to dissect living criminals, to the end of considering the parts that nature hid, to examine their position, color, texture, size, density, supporters, autoctenosis and prolongations of different folds; for it is not cruelty to seek knowledge on the bodies of a small number of criminals who render service to future ages in the conservation of an infinite army of innocent peoples." (Celsus, "*Protat*," liber i.)

The writings of Herophilus have been lost, and we only know of him what Galen has left us. He founded the school of Alexandria. He principally studied the nervous system, the mesenteric vessels and genital organs. He gave the name of duodenum to the first part of the small intestine. He continued the lessons of his predecessors in confounding the nerves with

the tendons and ligaments. "Certain nerves," says he, "arise from the brain and spinal marrow and obey the will; others unite the bones between them, and also the muscles to the bones."

He gave the name of compressor to the point of reunion of the right sinus, of the superior longitudinal sinus and lateral sinuses, supposing the blood must receive strong pressure at this point. He named *calamus scriptorius*, the vertical and middle ridges of the floor of the fourth ventricle. He distinguished the mesenteric vessels that go to the liver from the vessels attached to the mesenteric ganglions. He likewise studied arterial pulsations, and said their cause resided in the heart. He also gave a succinct description of the epididymis, the uterine tubes, the opening of the uterus, and the os hyoides.

*Erasistratus*.—Coming from the Island of Chios, a descendant of Aristotle, according to Pliny, Erasistratus was the collaborator of Herophilus, and founded, with him, the school of Alexandria. He likewise dissected human cadavers.

He became celebrated through the cure of Antiochus, son of the King of Syria, attacked by a consumptive malady. He discovered the young prince was dying of love for his mother-in-law, the second wife of Salencus Nicanor, and persuaded the latter to give his wife up to the young prince. He occupied himself with the same anatomical questions studied by Herophilus, especially the nervous system. He gave a description of the convolutions of the brain, and divided the nerves into those of movement, that he claimed arose in the dura mater, and those of sensation, that came from the brain proper. He studied the heart and gave the valves the name they bear to the present day; the sigmoid and triglochines or trienspids. He noted the lacteal vessels (chyliferous vessels) of the goat, but did not know where they originated nor where they went. He refuted an error of his predecessors by proving that foods and drinks did not pour down the trachea as was thought, as the trachea and arteries were supposed to contain air. He distinguished the first of these arteries, and added trachea, that signifies *hard to the touch*. He completed the doctrine of *pneuma*, or vital spirits, that revived the organs. For Erasistratus the air passed through the trachea into the lungs, that he compared to a bundle of wool. The air from the lung descended to the heart by the arterial veins

(pulmonary veins), arriving at the left ventricle, this air was elaborated by contact of the blood, that poured through the interventricular space and formed the animal spirits that were drawn by the contraction of the heart into all the arteries, which produced the pulsations or beatings of these vessels. Like Herophilus, he failed to distinguish nerves from ligaments and tendons. He did not know how to explain the road taken by the bile from the liver to the gall-bladder, yet he supposed that mysterious passages existed. This short period finishes with Erasistratus, and during the time anatomy received an impulsion. With the exception of Herophilus and Erasistratus, who had dissected human bodies, the little anatomy known to physicians had been learned from dissections of animals. After this period, during which the School of Alexandria gave a certain amount of advance to medical science, it is probable that none others dissected. Meantime, this is uncertain: historians do not know if the study of anatomy were continued on the human body at the School of Alexandria, where they still made demonstrations with human bones, according to Galen.

#### THIRD PERIOD.

This period lasted more than sixteen centuries, during which period they did not dissect.

*Dioscorides*.—Pedianus Dioscorides was the most celebrated Greek doctor of his period. He lived under Nero, towards the end of the first century A. D., but, properly speaking, he was not an anatomist.

*Galen*.—We shall not dwell at length on the part played by Galen and his qualities as a surgeon and anatomist. A man of great intelligence, he worked without ceasing, and wrote about five hundred volumes.

Claudius Galen was born at Pergamos, in Asia Minor, in the year 128 A. D., as has been proven by Jean Gaulin, historian of the eighteenth century. He was not born in 131 A. D., as before thought. He was the son of one Nicon, a rich senator of Pergamos. He was most carefully educated and frequented various schools, principally those of the Stoics and Epicureans. He commenced his medical studies at the age of seventeen years, and made a judicious choice of his professors, whose lessons he attentively followed. He afterwards travelled in various countries to complete his education, and finally sojourned long enough at Alexandria to be entitled to the doctorate of that school. He

there admired for the first time two human skeletons. After these instructive voyages Galen returned to Pergamos, where he was given official charge of wounded gladiators; he acquitted himself with great credit at this occupation. He was now twenty-eight years of age, and became the most passionate admirer of the ever-immortal Hippocrates. After passing five years at Pergamos, he left for Rome, and at the age of thirty-five years he was celebrated for his cures. He treated successfully, among others, a celebrated peripatetic philosopher Endemus, a relative of the Emperor, also the Emperor himself and His Majesty's two sons. This Emperor, Marcus Aurelius, astonished at the sagacity by which Galen discovered the cause of his malady and remedied it, remarked to Pitholaus, tutor of his sons: "We have only one honest and philosophic physician among us." Galen successfully removed the carion's sternum of a servant of Marullus, that no other doctor had dared to touch for reason of its proximity to the heart. After this operation, easily performed, the pulsations of the patient's heart could be plainly seen. This success excited the envy of the other physicians. Galen was abused, lied about and so insulted that he determined to leave Rome and return to his paternal land; this he did after five years' sojourn at the capital. His heart was broken. His energies failed him, and his enemies found him an easy victim for their wrath. He accepted a test of his skill, an examination that lasted several days, and exposed the organs of respiration and their mechanism. Instead of remaining at his home in Pergamos, he now proceeded to travel to benefit by foreign study again: he was then forty years old. Yielding to an earnest solicitation, he again returned to Rome, where he obtained a new success. They cited his cure of Marcus Aurelius, the Emperor, by the use of theriacum and wine containing pepper, with applications of oil of nard (obtained from the root of a plant used by the ancients) on the stomach.

Galen died in the year 198 A. D., aged seventy years. His death witnessed the decadence of anatomy among the Greeks and Romans. The majority of Galen's works were destroyed by the burning of the Temple of Peace, where they were deposited. Those that escaped this destructive conflagration, principally his works on anatomy, were re-edited by Oribasius, who was born in the year 325 A. D. Galen much deplored the medical ignorance regarding

anatomy. He tells in his third book and eighth chapter on anatomy that the Roman army doctors were poorly educated, being forbidden to dissect the bodies of Roman soldiers, thus did not know even the position of the viscera. "Some anatomists," says Galen, "have dead children's bodies found on the public highways and the cadavers of those bitten by serpents and the wild beasts of the amphitheatre, or the remains of criminals and brigands left on the mountains without burial, and thus have seen that the interior parts are like those of the monkey. As for myself, I have examined, at leisure, human bones that a river had washed from the tomb, have noted the bones of bodies that were picked by birds of prey." All this proves the poverty to which even his anatomical knowledge was reduced. It is not astonishing that Galen even travelled as far as three hundred leagues to see a physician make demonstrations on a human skeleton. This physician Galen was indeed a most extraordinary man.

In his travels, Galen showed a great predilection for the study of plants. He was a polypharmacist of the highest type. He often prepared his own drugs, so that even skilled pharmacists considered them their own make. So it came to pass that a portion of the pharmacopeia bore the names of Galenical pharmacy. Galen's office at Rome was on the Voie Sacree, and was adorned with rare plants he had brought from the Orient. Although he never dissected the human cadaver, Galen made many studies on animals, notably on the monkey, that he claimed was like man. He made some important discoveries in anatomy and physiology and in experimental medicine.

For a long time after Galen, anatomy was greatly neglected. Up to the time of Vesalius, Galen was the object of a superstitious cult. His ideas were so respected that no one was permitted to doubt or make an objection. Everything said contrary to Galen was considered as an error and anomaly, as much so as are regarded heterodox those who disbelieve in the modern germ theory, a poorly demonstrated theory at that. Anything found different from that stated by Galen was deemed an anomaly and error. When this anomaly was even proved to be a constant thing, the difference in view was held to be due to a human degeneration. Vesalius was the first to openly and boldly defy Galenical authority, and he thus awakened all the rancor and hatred of that class of medical men

who cannot tolerate an honest difference of opinion, men who worship at the shrine of every new authority. Vesalius was often obliged to hide the subjects he was dissecting. The influence of Galen went down as regards anatomy even several centuries later.

FOURTH PERIOD.—*Anatomical Period from the Fifteenth to the Nineteenth Century.*

This fourth period is the most important. We see that the study of anatomy really commenced in the fourteenth century, and made immense progress during the fifteenth and seventeenth centuries. In the ages following Galen, if we except the Arabic physicians, who left but little work behind them in this line, there were no very important discoveries. Meantime, physicians had begun to feel the weight of the Galenical yoke and a necessity for real anatomical work, fully persuaded that no man can ever be a good physician or surgeon if he is not an excellent anatomist.

A new love for the study was awakened. It was understood that it lived on errors and prejudices, with superstition, like some other things even in modern medicine. Frederic II, who possessed a part of Italy, issued an edict in the early part of the thirteenth century, a law forbidding the exercise of surgery by those who were not skilled on the human cadaver; this shows that Mondinus was not the first physician of the fourth period who dissected. This Emperor Frederic ordered dissection made in the different universities of his empire and the realm of Naples, yet we do not find any great traces of these dissections, according to Isidore Geofrey St. Hilaire. Frederic had, however, insisted that every surgeon must dissect human bodies for the space of one year at least, according to Lauth. But what difficulties! While the Emperor Frederic II ordered, Pope Boniface II had opposed. By a papal bull issued in 1300 all progress in anatomy had been checked. This bull was intended to prevent the absurd and superstitious practice held by the Crusaders, who cut up and boiled the remains of their relatives who died in expeditions to the Holy Land, in order that the remains might be sent back to their European homes more conveniently. The Court of Rome would not permit human dissection except on special permit, emanating from its authority.

In 1482 the University at Tubingen obtained from Pope Sixtus IV, according to a special privilege to dissect. It is said in this bull that

dissection is absolutely prohibited unless the reigning pontiff gave express permission and consent.

The ordinance of Pope Boniface VIII, upon sepultures inserted in the sixth book of Decretals, named the Sexte, excommunicated all those who disinterred the dead for the purposes of dissection.

### Heat for the Relief of Itching in Ivy Poisoning.

Assistant Surgeon U. S. A., Dr. Chas. Norton Barney, stationed at Key West, Fla., writes to the *Journal of the American Medical Association*, under date of August 12, 1902:

"In connection with the statements of Prof. Edmund Andrews as to the value of strong heat as a remedy for pruritis ani, in his article in *The Journal* of July 12, 1902, I wish to say that since 1896, when its value was called to my attention by the experience of Col. W. H. Forbes, of Milton, Miss., in his own case, I have found strong heat to give more relief to the intense itching of ivy poisoning than any other treatment which I have tried (e. g., combinations of carbolic acid, zinc oxid and lime water, lead acetate and alcohol, lead and opium wash, etc.). Where the affected part cannot be plunged directly into the hot water, the hot water can be sopped on with a sponge."

### Ecthol in Scarlet Fever.

According to Dr. John M. Turk, of Canton, Ga. (*New Orleans Medical and Surgical Journal*, May, 1902), ecthol has more than met his expectations in an epidemic of scarlatina, lasting a year—robbing the disease of its distressing sequelae, such as nephritis, ear complications, aderitis, membranous angina, etc. The remedy should be given early, and as often as every two or three hours in bad cases, until desquamation is over. Ecthol prevents, in large degree, the disintegration of cellular tissue.

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### Death from Sulphonal.

Mr. James Hamilton, Chelsea, in the July 30th number of *Medical Press and Circular*, records a death from sulphonal. Man, over 40 years of age, was in the habit of taking sulphonal for insomnia—measuring it out roughly in his hand. He died in about 6 hours. On being called at 6:15 A. M., the symptoms were: "Moist stridor, resembling the death rattles (which I heard before entering the room), deep coma, pupils contracted and insensible, pulse strong (80 per minute), heart acting well (no murmurs), respiration very slow (about 8 to the minute); at 8 A. M., it dropped to 4 to the minute. The face was dusky; the lips and tongue quite black, and the front of the thorax was also cyanosed. He had passed no urine since 7 P. M. the previous evening, and the bladder seemed empty." "The breathing was nasal, there was no sign of inflation of the lips, and the appearance of the face and the character of the pulse negatived apoplexy." The autopsy also negatived the theory that a cerebral lesion had taken place, as the brain and membranes were intact, although severely congested. The lungs and viscera were also much congested, and the hands were firmly flexed—the thumbs being turned inwards. On the jugular vein being severed, a considerable quantity of gas bubbled up, and a number of blebs caused by gas were found on the surface of the liver. "The severe congestion which was discovered at the post-mortem, suggested to my mind, that bleeding might possibly be a desirable form of treatment in cases of sulphonal poisoning." Sulphonal is decidedly uncertain in its action—often varying to a somewhat remarkable extent in different individuals. Thus, while as many as 1,400 grains have been taken without fatal result, as small a dose as 30 grains has been known to produce serious symptoms.

### Prostatic Gonococcal Auto-Reinfection of the Urethra.

Dr. Terry M. Townsend, of New York city, presented the following paper to the American Urological Association at Saratoga Springs, N. Y., June 13, 1902, which we take from the *Medical Record*, September 6, 1902:

In a recent publication Dr. Valentine has directed attention to urethral gonorrhœal auto-reinfections from gonococci remaining residual in the urethral stroma and adnexa, and pointed out

the difficulties attendant upon the cure of these obstinate conditions. It is with the hope of supplementing this subject that the following observations of gonorrhœal auto-reinfections of the urethra are offered:

Of the complications of gonorrhœa, prostatitis is the most frequent. Most writers agree that posterior gonorrhœal urethritis is almost invariably followed by gonorrhœal prostatitis. Von Frisch forcibly remarks that "almost no case of acute posterior gonorrhœal urethritis occurs without infections of the glands." A study of the methods of prostatic infection causes surprise that any gonorrhœic escapes prostatic involvement.

While direct extension of the gonorrhœal process to the prostatic gland ducts is the most frequent route of infection, this cannot account for many cases in which the posterior urethra seemingly retains its integrity.

Groszlick suggests that posterior urethritis may occur and disappear without observed symptoms during the interval between the patient's visits to his physician. Wossido believes that the posterior urethra in some cases possesses an immunity which allows gonococci to traverse its length and infect the gland without producing urethral symptoms. Another method of prostatic invasion is suggested by Lewis. He believes, with Rona, of Buda-Pesth, in the possibility of gonococci entering the posterior urethra and prostate through lymphatic anastomoses between the anterior and the deep urethra. Still another method is suggested by Lydston, who likens the posterior urethra during ejaculation to the rubber bulb of a syringe. He assumes that the first few contractions of the perineal muscles force the seminal fluid into the anterior urethra and the succeeding contractions and relaxations aspirate the semen, mixed with anterior urethral secretions, into the posterior urethra.

Through whichever method or whatever route the infection occurs, neglected, misdirected, or omitted treatment will result in a chronic gonorrhœal prostatitis, whose recrudescences constitute a never ending danger and annoyance.

For convenience of consideration, these recrudescences may be classified into (1) those which occur before convalescence is established; and (2) those which occur some time after the cessation of all symptoms. That the recrudescences occur in this manner may be explained by the pathology of gonorrhœal prostatitis.

In the lightest and most frequent type of infection ("der acute gonorrhöische Katarrh der Glandulæ prostaticæ"—Finger), only the ducts of the prostatic follicles are affected. "The disease phenomena of this lightest form of prostatitis can hardly be observed alone, as they are so fully covered by the pregnant symptom-complex of acute posterior urethritis." (von Frisch.) The best evidence of this condition is the presence of curled filaments in the urine, first described by Furbringer, consisting of mucus, pus corpuscles, prostatic epithelia, and usually rich in gonococci.

Given this form of prostatic infection, a urethral discharge or excess of moisture free from gonococci, clear urine containing perhaps but few filaments; any mechanical dislodgement of the contents of the inflamed ducts will most likely result in an exacerbation of the urethral discharge and rapid proliferation of gonococci.

It is when the gonorrhœal process proceeds to the prostatic follicles and becomes subacute or chronic that the pathological changes in the gland occur, which makes possible the auto-infections seen after intervals of apparent health. These changes consist of small round-cell infiltration into the peri-glandular tissues, which later take on a cicatricial character, resulting in stricture or obliteration of the ducts. From this connective tissue change, the follicle and remaining part of the duct acquire a racemose appearance, are filled with desquamated epithelia and pus corpuscles, and in many cases the original infectious bacteria.

The causative factors in the dislodgement of this plug of mucus epithelia and pus are usually coitus, nocturnal pollutions, the massen's finger, and sexual excitation without gratification. However, these will not explain the recurrences occurring years after apparent cure. Valentine reports such a case after twenty-five years of healthy marital life. In this case manifestations of incipient, senile hypertrophy of the gland was the motive for consultation. The writer has observed one case of this type, in which the only traceable cause was a period of prolonged physical and mental exertion.

The symptomology contains a few interesting features which differ from those of acute anterior gonorrhœa. Ardor urinae is usually absent and the patient's first indication of an abnormality is a sensation of dampness around the genitalia or stains on his shirt. Unless the condition be recognized at once, and the prostrate

vigorously treated, acute posterior urethritis and an acute recrudescence of the prostatitis occurs. In this event the prostatic symptoms predominate.

If the gonorrhœa be of recent acquisition, in the majority of cases studied, the prostatitis has shown decided tendency to parenchymatous inflammation and to abscess formation. Cases of the second type, where gonorrhœal infection has been of years before, the prostatitis nearly invariably remained follicular, because of the endogenous cicatricial connective tissue in the parenchyma.

The symptoms of prostatitis have been so well detailed by master pens that their recapitulation is unnecessary. The urethral symptoms vary directly with the intensity of the exacerbations of the prostatitis; the discharge and turbidity of the urine diminishing with increased prostatic engorgement and increasing as the inflammation subsides.

After the diagnosis of gonorrhœal urethritis is made, the differentiation between an acute infection and a prostatic recrudescence is more perplexing, and, after the lapse of a few days, even impossible. This differentiation assumes importance, because upon it depends the direction of intelligent treatment, and not infrequently the re-establishment of conjugal felicity.

The following symptoms of acute infections are opposed to those of prostatic recrudescences:

#### IN PROSTATIC AUTO-RE-INFECTION.

History of a precedent gonorrhœa, with posterior invasion.

A short incubation period; twenty-four to forty-eight hours.

The stain is much larger in proportion to the discharge.

Meatus is somewhat puffed and its lips pouting outward.

First portion of urine usually clear and containing the curled filaments of Furbringer.

Discharge unaffected by anterior urethral treatment.

Abrupt onset of acute posterior urethritis.

Appreciable pathological changes, per rectum.

#### IN ACUTE INFECTION.

May or may not have had a previous gonorrhœa.

The usual period of three to ten days incubation.

The stain on the cotton covering the meatus is commensurate with the urethral discharge.

Meatus is usually red-ended and eroded.

First portion of urine almost invariably turbid.

Discharge is reduced by anterior urethral treatment.

Gradual appearance of acute posterior urethritis.

Gland, normal, per rectum.

Since the symptoms are not always constant, and may be masked by disease phenomena not here considered, the microscopic features of the urinary sediment are worthy of closer study.



Accepting Heitzman's differentiation of epithelia in urine sediment, the features found in the incipency of prostatic auto-reinfections of the urethra are here tabulated, with a consideration of their significance.

1. Pus corpuscles—depending in number on the purulence and intensity of the disease.

2. Red blood globules—depending upon the area and intensity of urethral involvement.

3. Epithelia from the prostate gland and its ducts. These preponderate in number over other epithelia found in the urine and are filled with globules of fat, indicating that the chief lesion is prostatitis, and that the condition is chronic. Few of the epithelia from the gland contain endogenous new formations, showing the effect of the pressure by the peri-follicular exudate.

4. Epithelia from the urethra, varying in number with the area and degree of intensity of the urethritis.

5. Epithelia from the urethra, near the vesical neck.

6. Epithelia from the middle layer of the bladder. Heitzman (op. cit.) finds these two latter varieties of epithelia in the majority of cases.

7. Mucus threads abundant, as is the rule, in all genito-urinary inflammations.

8. Fat globules—free, and in the epithelia and pus corpuscles. They indicate a degenerative metamorphosis and signify chronicity.

Taking these features for a premise, the following reasoning is logical. Prostatic epithelia studded with fat globules and some containing endogenous new formations, indicate a chronic prostatitis, hence this is the previous lesion. Urethral epithelia, from both strata and red blood globules, denote acute urethritis, necessarily acute because of the absence of the fat globules in the epithelia and the presence of red blood globules. Therefore, the diagnosis of chronic prostatitis with acute urethritis is inevitable. The infective nature of the disease can be demonstrated by staining a filament or the urine sediment for gonococci. Oftentimes stained specimens show prostatic epithelia containing diplococci with the morphology and staining properties of gonococci. This fact is conclusive proof of the correctness of the diagnosis. In many cases other features are found in the urine sediment from concomitant or pre-existing lesions, but these are aside from present consideration.

While the prostatic infection remains a simple catarrh of the gland ducts, *ceteris paribus*, the prognosis for rapid and complete recovery is good. Unfortunately, the extension is seldom recognized in time to prevent its further progress. Frank suspects and searches for this complication within the first few days of the disease and attains success by vigorous treatment.

The prognosis in prostatic recrudescences occurring some time after the cessation of subjective symptoms must be guarded. Ordinarily, the urethritis yields kindly to treatment, but the prostatic foci of gonococci are not easily eliminated. Those prostates which present a large area of diseased tissue, many nodules of hardening and spots of softening, and of long duration, are most difficult to cure. Van der Poel thinks that catarrhal inflammation previous to the gonorrhœal infection is the cause of these softened spots, and predisposes to a gonorrhœal follicular prostatitis. This will, in part, account for the obstinate persistence of points of hardening and softening even after prolonged treatment. It is well to reserve opinion as to the probable duration of such conditions, and even after the disappearance of disease phenomena to warn the patient of possible future auto-reinfections.

Rational treatment demands simultaneous attention to the prostate and the urethra. This may be accomplished by thorough massage of the gland followed by irrigation of both urethra. Many of the simple infections of the ducts do not require massage. Von Frisch says "the treatment of acute catarrhal prostatitis coincides with the treatment of acute posterior urethritis." However, if there is the slightest suspicion of follicular invasion, and especially if prostatic epithelia abound in the discharge or urine sediment, massage should be instituted. Under any circumstances, this procedure, properly conducted, cannot produce untoward results.

In many cases of chronic prostatitis, effective emptying of the follicles is difficult, in some instances because of the hard fibrous condition of the gland, and in others because of its high location in the pelvis. Mechanical devices to aid the massaging finger have been proposed by several authors, but have not accomplished the results that justify their use.

The frequency with which prostatic massage may be done is quite variable. Ordinarily, afebrile cases of mixed follicular and parenchyma-

tous types bear daily massage well. After six or eight days the interval between massages may be lengthened one day until five or seven days are reached. Old follicular prostatitis do not seem to tolerate treatment oftener than every third day, increasing the interval *pari passu* with the improvement.

In the prostatic treatment the following ends must be attained: (1) Evacuation of the infecting focus or foci; (2) effective emptying of other diseased follicles; (3) *Restitutio ad integrum* of newly-infected areas.

The management of the urethritis does not materially differ from that of acute gonorrhœa, except that intravesical irrigation may be done from the beginning of treatment.

When a stenotic meatus, stricture, or urethral infiltrations exist, instrumental treatment may be instituted in the interim between massages, thereby gaining time in the cure.

The selection of the irrigating fluid depends upon the microscopic findings, silver preparations being preferable when gonococci persist. When gonococci disappear, other bacteria remaining—*e. g.*, colon bacilli, strepto- or staphylococci, solutions of corrosive sublimate are indicated; where no bacteria are demonstrable, astringents.

#### SUMMARY.

1. Early and vigorous efforts should be made to prevent gonorrhœal prostatitis.
2. Once established, all care should be taken to prevent it from becoming follicular and chronic.
3. Auto-reinfections of the urethra from chronic prostatitis can be differentiated from acute infections.
4. An opinion on the probabilities of future recrudescences should be very guarded.
5. Each prostatic massage should be immediately followed by thorough irrigation of both portions of the urethra, to prevent recurrent acute urethritis.
6. Omission of this irrigation is sometimes permissible for diagnostic purposes.

#### Laxative Antikamnia and Quinine Tablets.

Dr. A. H. Ashley, Boston, Mass., has used this combination in severe neuralgic, ovarian and menstrual pains; and his experience teaches that it is a remedy which will replace morphine and meet all requirements.

#### Serum Treatment of Acute and Chronic Articular Rheumatism.

The salicylates are useful, indeed indispensable, remedies in the treatment of rheumatism, but they are not the absolutely certain specifics that it was hoped they would prove to be when they first came into notice. Even when they seem to exert a curative effect, convalescence is apt to be prolonged, and the patient gets up from his bed far from a well man. It is natural, therefore, that a watch should still be kept for other and more satisfactory methods of treatment, and since the belief has become so general that rheumatism is a germ disease, the hope has arisen that a specific serum might be obtained which would supply the defects of salicylic acid.

Menzer, in an article in the *Zeitschrift für Diätetische und Physikalische Therapie*, Vol. VI, No. 4, ascribes favorable results in the treatment of these cases to the injection of a streptococcus serum especially prepared for the purpose. The cultures obtained from the tonsils of rheumatics are not attenuated by passage through animals and then used for the immunization of larger animals, but are kept, as nearly as possible, in their original form by cultivation on ascites fluid to preserve their virulence, and then are injected, in graduated doses, into larger animals. The serum thus prepared is not antitoxic, but antibacterial, and its introduction into the body supplies the latter with bacteriolytic agents. The injection of the serum, therefore, reinforces the natural reactive process of the body. Its action at first is to increase the inflammation and temperature, but later it facilitates defervescence, and in the healthy produces no reaction whatever. Its use in twenty cases showed that it was without effect in diminishing pain or fever, or modifying the usual clinical sequence of events, but as soon as defervescence occurred the patients were fully convalescent and no relapses were observed. The duration of the fever averaged five or six days; that of the temperature, six or seven days, and the first day out of bed was usually the fourteenth. Chronic cases, in particular those that had already resisted the salicylates and other methods of treatment, were cured, or greatly benefited in from two to three weeks. No untoward by-effects were observed, except slight redness at the site of injection and occasional swelling of the adjoining glands.—*Medical Record*, September 6, 1902.

### Treatment of Proctitis.

According to the *Amer. Jour. Surg. and Gynec.*, September, 1902, Dr. S. G. Gant, Professor of Rectal Diseases in the New York Post-Graduate Medical School, divides the treatment of chronic proctitis into palliative and surgical. The palliative treatment consists in the removal of any irritating disease or foreign body in the colon or rectum which tends to aggravate or prolong the inflammation. Antiseptic, stimulating and cleansing remedies should then be applied to reduce the inflammatory process. The diet should consist principally of eggs, milk, cream, nourishing soups, broiled steak, baked potatoes, and koumiss. Fruits and vegetables may be taken in limited quantities except when the stools are too frequent.

As *intestinal antiseptics*, the following may be used:

℞ Potassii permanganatis . . . . . 0.15  
Sodii sulphocarbolat . . . . . 3.5

M. Fiat capsul. No. xx. Sig.: One capsule three times a day one hour after meals. The capsule should have an enteric coating to render it insoluble in the acid secretions of the stomach. Or one may order:

℞ Betanaphthol . . . . . 8  
Bismuthi salicylatis . . . . . 8

M. et div. in chart. No. xxx. Sig.: From three to twelve powders in twenty-four hours; or:

℞ Saloli.  
Bismuthi salicyl., aa. . . . . 10

M. Fit. chart. No. xxx. Sig.: One powder three times a day before meals. When laxatives are necessary the salines are of benefit. Strong purgatives are always contraindicated.

To reduce inflammation and encourage the healing of ulcers, the greatest benefit is derived from semi-weekly enemata composed of:

℞ Argenti nitratis . . . . . 2.65  
Aque . . . . . 480.

M. Sig.: To be used as a local enema twice a week. If this should cause pain the rectum should be immediately irrigated with physiological salt solution.

When the ulcers are stubborn to treatment the mucosa may be mopped frequently with the following:

℞ Bismuthi subnit . . . . . 2.  
Balsami Peru . . . . . 30.

M. Sig.: To be applied locally. A 10 per cent. solution of ichthylol may be substituted for

the foregoing. This is not so objectionable on account of smell as that which Matthews recommends for such purposes:

℞ Bismuthi subnit . . . . . 15.  
Iodoformi . . . . . 2.  
Olei olivæ . . . . . 90.

M. Ft. emulsio. Sig.: To be used as a rectal injection.

### Tubal Pregnancy—Diagnosed a Week Previous to Rupture.

Dr. Edward N. Liell, Jacksonville, Fla., reports (*Transac. Fla. Med. Ass'n*, 1902) the case of Mrs. X., delivered some years ago of two children at full term. Three years ago, ventro-fixation had been performed because of complete retroversion of the uterus, with some prolapse. Menstruation became regular.

On February 10, 1902, she gave history of having missed two periods. The uterus was slightly enlarged; but an orange size enlargement was detected about the left tube. Probable tubal pregnancy was diagnosed; but it was difficult to make the husband realize the condition.

On February 17th, Dr. Liell was summoned in haste, and found patient just rallying from an attack of syncope, and in great pain. She had been taken suddenly with an acute and excruciating pain in the left ovarian region, and fainted away. Examination verified the diagnosis of a week ago with the addition of rupture and hemorrhage; but the patient opposed operation. Palliatives only could be used.

March 11th, tenderness had subsided to map an adherent tumorous mass the size of a small grape fruit, posterior to and to the left of the uterus. Uterus itself not tender and but slightly enlarged. After full explanations she consented to operation March 17th, just one month following time of rupture.

Abdomen opened; enlarged left tube, slightly cystic ovary and mass of dark clotted blood and fresh lymph filled the pelvic space completely, behind and to the left side of uterus especially. Adhesions were readily broken up, and the mass of clotted blood removed. When drawn into the abdominal opening, it was seen that the pregnancy and distension in the distal portion of the tube, near the fimbriated extremity—the tube being an unusually long one.

Convalescence rapid—the abdominal silk sutures being removed on tenth day. Primary union resulted throughout.

### Treatment of Malarial Hemoglobinuria.

Dr. J. S. Helms, Tampa, Fla., during the 1902 session of the Florida Medical Association, read a paper on this subject, which was full of interest and confirmatory instruction. The great importance of the subject cannot be overlooked when we consider the gravity and fatality of the disease, and its extreme frequency of occurrence in most all semi-tropical and tropical countries. It is more or less prevalent in some parts of the Southern States during certain seasons of each year.

The disease may be defined as the manifestation of hæmoglobin in the urine during an attack of malarial infection. Its geographical distribution leads to the belief that it is due to a special form of parasites—probably to æstivo-autumnal infection. Possibly the solution of the problem lies in the chronic pathologic changes which have taken place in all cases of chronic malarial toxæmias and malarial cachexias.

The hæmoglobinuric patient presents the characteristic appearance of malarial cachexia, with changes in the spleen, liver, kidneys and tissues generally. He has had a number of previous attacks of acute malarial toxæmia—each succeeding attack being generally more severe than the former, and requires larger amounts of quinine to control them. He has overtaxed himself, or has been exposed to cold, or subjected to an influence that brings about physiologic depression. There is anorexia, headache, pains in the back and extremities, and loss of energy and a feeling of exhaustion, followed by a severe chill. This is followed by severe lumbar pains, intense headache and pains—especially of the lower extremities, nausea, and vomiting of a viscid yellow bile, stained fluid; face flushed; conjunctivæ injected; scleræ stained yellow; skin assumes marked icteric hue. The patient is restless, and tosses from side to side, and is the picture of anxiety and apprehension. He has intense desire to void urine early in the paroxysm, and perceives it to be of a rosy red color. The urine rapidly becomes deeper in color until it is brownish-black with a greenish tinge and a greenish-yellow foam. Nausea increases; epigastric pain supervenes; the vomitus is dark, murky green, and in some cases black, with granular coffee-ground appearance. The jaundice rapidly increases until a saffron hue develops, which becomes muddy greenish yellow. Consciousness unaffected, but extreme anxiety,

agitation and restlessness increase. Bowels usually constipated. Temperature often high— $104^{\circ}$  to  $105^{\circ}$ . Urine—generally scanty, and loaded with albumen—on standing deposits a copious, reddish-brown sediment. Specific gravity bears inverse ratio to amount passed. Sediment generally contains mucus, bladder epithelium, pigment masses, hyaline and granular casts, with epithelium adherent, and sometimes red corpuscles may be found. Mild cases occur, but generally the condition is aggravated. Slight remissions may occur in fever and the condition of urine; but exacerbations rapidly follow in irregular order, and the attack becomes continuous. Urine becomes more scanty and more albuminous; patient becomes pale; the eyes sunken; pulse rapid and feeble; mouth dry and death follows. Other cases are more rapidly fatal. Nephritis of a fatal character may follow any severe case.

*Prognosis.*—Hæmoglobinuric fevers are invariably regarded with apprehension—1 in every 3 or 4 proving fatal. If patient recovers, he is intensely anæmic, with damaged kidneys, and strongly predisposed to recurrent attacks and finally death. In mild cases, parasites disappear from the blood, and spontaneous recovery results—possibly due to phagocytism.

*Treatment.*—Quinine is the antidote par excellence. All other drugs pale into insignificance in comparison with it. This observation is based on observation of 35 cases in Florida. Hæmoglobinuria is produced in malaria solely by the hæmolytic action of the malarial parasites and their toxins—the process being identical to the processes which take place in the blood in any acute malarial infection. But quinine does not produce hæmoglobinuria. The suggestion that quinine in large doses has an irritating effect on the kidneys in young children is true. But Dr. Helms has never seen a case of malarial hæmoglobinuria in a young child following the administration of quinine—even in excessive doses. Those cases recovered without distressing symptoms other than the urinary suppression. The irritating effect of quinine upon the kidneys would produce hæmaturia rather than hæmoglobinuria. The cases of urinary suppression occurring during hæmoglobinuria are produced by the effect of the parasites and their toxins, and not by the quinine.

In cases where the hæmoglobinuric parasites have disappeared from the blood through natural forces—cases of spontaneous recovery—qui-

nine is not indicated. The microscope should determine the diagnosis.

However given, care must be taken that quinine is absorbed. Administration by the rectum gives uncertain and unsatisfactory results. The subcutaneous method is the safer—especially if the bihydrochlorate, which contains the biggest per cent. of quinine, and is the most soluble preparation—is the best to use. A concentrated solution is best—such as one-half grain of the bihydrochlorate in each minim—injected undiluted. Boil the solution immediately before injecting, and inject hot from a sterilized syringe, after cleansing the skin at the site of puncture. Thrust the needle in vertically and as deep as the length of the needle will allow in the muscular tissue; the buttock is a good place. This method is somewhat irritating; but having adopted it more than one hundred times, he has yet to see an abscess, tetanus or any other harmful effect result. It is necessary that the technique be perfect. If the exacerbations are frequent, irregular, and characterized by chills, increased hæmoglobinuria and hyperpyrexia, or the paroxysms are continuous, he does not hesitate to give as much as 20 grains every 4 or 6 hours until the exacerbations are checked; in milder cases 10 to 15 grains every 4 to 6 hours should be given.

When the stomach can retain and absorb the medicine, Warburg's tincture sometimes succeeds when quinine by the mouth fails. The powdered extract put up in elastic capsules by Parke, Davis & Co., has proven a most satisfactory method of administering the formula of Dr. Warburg.

The administration of calomel in large doses is essential for its stimulating effects upon the secretions of the liver and intestinal glandular system, as also for its diuretic effect. When calomel produces copious black discharges of almost tarry consistence experienced clinicians entertain favorable opinions as to the recovery of the patient. Hyposulphite of soda, sulphate of magnesia, and other saline cathartics are useful adjuvants to calomel.

Diuretics should be given in cases of diminished secretion or suppression of urine. Turpentine, sugar of milk, hot fomentations and saline enemata are the most useful diuretics.

The nausea is best controlled with cracked ice, iced champagne, mustard sinapisms, and morphine hypodermatically. The heat action is best stimulated by strychnia hypodermati-

cally, and intravenous or subcutaneous injections of normal saline solutions, which latter not only stimulates the heart, but is curative by reason of its antiseptic and eliminative effects.

Hyperpyrexia is controlled by prolonged immersion in cold water, rectal injections of ice water, and the use of the ice cap. Antipyretic drugs, as acetanilid, antipyrin, phenacetin, etc., are positively dangerous.

The author concludes with the following propositions:

1. Hæmoglobinuria, as a symptom occurring during a malarial toxæmia, has for its causative factors the actions of the malarial parasites and their toxins on the blood.
2. It occurs only in those who are subjects of malarial cachexia.
3. *Mild cases* tend to spontaneous recovery, without treatment, through natural resistive influences existing in the body.
4. The microscope should be used in all cases to determine the presence or absence of malarial parasites.
5. Hæmoglobinuria is not produced by quinine.
6. Quinine is the curative agent when the parasites are found in the blood.

### Diagnosis of Gastric Ulcer.

Ewald (Twentieth Congress for International Medicine, Wiesbaden, April, 1902), spoke upon this subject as follows:

A classification of the 1,080 cases observed by Ewald during the last ten years as regards age and sex, leads to approximately the same proportions pointed out by other observers. The same is true as to the mortality. The use of the stomach tube for confirming the diagnosis is generally to be avoided. Cases frequently occur without any increase in the secretion of hydrochloric acid. Ewald has found hyperacidity in 34.1 per cent. normal acidity in 56.8 per cent., and subacidity in 9 per cent.; great fluctuations occur in any given case. Lactic acid is always wanting and generally the long bacilli. In patients with gastric ulcer, blood often occurs in the voided contents of the stomach without its being due to vomiting. Hæmatemesis occurred in 54.5 per cent. The diagnostic value of these symptoms is great, and yet the possibility of the blood having some other origin should be borne in mind. Ewald points out three sources of error in this respect: (1) Menstrual hemorrhage;

(2) the hæmatemesis of severe septic processes; (3) the so-called parenchymatous hæmorrhage. The so-called hæmorrhagic erosion Ewald did not regard as a distinct disease picture. Any positive diagnosis as to the seat of the ulcer is uncertain. It at best rests on the finding of a tumor at the pylorus with the remaining symptoms indicating an ulcer. Differential diagnosis here comes in connection with (1) spasm of the pylorus, (2) muscular hypertrophy or cicatricial thickening, (3) carcinomatous new formation. The pain attending gastric ulcer is in no wise typical, this is especially true in old cases, so that confusion with cardialgia sometimes occurs. Those gastralgias are to be expected which occur in the initial stage of tuberculosis, as is the so-called prostatic stage of tabes. Particular attention was here called to hernias of the linea alba, the speaker having seen repeated failures in diagnosis in this connection. The affection assumed to be ulcer can be readily distinguished from hernia by a slight operation. Extreme emaciation and a cachectic appearance seem rarely to have any direct relation to gastric ulcer. Only in very nervous and hysterical persons, on the one hand, and in very fat persons, on the other, who, from fear of pain have limited their food as much as possible, and as a result have become emaciated, can it bear on the diagnosis. The glandular swellings are of slight and untrustworthy value. Great weight is, however, to be placed on the character of the tongue, which in most ulcer patients is moist, red and little or not at all coated. Differential diagnosis from neuroses is practically impossible in many cases, especially in those of young chlorotic, anæmic persons. In such cases one often reaches a correct judgment as the result of giving the typical ulcer treatment. This, when employed with the neuroses, gives no results at all, or only transitory results through suggestions, but has lasting results to show when it has to do with an organic lesion. It may, however, happen that one has every reason for operating on an ulcer or a perigastric adhesion only to find the stomach without recognizable alteration. Of diagnostic importance are the reflex neuralgias in the shape of intercostal pains, pain under the shoulder blades, especially the left, as well as the typical intermittent diffuse pain, with suspicion of marked ague, due to gall-stones. Ulcerations of the œsophagus give occasion to few mistakes, the location and kind of pain and finally the œsophage ex-

amination render the diagnosis sure. The question as to the anatomic nature of the ulcer, whether it belongs to the usual *ulcus pepticum* or to the rarer forms of the tubercular, syphilitic, diphtheric, or uræmic ulcer, can be differentiated from the course of the disease—that is to say, whether the symptoms of ulcer appeared at the beginning or during the course of the affection. Usually, ulcer remains latent in the last-named cases, and has more of a pathologic anatomic than a clinical interest.—*Medical Review of Reviews*, August 25, 1902.

### Value of Roentgen Rays in Treatment of Carcinoma.

Dr. Carl Beck, Professor of Surgery in the New York Post-Graduate Medical School and Hospital, read a paper on this subject before the American Therapeutical Society, May 15, 1902, which is published in full, with illustrations, in the *Medical Review of Reviews*, August 25, 1902.

The curing influence of the Röntgen rays in carcinomatous tissue can no longer be doubted. Morton, Allen, Williams, Weigel, and others besides myself have reported cures in epithelioma. All integumental forms of carcinoma are accessible to Röntgen-therapy, also the tongue and the cervix uteri at an early stage. In spite of this fact I would regard it extremely unwise to leave to the rays what can be done much quicker and more effectively with the scalpel—namely, extensive removal.

But irradiation should be considered in the after treatment as well as in inoperable cases. Even after a thorough operation carcinoma cells are often left in the deeper strata which cannot be reached by the surgical knife.

We must consider that in the majority of cases the recurrence of carcinoma is caused by the epithelial cells of the primarily affected area—and but rarely by those of the secondary foci. Local recurrence, the most frequent form, is always produced by the carcinomatous cells which were left back at the operation, while the indirect type originates from neighboring tissue, which at the time of the operation appeared to be normal, but in fact carried the embryonic elements of carcinomatous infection.

A carcinomatous portion, however, left at the time of operation must not necessarily always be the cause of further infection. The *vis medicatrix nature* often attempts to secure a natural protection by surrounding the cancer alveoli

with giant cells, which, as microscopical examination shows, starts a regressive metamorphosis analogous to the well-known healing processes in tuberculosis. It is the abundance of the epithelial toxins which prepares the soil for the new invasion and further development of the carcinoma cells. This also explains the rare occurrence of blood-metastasis in carcinoma. If these cells could not really be destroyed, but if only a regressive metamorphosis was induced by the rays, a great advance in the treatment of this horrible disease would be made. So far I have treated ten cases of recurrent carcinoma mammae after the operation. In all of them a decided improvement could be observed. One case of adenocarcinoma, recurring three months after most extensive removal by an excellent surgeon, was reported by me at the meeting of the New York State Medical Society, January 29th. Within another three months a large infiltrated mass, reaching from the sternum to the axilla, had formed. The supraclavicular region, shoulder and the whole upper extremity of that side were oedematous to the utmost degree. Near the sternum a small ulcerating area was noticed. The patient suffered temporary pain of great intensity. I did not believe then that there was any possible chance even of improvement, but the husband urged me to try irradiation nevertheless. The whole area was exposed, first at intervals and then every day, for an average of twenty minutes. There were sixteen exposures altogether before the report. After the fourteenth exposure the infiltrated area began to shrink and the oedema disappeared entirely. The recurring growth had reached the pleura, as was evident from the presence of pleuritic effusion, which was aspirated. A specimen taken from the irradiated area showed colloid degeneration, the adenoid character having disappeared. This seems to some extent to show the mode of cell-metamorphosis which the cells undergo after irradiation. The microscopical examination made by Dr. H. Kreuder revealed the following condition: Adenocarcinoma with beginning colloid degeneration. The tumor shows a resemblance to glandular structure, in most parts the alveoli are completely filled with epithelial cells, so that in some places they appear like aveolar carcinoma. Some areas have undergone degeneration, their epithelial cells not taking on the stain the same as the others. The cells have diminished in size, and the degenerated area—except the nuclei—

appears coarsely granular. Changes of the same nature are observed in the epithelium of the skin covering the tumor (also due to the action of the rays). In some parts of the necrotic area a large amount of dense connective tissue and marked vascularity are noticed.

The patient was at the time of the report free from pain and her appetite had increased. A few days later the superficial layers around the ulcerating area shed themselves as scabs.

Even in this desperate case the temporary influence of the rays was well marked. The patient after a long period of euphoria succumbed to pleuropneumonia two months after the report.

In such cases hard tubes must be chosen, while in neoplasms confined to the skin soft tubes are preferable. My observation suggests that irradiation should be begun as soon as union is perfect after the removal of the neoplasm, and should be kept up for a period of several weeks.

The soft tube is the tube par excellence in the Röntgen-therapy of integumental and subintegumental growths. Deep seated or visceral tumors, like carcinoma of the stomach, for instance, are also reached by the rays, provided hard (deep-penetrating) tubes are chosen. But their influence is too weak then to warrant cell-metamorphosis. In thin animals, like mice, rays of great intensity showed marked reaction at the opposite side of the body (abdomen, for instance, when the dorsum was exposed). The signs of reaction at the opposite side appeared a week later, on an average, than those of the area directly exposed. In men visible effects at the opposite side have not been observed.

As to the technique of Röntgen-therapy it is advisable to expose for five minutes at first, and after a week for about ten minutes. If, after a third exposure, two weeks after the first exposure, no reaction has been shown, the patient apparently is not liable to have an idiosyncrasy. Then he may be irradiated every second or third day, and at last daily until intense reaction shows itself.

During the tentative exposure the distance of the tube should be four inches, later on it may be one inch only. Some patients like the direct contact with the tube, and I have seen no harm from it in resistant individuals.

If a large area is to be irradiated the distance of the tube must be greater than if small foci only are to be exposed. Tumors of globular

shape must be irradiated from different sides so that all surfaces may be equally well reached.

In benign integumental diseases a shield of lead must be fastened over the area to be irradiated. It may be attached by a bandage. To the uneven surface of the margin tin-foil or a piece of cork may be added. Corresponding with the area to be irradiated a hole is cut in the shield.

In the treatment of malignant growths, however, the use of a shield is improper, since it is intended to have the influence of the rays extend as far as possible.

During the intervals xeroform salve (1 to 10 lanolin) should be employed.

One of the patients, now fifty-seven years of age, was seen by me first in February, 1894. She then showed an extensive carcinomatous area of the left breast, the axillary glands also being involved. She reported that the first signs appeared a whole year previously, but she did not seek medical advice until there was considerable destruction and pain. I did a very extensive operation, not only removing the pectoralis major together with the axillary glands, but also excising so large an area of adjacent integument that a plastic operation had to be performed in order to cover the large gap. Recovery was perfect until six months later, when a small nodule appeared at the anterior axillary fold. This was again widely removed. Then a period of euphoria followed for a whole year. In September, 1896, a hard nodule originated near the sternum, which was also extirpated. Then there was no disturbance until June, 1897, when a small nodule appeared in the axilla, which was extirpated by Dr. F. Torek, to whom I am indebted for the following report.

On August 7, 1897, there was pain at the site of the last operation. No recurrence. March 7, 1898, recurrence in posterior axillary line; extirpation April 11, 1899, another recurrence, the tumor showing about 3 cm. in diameter; ichthyol-vasogen treatment. On January 16, 1900, the immovable tumor has grown to the size of 8-9 cm. in diameter. Dissection of axillary artery and ligation of the axillary vein. Microscopical examination by Prof. Henry J. Brooks: Carcinoma, with much fibrous tissue. February 14th, wound perfectly healed. February 14, 1901, another recurrence in axilla, tumor being of about the size of an egg. February 19th, operation. Discharged from hospital cured March 8th. August 21, 1901, an-

other large node, probably starting from the stump of the pectoralis major muscle, which is removed. Primary union on August 29th. October 31, 1901, another operation is made in the pectoral region, and two nodules removed in the axillary region. January 13, 1902, another recurrence in the axilla of the size of a filbert, also one tumor below the clavicle of the size of a walnut. A third neoplasm is observed in left arm, in the former region of the pectoralis major muscle and alongside the biceps muscle. None of the recurrent tumors is movable. Medication: Thyroid extract.

In view of this enormous extent of the growths, the arm also being extremely œdematous, a tenth operation seemed to be inopportune, wherefore the Röntgen-therapy was considered now.

Still it seemed to me to be preferable to extirpate the tumorous portions as far as it was possible before resorting to irradiation. I succeeded in removing the whole biceps muscle and a part of the axillary region.

The infraclavicular tumor could not be removed in its entirety. The patient left St. Mark's Hospital eleven days afterwards. The general condition has remarkably improved after ten irradiations, each one lasting about thirty minutes. There is an infiltration below the clavicle and also along the triceps muscle, but no more œdema.

I regard this case, in spite of its imperfect recovery, a triumph of surgery. Nearly nine and a half years have now elapsed since the first sign of carcinoma as observed, and nearly eight years since the first operation, which was performed under the most unfavorable circumstances, due to the patient's own procrastination. The patient still appears well. I expect no recovery, but believe that under the Röntgen treatment her condition will improve still further.

The second case I present is that of an unmarried lady of 47 years who noticed a small nodule in her left breast in June, 1896, which caused slight pain. In October of the same year she consulted Dr. L. Weber, who advised immediate amputatio mammae. But she procrastinated until December 21, 1897, when she submitted to extensive operation. Recovery was speedy, and it was not until August, 1898, when recurrence took place near the sternum. In November of the same year a second extirpation was successfully performed. Another re-



currence took place in March, 1900, but no operation was attempted then, the treatment consisting especially in local application of antiseptics and in the administration of Fowler's solution. On March 17th, I saw the patient for the first time. Then there was a large hard mass of the size of a fist, covering the manubrium sterni, and a large ulcerated area in the left mammary region. Considerable œdema was also present. After twenty-four irradiations, which, on the average, lasted thirty minutes at each time, the large mass above the sternum shrank almost entirely and many of the ulcerations cicatrized. The œdema disappeared completely.

The third case I show, for which I am indebted to Dr. Seneca D. Powell, is that of a married lady of 42 years, whose left breast was amputated by a reputed surgeon three months ago. There was a speedy recurrence in the cicatrix and also a metastatic tumor in the supraclavicular region. The patient suffered from intense pain, which could not be stopped by the administration of large doses of morphine. So far only two irradiations have taken place, but it is most remarkable that after but five minutes' exposure the pain ceased and the patient was able for the first time to enjoy a night's rest. This anaesthetizing influence of the rays is most wonderful in some cases.

### Sterilization of Catheters.

Too many cases of cystitis (especially in the aged) depend upon the carelessness of doctors in the care of catheters. Nancrede and Hutchins, of Ann Arbor, Mich., after much experimentation, lay down the following rules: (1) An infected soft-rubber catheter cannot be completely sterilized by boiling, under four and one-half minutes. (2) Mechanical cleansing from all dried pus, coagulated blood, or mucus will render sterilization easier; and will demand a shorter time to be effective. (3) Elastic (English web) catheters and soft-rubber catheters can be repeatedly boiled for five or more minutes without roughening of their surfaces or diminution of their elasticity or strength. (4) Immersion in a 1 to 2,000 mercuric-chloride solution for five minutes does not "sterilize" any variety of catheter which has become infected, at best only inhibiting the growth of the germs; for if the mercuric salt be precipitated by ammonium sulphide, the germs will grow freely when implanted in culture media. (5) The re-

sults of experiments, as stated in the previous conclusion, indicate that chemical sterilization should never be employed for catheters which are to be retained in the bladder for any length of time, unless subjected to a very prolonged action of the mercurial salt, lest the merely inhibited germs develop. (6) Should corrosive sublimate be employed for the sterilization of catheters, it must be in a concentrated solution, and the catheter must remain in it for a much longer time than the usual period considered amply sufficient in the laboratory, no mere washing with any chemical solution being efficient for an infected instrument. (7) Formalin vapor will sterilize infected instruments in twenty-four hours; how much shorter time will be sufficient has not as yet been determined. (8) All methods of sterilization commonly employed should be continued for much longer periods than the minimum time required for the destruction of germs in the laboratory. (9) English-web catheters can apparently be more readily sterilized by heat than can soft-rubber catheters, probably on account of their interior construction.—*Amer. Jour. Surg. and Gynecol.*, September, 1902.

### Terrible Predicament.

An eminent London physician has a telephone in his bedroom. One night the bell rang, waking both him and his wife. The medico went to the phone, and heard, "Please come at once to Lucessia Square—Lady Brown is very ill." Handing the phone to his wife, with an imprecation, he said to her, "For heaven's sake say the doctor is out of town." The wife complied.

Next morning the doctor called at the Brown mansion to express his deep regret to Lord Brown that he had been absent when called. "But you were really not at home?" inquired his lordship. "Of course not," responded the doctor. "Then, my dear doctor," said Lord Brown, "I must sympathize with you in your terrible misfortune; for I distinctly heard a man's voice in your bedroom, talking to your wife."

### Prepared Post-Prandial.

A young man was slated to respond to a toast at dinner. When called on, he arose somewhat embarrassed, and began: "Gentlemen, before coming here I prepared what I considered a good speech, which was known only by myself and God. It is now known only by God," and then sat down.

## Book Notices.

**System of Physiologic Therapeutics.** Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. *Volume IX, Hydrotherapy, Thermotherapy, Heliotherapy and Phototherapy.* By Dr. WILHELM WINTERITZ, Professor of Clinical Medicine in the University of Vienna, etc.; Assisted by Dr. ALOIS STRASSER, Instructor in Clinical Medicine at the University of Vienna, and Dr. B. BUXBAUM, Chief Physician of the Hydrotherapeutic Institute in Vienna, etc.; and *Balneology and Crownotherapy*, by Dr. E. HEINRICH KISCH, Professor in the University of Prague, etc. *Translated* by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, etc., with *Notes on American Springs*, by Guy Hinsdale, A. M., M. D., Including Special Chapters on *The Classification of Mineral Waters and their Distribution in the United States*, by A. C. Peale, M. D., Aid in the National Museum, Washington, D. C., etc. *On the Practice of Phototherapy and Thermotherapy*, by J. H. KELLOGG, M. D., Battle Creek, Mich., and on *Saline Irrigation and Infusions*, by HARVEY CUSHING, M. D., of Johns Hopkins University, Baltimore. *Illustrated.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. 8vo. Pp. 570.

While title enough has been given of this Volume of "a practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick," we find an *Appendix by the Editor* of 30 closely printed pages on "*Additional Methods for the Therapeutic Use of Water, Heat, Cold, Light and Mineral Baths.*" We regret that lack of space compels us to depend chiefly on so full a title for a description of the book. It is undoubtedly one of, if not the most useful of, books published on the subject. No evasion of fuller mention is intended; for having examined the book on almost every subject, we find it to be one of the most valuable works in our library. It teaches also that the practice of medicine does not necessarily consist in the administration of drugs, and the work would be useful in teaching courts and lawyers, etc., that the exemption of osteopaths and the like from examinations by boards of medical examiners, etc., is all wrong in spirit as it is in reality. A glance alone at the 30 pages of double column, nonpareil *Index* ought to be sufficient to convince any one that the practice of medicine does not necessarily consist in the prescription of pills or potions. It would take at least several full pages

of this journal to give an outline of this one Volume of the System of Physiologic Therapeutics.

**Progressive Medicine.**—*A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences.* Edited by HOBART AMORY HARE, M. D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, etc., Assisted by H. R. M. LANDIS, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. *Volume II.* June, 1902. Surgery of the Abdomen. Including Hernia—Gynecology—Diseases of the Blood and Ductless Glands. The Hemorrhagic Diseases. Metabolic Diseases—Ophthalmology. Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. vii-442. Per annum (4 volumes), \$10.00, delivered.

As usual, this second volume for 1902 of *Progressive Medicine* equals the past issues in having brought out a book containing the most recent advances of medicine made in the various departments mentioned in the headlines. There are twenty-one authors, all of them men of note, and twenty-eight illustrations. This series is intended not for the college student, but for the practitioner, whose library is kept modern by the addition every three months of a new volume. These books seem to measure up to their requirements, and we believe they will be found useful in each office.

**Practical Dietetics**—With Special Reference to Diet in Disease. By W. GILMAN THOMPSON, M. D., Professor of Medicine in Cornell University Medical College, in New York city, and Visiting Physician to the Presbyterian and Bellevue Hospitals. *Second Edition, Enlarged and Thoroughly Revised.* New York: D. Appleton and Company. 1902. Cloth. 8vo. Pp. xxiii-828.

This valuable book is divided into nine parts, plus an appendix. Part I—deals with Foods and Food Preparations; Part II—Stimulants, Beverages, Condiments; Part III—Cooking, Food Preparation and Preservation, the Quality of Food Required; Part IV—Foods Required for Special Conditions; Part V—Food Digestion—Conditions which Especially Affect Digestion; Part VI—The General Relation of Food to Special Diseases—Diseases Which are Caused by Dietetic Errors; Part VII—Administration of Food for the Sick; Part VIII—Diet in Disease, including (a) Diet in Infectious Diseases; (b) Diet in Diseases of the Res-

piratory System; (c) Diet in Diseases of the Circulatory System and Blood; (d) Diet in Diseases of the Urinary System; (e) Diet in Diseases of the Alimentary Canal; (f) Diet in Diseases of the Intestines; (g) Diet in Diseases of the Liver; (h) Diet in Diseases of the Nervous System; (i) Diet in Skin Diseases; (j) Diseases Especially Influenced by Diet; (k) Diet in Miscellaneous Diseases; and (l) Diet for Surgical Patients. Part IX treats of Rations and Dietaries, considering in detail army and navy rations while in the field, travelling, or doing garrison duty, diet in prisons, dietetic cures, athletic training, diet and occupation, diet in pregnancy and for puerperal women, hospital dietaries, besides "a hundred and one" other things too numerous to mention. We have given the headlines of the table of contents thus fully so as to enable the reader to judge for himself in a general way what manner of book this is. The reading matter is well written, and, something we were scarcely expecting to note in such a book—there is but very little dry reading. It is remarkable that so few medical colleges pay any special attention to this important subject, and we can but hope that it is an oversight that will soon receive the attention it deserves. We cannot imagine there being a better text, as well as a ready reference book than this one on practical dietetics by Dr. Thompson.

**The Perverts.** By WILLIAM LEE HOWARD, M. D. G. W. Dillingham Co., Publishers, New York. Cloth. 12mo. Pp. 388. Price, \$1.50.

This is a book dedicated "to the memory of Edgar Allan Poe as a tribute to his genius, and in recognition of his struggles with a psychic incubus"—intended, evidently, for the scientist and alienist—not the strongly impressionable. It is based on the doctrine that "a true understanding of man can only be had by studying the ruins and wrecks of the human beings which are scattered around us." The characters in the book are drawn from cases taken in his note book—some toned down and others polished up to suit the trend of the story. Instead, however, of being exaggerated, most of the characters have had some of their impulses kept within readable bounds. The purpose of the book is to impress the idea that a human being is just as liable to have the growth in the cell making up certain distinct centres in the brain disturbed and distorted as in the cells making up any other centres—physiological and psychical." Hence

"it is unreasonable to send a man to prison because he is deformed in certain psychological centres." The idea is that perverts guilty of apparent and even base criminality should be sent to hospitals rather than prisons and gallows. It is a plea for leniency to the pervert. But the kind of criminal acts that the pervert may be guilty of, if he go unpunished, would become common habit with others, and human life would be in constant jeopardy, or the sense of security from the incendiary fiend would be lost, or the idea of protection of virgin purity from the brute man would be gone. Let each case of mental or moral perversion be judged by the case and the circumstances that surround it.

**A Physician's Practical Gynecology.** By W. O. HENRY, M. D., Professor of Gynecology in the Creighton Medical College. With five full-page Illustrations, and 61 Illustrations in the Text. Lincoln, Neb.: The Review Press. 1902. Cloth. 8vo. Pp. 229. Price, \$2.

This is a book of every-day utility to the physician—describing diseases of the female that come under his care and observation. While it describes some of the more important of the major operations done in gynecology, it is for the most part a book that helps the physician greatly in office work and at the bedside. After a chapter on Definitions and General Terms, some general considerations are entered, as to the physician's office, instruments and methods, anatomy of gynecological parts, etc. Then follow chapters on the anatomy, histology, anomalies and diseases of the mammae, of the vulva, the vagina, uterus, tubes, ovaries, etc. Then a chapter comes on menstruation and its disorders; another on sepsis following abortion or labor. Other chapters are on pelvic inflammations, leucorrhoea, extra-uterine pregnancy, urethra and the bladder, constitutional diseases, and describes operations for various persons.

**General Medicine.** Being Volume VI of the *Practical Medicine Series of Year Books*. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D. May, 1902. Chicago: The Year Book, Publishers. Cloth. 12mo. Pp. 271. Price of volume, \$1.50; of series, \$7.50.

This Year Book on *General Medicine* is edited by Frank Billings, M. S., M. D., Head of Medical Department, and Dean of Faculty of Rush Medical College, Chicago, with the Col-

laboration by Dr. S. C. Scranton. This volume, with that for October, 1901—which latter included all the general diseases except those of the alimentary tract and those diseases which are more seasonably discussed in the present volume—make a fairly complete resume of the best literature of the year on general medicine. Note is made of the important part taken by American physicians in some of the most important medical discoveries of recent times—especially in relation to the transmission of yellow fever, the affirmation of the bacterial cause of dysentery, and the relation of gall-stones and cholangitis to pancreatic disease. One is surprised to find how much of real fact has been added to the history of certain diseases in modern times.

The series of ten volumes is the ideal year book in "completeness, seasonableness, freshness of material, convenient size, ease of reference, and in low price." We are glad to learn that the enormous edition called for by the profession renders the remarkably low price of \$7.50 for the series possible.

**Pediatrics and Orthopedic Surgery.** Being *Volume VIII of the Practical Medical Series of Year Books*, under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. July, 1902. Chicago: The Year Book, Publishers. Cloth. 12mo. Pp. 231. Price of book, \$1.25.

The series of ten volumes a year is sold to subscribers at \$7.50. Each of the ten volumes notes the advances during the previous year or more in the branches of which each volume treats. While Dr. Head has editorial charge of the series, each volume, being on different subjects, has its own special editor. Thus, the present volume on *Pediatrics* is edited by Dr. W. S. Christopher, Professor of Pediatrics in the Medical Department of the University of Illinois, with the Collaboration of Dr. Samuel J. Walker, Adjunct Professor of Pediatrics in the same University. The part on *Orthopedic Surgery* is edited by Dr. John Ridlon, Professor of Orthopedic Surgery in the Northwestern University Medical School of Chicago. No attempt is made in either department of the book to be a complete work, but to note the more important advances and discoveries that have been made since the last issue. It is a series that would well repay any practitioner of medicine to subscribe for, as in the appropriate volume he will find material which, added to the regular text-books of a year or two ago, will make a complete up-to-date work.

## Editorial.

### Correction of Title of Paper.

Dr. E. W. Saunders, 1635 S. Grand street, St. Louis, Mo., in a letter to the Editor, notices a slight mistake in the subject of his paper to be read before the session of the Medical Society of Virginia at Newport News, September 23d-25th. It should read: "Necessity of Reduction of High Temperature before the Administration of Pilocarpine and some other Drugs"—the italicized words being added.

### A Disgraceful Verdict.

If the facts be as reported in the *Philadelphia Medical Journal* of a recent date, then intelligent people all over the country should rise in their indignation, and condemn the judge and jury that found the doctor guilty: "It seems that a physician vaccinated a child. Four weeks later the child was taken with impetigo contagion, and later on the child was a victim of diphtheria, of which it died. The physician who vaccinated the child was sued for damages. The jury found him guilty."

There is a little journal in Columbus, Ohio, that, commenting editorially on the case, says: "A doctor who vaccinates a child, and death results, ought to be held responsible." "We regard the decision of such a jury as perfectly just." "We are glad the people are beginning to rise in their own defense," and a number of like sentences are used.

Look for a moment at the outrageous nonsense of this editorial. A child vaccinated today develops diphtheria six or eight weeks later! The editor who penned such stuff is a pure ignoramus, who could attempt to trace cause and effect in this manner. And yet it is just such nonsense that takes the eye of some people, who repudiate every advance of science. The fact that the writer of such an editorial has the title of M. D. attached to his name either indicates that he is a fraud upon the people—a wolf in sheep's clothing—or else he stands as a disgraceful outcast from any respectable college that gave him the title of doctor of medicine.

We would not condescend to notice such absurdities were it not that we find other "osteopaths," faith cures," etc., in this and other States that have the impudence even to insult legislators with their claims to practice without examinations or license before any competent board of examiners as to their knowledge of the

rudiments of medical science, and even here and there respectable citizens have been entrapped in their cages.

### The Law to Regulate the Practice of Medicine.

The *Mobile Medical and Surgical Journal* records the fact that the recent decision of the Supreme Court of Alabama, defining what constitutes the practice of medicine, has naturally aroused antagonism among those affected by that clear and unequivocal declaration supporting *in toto* the claims of the Alabama State Medical Association. The Supreme Court of Illinois, in line with the action of the Supreme Court of Alabama, in the case of Joseph P. Gordon, a "magnetic healer," decided that the administration of drugs is not necessary to constitute the practice of medicine. "The law is to protect the sick and the suffering and the community at large against the ignorant and unlearned, who hold themselves out as possessing special skill in the treatment of disease, and advertise as physicians or practitioners without having the needed knowledge." The *Journal of the American Medical Association*, in commenting on the Illinois decision, says: "The decision fairly covers, as it appears to us, the same class of cases as were considered in the Alabama court, and is, if anything, a little more comprehensive. \* \* \* The decision is a good example of the application of common sense to the interpretation of the law, which seems to be sometimes lacking in the decisions of the lower courts." We are also in line with the *Mobile Medical and Surgical Journal* in the statement: "We have no fight against any school of medicine—homeopathic, eclectic, osteopathic, magnetic, etc., but we contend that every one desiring to practice medicine in the State should be made to give evidence of at least fair professional competency before he shall receive legal authority to treat the diseases of human beings. \* \* \* Without this evidence, charlatany will be dominant, and ignorance will sit in high places to the detriment of the most sacred interests of the people—the right to receive, in times of sickness and distress, intelligent service." Some of the lower courts of Virginia have decided that osteopaths, etc., can practice in this State without going before the Medical Examiners' Board of Virginia.

### A Statue of Dr. Crawford W. Long.

In accordance with a special act of the Legislature of Georgia, a statue of Dr. Crawford W.

Long, the acknowledged discoverer of anesthesia, will be given the first place in Statuary Hall at Washington, D. C. This being the first Georgian to be thus honored, the committee has made a choice that will be heartily approved by all medical men, for in the progress of medical science there is nothing comparable to the discovery of anesthesia.

### Valentine's Meat Juice.

Notwithstanding the many efforts on the part of pharmacists and chemists to supply a fluid preparation of beef for the invalid stomach, none have yet ever equalled the simple process of the Valentine Meat Juice Co., of Richmond, Va., in extracting every essential chemical and physiologic principle of beef. For thirty years it has been on the market, and there has all along been a constantly growing demand for it, abroad as well as at home. Its readiness for administration has always been one of its highest recommendations, simply adding two to four or even more parts of cool water to the dose—according to the purpose desired or the condition of the stomach. If water can be retained and absorbed, the Valentine's Meat Juice mixed with it will also be digested and prove itself valuable as nutrition. It is said that a dollar bottle—the only size used—furnishes the nutrition that four pounds of beef will do. Under the management of the Valentine Brothers, the most scrupulous care is taken in the selection of beefs and in the preparation and packing of the Meat Juice in properly sterilized and hermetically sealed bottles. And experience has proven that it is as useful in the remotest foreign countries as at home—showing the care taken in the selection of the beef and in reducing it to Meat Juice.

### Drs. J. R. Gildersleeve, of Tazewell, Va., and Joseph A. White, Richmond, Va.,

Are homeward bound after a trip of some seven or eight weeks in England, France, Germany, etc. Their steamer is expected to arrive at New York by the morning of the 18th instant. A number of professional engagements have been made for Dr. White at his office, in his special line of practice—eye, ear, throat and nasal diseases. He and Dr. Gildersleeve, who was the President of the Medical Society of Virginia during the last term, will be at the session of the Society at Newport News, September 23d-25th.

### Important Typographical Correction.

In the issue of July 25, 1902, of this journal, we regret to find a typographical error, which completely destroys the meaning of a part of the article by Dr. R. S. Martin, of Stuart, Va., in his able discussion of "What can be done to regulate the number of young men studying medicine?" On line 23, first column, page 175, in the quotation from the letter of Dr. Emil Amberg, of Detroit, the author is made to say: "I think in the future each State will be afflicted, directly or indirectly," etc. We find that beside the misprint of the word *affiliated*, several lines of text have been omitted. The passage should read—quoting from Dr. Amberg's letter: "I think that, in future, each State will have only a limited number of medical schools, which will be State institutions, and that all reliable hospitals will be affiliated, directly or indirectly, with the State medical schools."

Another printer's error of importance to which our attention is called refers to an omission in the table of "Institutions represented by Applicants who came before the Medical Examining Board of Virginia, Spring Session, at Richmond, Va., June 16-19, 1902." From the manuscript of the Secretary, Dr. R. S. Martin, of Stuart, Va., as sent us, we find that on page 203, August 8, 1902, issue of this journal, the omission of mention of the *College of Physicians and Surgeons, of Baltimore*. The total number of applicants from this college during this session of the Board of Examiners was 3, and that 3 were licensed.

### Vaccination.

It is surprising that in this day of enlightened culture among citizens generally there should be found any one who does not submit himself promptly to vaccination. With the aseptic vaccine matter of the present day, as furnished by Messrs. Parke, Davis & Co., of Detroit, the H. K. Mulford Co., of Philadelphia, etc., that scarcely leaves an inflammatory result, there is no excuse why every child or adult is not vaccinated and thus cause the eradication of small-pox from the list of human diseases. Doctors who are family physicians are often responsible for such a condition of affairs among their patrons—forgetting to insist on vaccination in the families they are attending. School boards and school teachers are oftentimes too relax in having the law carried out in this particular. We

hope this reminder will be sufficient to awaken interest in our doctors to attend to their plain and obvious duties in this respect.

### The Medical Society of Virginia

Will have held its thirty-third annual session before the next issue of this journal. The session will be held at Newport News, Va., about 8 P. M., Tuesday, September 23, 1902. The program already sent to every Fellow and applicant for Fellowship and invited guests, and to most of our exchanges and secretaries of State Societies that usually send fraternal delegates, etc., indicates, we think, that the session will be one of the best, from a scientific standpoint, that has ever been held, and the best of all from a social standpoint of pleasure. The hotel accommodations are ample for the largest possible number that may attend—including the wives, daughters, sisters and sweethearts. If any should possibly prefer stopping at "The Chamberlain," at Old Point Comfort, they will receive fine attention at 10 per cent. off regular hotel fare, and extra fast electric cars bring the visitors to Newport News in about forty minutes—electric trains all day until midnight at intervals of about twenty minutes. The visiting ladies will be taken charge of by the Ladies' Committee, named on the program. The general Committee of Arrangements is under the chairmanship of the popular treasurer of the Society, Dr. Richard T. Styll, of Newport News, who is assisted by leading doctors of Newport News. Under the conservative judgment of the President, Dr. Richard S. Martin, of Stuart, Va., the session will be harmonious and profitable. Let every Fellow work upon the doctors of his neighborhood and get all the worthy practitioners in his county, as far as possible, to send in his application for Fellowship. The membership of the Society ought to be at least 1,600.

### The Metric System.

It is singular that the general adoption of the metric system has not made greater headway than it has. In 1880 it was officially recognized in the U. S. Pharmacopoeia, and in the next decennial revision it was used exclusively. Quoting from the report of the Committee of the Franklin Institute on the advisability and feasibility of adopting the metric system of weights and measures in the United States, we find "that the metric system is commendable, not alone as a

suitable international standard, but also for facility of computation, convenience of memorizing and simplicity of enumeration. Almost all the civilized countries, except Great Britain, Canada and the United States, adopted the metric system, and we cannot expect nations using the metric system to abandon that and use our systems instead. The only valid objection that has been made to the metric system is that it cannot be continuously subdivided by two. But as a minimum unit of lineal measurement, the millimeter is fully as convenient as the sixteenth or thirty-second of an inch. England is the drawback. It has been thought that the adoption of the metric system would have a tendency to estrange us, commercially, from England. But this can hardly be an effect at this time. The Canadian Government has been carefully preparing the way, and is unquestionably ready to introduce the metric system as soon as the United States and England make the change. The metric system is being taught in schools and colleges, and is a far simpler system than that now in popular use in English speaking countries. The question is an old one before the medical world, but England and the United States for some incomprehensible reason seem unwilling to give up their old ideas on the subject. We hope in the near future to see this matter taken up by scientific bodies for a final decision in its favor.

### The Cincinnati College of Medicine

Has decided not to reopen its doors this fall. The Faculty gives as the reason for its action that the attendance has fallen off so much since the enactment of the State laws requiring rigid entrance examinations that it no longer paid to run the college.

The *Detroit Journal* of September 3d, has an editorial on this subject of medical students, medical colleges and medical graduates that we think worthy of attention—showing conclusively that there is no need for free education medical colleges:

"It is estimated that 6,000 doctors are graduated each year in the United States. Taking this as a basis, it is not a difficult problem in arithmetic to discover that the number of doctors is out of all proportion to the number of possible patients. The number, however, is not so great an evil as the ill-prepared condition in which some of these young medics are turned out to practice. Many colleges take men who

lack entirely the education necessary to fit them for the study of medicine. These colleges run their students through a two, three or four years' course of study, and then let them loose on a long-suffering public.

"A law, therefore, which shall provide that men graduated from a medical college must be thoroughly qualified to practice medicine according to the most enlightened and humane methods, is a public benefaction. A summary of the expression of the opinions of many eminent doctors as published in a current medical journal shows that the method most favored is that of rigid entrance requirements. New York has led the way in establishing a uniform entrance examination, and in that State no one can study to be a doctor without first passing such an examination. Ohio followed last year, and it is in consequence of this act that the Cincinnati college has closed its doors. Minnesota has fallen into line and, to a certain extent, Pennsylvania also. Illinois has passed a similar law which will come into force next January.

"There is a proposition to establish a similar law in Michigan. There are six medical colleges in this State—two in Ann Arbor, one in Saginaw and three in Detroit. Each college has its own standard of entrance. With the competition that must exist in the presence of so many unendowed colleges, since they must pay expenses, too high a standard cannot be maintained. It is also obviously impossible to provide all the new and costly experimental apparatus for so many laboratories or to find first class professors for so many positions.

"A common sense view of the situation must make it clear that the day of the many medical colleges has set; that the day of the few choice ones has dawned. With fewer colleges and fewer and more thoroughly prepared men studying medicine, the profession will at once reach a higher level and will be able to exceed greatly the large measure of good which it is even now rendering to mankind."

### Specific Microbe of Cholera Infantum Probably Discovered.

The important announcement has just been made public that Dr. William H. Welch and his assistants at the Thomas Wilson Sanitarium for Children, at Mount Wilson, Md., have finally been able to isolate the germ which is claimed to cause "summer complaint" among infants. Now for something to kill the germ which will not kill the patient!

### The New Orleans Meeting of the American Medical Association.

Which takes place May 5-8, 1903, will doubtless be one of the best the organization has ever held. Dr. Frank Billings, of Chicago, the President, appointed Dr. Isadore Dyer, of New Orleans, as chairman of the Committee of Arrangements, and the latter has already started with his work—sending out circular letters, etc. It is earnestly to be desired that the whole Southern profession shall assist to make this next session a great success, and to this end, the Southern medical journals are called upon to create proper enthusiasm, urge attendance, and augment the membership of Southern doctors. It is the purpose to show the Northern guests a good time that they will not soon forget.

### The Journal of Advanced Therapeutics

Is a new publication devoted to electro-therapeutics, radiography, thermo- and hydro-therapeutics. It is to be issued monthly at \$3 per annual volume of about 800 pages. Subscribers during 1902 will become members of the "Founder's" Club, entitling such members to subscribe at \$2 for the first and each succeeding year. The journal will be sent free until December, 1902, with each annual subscription to commence January, 1903, and which is to be paid for at the close of the year.

### Address on William Beaumont.

The Committee on "Osler Memorial Address" of the St. Louis Medical Society of Missouri (Drs. Robert Luedeking, W. G. Moore and A. R. Kieffer) announce that Prof. William Osler, of Johns Hopkins University, Baltimore, Md., will deliver a memorial address on "*William Beaumont—the first and greatest American Physiologist*"—at the Odeon, on Saturday, October 4, 1902, at 8 P. M. The Medical profession is cordially invited to attend. The subject to be presented, and the eminence of the essayist, make this occasion one of the greatest importance and interest.

### Health Among Our Soldiers in the Philippines.

Dysentery has, according to advices recently received at the Surgeon General's office in Washington, D. C., nearly disappeared—owing to the strict sanitary measures that have been enforced. Among other things the measure provides for the boiling of all drinking water, rules

for bathing, and particularly for the washing of hands before handling food. Dhoobie itch, a tropical skin affection very common in the Philippines, is also stated to have been practically eradicated. Typhoid fever cases are less numerous, and the latest reports are to the effect that the cholera situation is under control.

### The Title, "Doctor."

According to the *Metaphysical Magazine*, the title "Doctor" was first conferred upon Inerius of the University of Bologna, in the twelfth century. The first "doctor of medicine" was Gulielmo Gordenio, who received the honor from the College of Aosti, also in Italy, in 1220.

### The American Electro-Therapeutic Association

Held its twelfth annual session, September 2, 3 and 4, 1902, at Hotel Koaterskill, Catskill Mountains, N. Y. Dr. Geo. E. Bill, 255 North street, Harrisburg, Pa., secretary.

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## Obituary Record.

### Professor Rudolf Virchow,

The German pathologist and anthropologist, died at Berlin on September 5, 1902, after a lingering illness. He was born at Schivelbein, in Pomerania, October 13, 1821. The name, Virchow, has long been a most respected one in the medical world, and the scientific researches and writings of this eminent man will long live to bear testimony to his worth.

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**The Last.**—A professor in the medical department of Columbia College asked one of the more advanced students: "What is the name of the teeth that a human being gets last."

"False teeth, of course."

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After the removal of alcohol, Celerina, given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.



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## Original Communications.

### SOME PHASES OF CHRONIC NEPHRITIS.\*

By M. D. HOGUE, Jr., M. D., Richmond, Va.,

Professor of Histology and Urinary Analysis, University College of Medicine, Richmond, Va., etc.

The more scientific our observations are upon the subject of chronic nephritis, the greater will be the divisions and sub-divisions as to nomenclature. This is perhaps rather more the fault of the pathologist than of the clinician, because the one having the opportunity of noting the minute microscopic changes at different stages of a progressive disease is inclined to give this or that classification, whereas the other forms his opinion from the general grouping of all the symptoms and applies his remedies and makes his prognosis accordingly.

Acute parenchymatous nephritis runs the gamut from simple hyperemia to sub-acute and chronic forms, consequently it is far more common than one would suppose, and perhaps the reason why it has escaped observation, or rather not been regarded more seriously than it is, may be due to two facts—first, the urine is not examined frequently enough, and again, we know that it is so often a secondary complication accompanying acute infectious diseases. Here the poison reaches the kidneys through the circulation, and is in part eliminated; in this way it works harmfully upon the parenchymatous elements of these organs. Some acute infectious diseases show their effects upon the renal cells more plainly than others, as, for instance, scarlet fever, measles, small-pox, and diphtheria. It is not unusual to see acute albuminuria develop in the later stages of tuberculosis and syphilis. Further may be mentioned poisoning from strong mineral acid and irritants to the system generally.

When we come, however, to consider more directly the subject of this paper—chronic neph-

ritis—we must bear in mind both in the parenchymatous and interstitial forms some kind of toxemia must have been the ætiological factor, whether an inheritance from acute nephritis, alcohol, high living, or irritant poisons, the end result is the same, the blood contains some element which the kidneys are endeavoring to get rid of, and in this struggle they pay the penalty.

In making a diagnosis between the large white kidney and the small red kidney, little difficulty ought to be experienced, provided strict attention is paid to the clinical symptoms and careful and sometimes repeated examinations of the urine.

In the chronic parenchymatous form, the symptoms noted are anemia, pallor, anorexia, nausea, headache, vertigo, albuminuric retinitis and edema of the feet and ankles; indeed this symptom is the first noticed by the patient, and causes him to seek medical advice. Uræmic convulsions may occur, though they are less frequent than in the chronic interstitial variety. As to the urine, the quantity in 24 hours is normal, or somewhat diminished, the specific gravity ranges from 1.020 to 1.028, color rather dark and cloudy by transmitted light, albumin is present in large quantities, the daily loss being from one-half to one drachm; the urea is considerably diminished. Microscopically are found fatty degenerated epithelial cells, dark, coarse granular, hyaline and fatty casts.

I am inclined to think, from my experience, that while the prognosis is always serious, it need not necessarily be hopeless, for I am convinced that a good many cases do recover. In some instances the disease runs its course in three months, and in other extends over four or five years.

As to treatment, it seems to me a great mistake to prescribe harsh stimulating diuretics for an organ that is already clogged and probably doing its best. Our remedies should be directed more to relieving the kidneys through the bowels and skin. I have found much benefit from

\*Read by invitation before the Rappahannock Medical Society, September 10, 1902, held at Fredericksburg, Va.

prescribing the following, which is an alkaline purgative:

℞ Phosphate of soda.....	5xx.
Sulphate of soda.....	5x.
Bicarbonate of potash.....	5vj.
Carbonate of lithia.....	3iij.
Citric acid.....	5v.

M. Fiat pulv. No. 1. Sig: A teaspoonful in a glass of water before each meal.

In order to increase the function of the skin nothing is better than dry heat. It can be given the patient in bed by surrounding the body with a large number of hot bottles or by sitting nude in a chair over an alcohol lamp, the body closely covered by a large blanket, the head only exposed.

As anæmia is so often a complication, iron in some form is indicated. It seems to me from what physicians say that it is given in too small doses; if the ferric chloride tincture is well tolerated by the stomach, one-half to one drachm well diluted is the proper dose. An excellent and pleasant remedy is the old-fashioned Basham's mixture in tablespoonful doses; its formula is:

Tinct. of chloride of iron..	2 parts.
Dilute acetic acid.....	3 parts.
Spirit of mindererus.....	20 parts.
Elixir of orange peel.....	10 parts.
Simple syrup.....	15 parts.
Water.....	50 parts.

As to diet, a safe rule is to avoid fried meats and vegetables, and the nearer the patient comes down to and keeps on milk, the better.

Distilled water, which now can be so easily and readily obtained from the numerous ice factories, is an important aid on account of its blandness and solvent properties. Patients with inflamed kidneys ought not to expose themselves to sudden or severe changes of climate any more than those who have inflamed lungs.

In chronic interstitial nephritis—the cirrhotic kidney—we have to deal with the most stubborn and insidious of all diseases; it may exist for two or three years in some cases before clinical symptoms show themselves: in others such premonitory signs as debility, anorexia, headache, nausea, shortness of breath, renal asthma and convulsions develop. Dropsy, as a rule, appears only in the latter stages of the disease. As to the urine, the quantity is considerably increased, the color pale and transparent, reaction acid, specific gravity 1.010 to 1.015 continuously, albumin only a trace or at times en-

tirely absent, urea much diminished, hyaline casts more or less numerous, granular casts rare, crystals of uric acid or oxalate of lime, and a few leucocytes.

An important aid in connection with the above in making the diagnosis is the accentuation of the second heart tone and hypertrophy of the left ventricle. As to the prognosis, its termination is fatal, though the final end may be postponed possibly ten years. We must be guided largely by the ability of the heart to maintain its compensation, and the digestive system its functions.

As to treatment, in general it varies little from that mentioned for chronic parenchymatous nephritis, except that here digitalis is of much importance.

The following formula will be found useful:

Bichloride of mercury.....	gr. j.
Tinct. chloride of iron.....	5ij.
Sweet spirits of nitre.....	5j.
Water.....	5j.
Simple elixir q. s.....	5iv.

M. Sig: Teaspoonful in water after each meal.

Finally, it will not be amiss to call attention to a procedure first proposed by Reginald Harrison in England in 1896, and by George M. Edebohls, of this country, in 1899, of splitting the capsule and in some cases of incising the kidney cortex for chronic nephritis.

308 East Grace Street.

## SURGERY OF THE HEART.\*

By B. MERRILL RICKETS, Ph. B., M. D., Cincinnati, O.

Injuries and surgery of the heart have, until recently, been classed as anomalies. This one fact shows how little confidence there has been in successfully dealing with the heart surgically. At one time simple needle puncture of the heart was thought to always result in instant death. Experimental physiology and surgery shows what can be done, and how to do it. It is the basis upon which the heart surgery especially has been placed.

Twenty-five dogs were used in the experiments. Penetrating and non-penetrating

\*Original abstract of a paper read before the Surgical Section of the American Medical Association during its session at Saratoga Springs, N. Y., June 10-13, 1902.

wounds of the heart were made and closed with sutures of different material. Interrupted silk sutures were found to be the best. No especial aseptic precautions were taken, as all pathological conditions were desired.

The pericardium may be entirely removed without death resulting. Either one of the coronary arteries may be ligated at its base without producing death. In a certain class of cases it is best to suture the pericardium to the chest wall that drainage may be perfect.

It is ideal to suture during systole, but one will be satisfied to secure perfect suturing in systole or diastole.

Even though the auricular is thinner than the ventricular wall, it may be sutured with equal success. Owing to this difference in thickness, the percentage of penetrating wounds of the auricles is much greater than those of the ventricles.

Knitting of the sutures should be firmly secured, otherwise they may become untied by the constant action of the heart. Sutures should not be made tight enough to cut the heart tissue.

The sutures should pass through the bottom of the wound when non-penetrating, and through the endocardium when penetrating. If not in the latter, the wound may become enlarged from within.

The mortality is less in wounds of the right than those of the left auricle and ventricle. Bleeding is more severe in wounds from sharp instruments than when due to bullets.

Conclusions of the paper are as follows:

1. Injuries and diseases of the heart have resisted surgery longer than almost any of the tissues or organs of the human body.

2. They, however, no longer offer such resistance, but find themselves subject to attack by the same surgical principles as other parts of the body.

3. Experimental surgery teaches one to reason from animal to man.

4. Aneurism, foreign bodies, ossification, together with abscess, syphilis and gangrene, possess features which will have a great bearing upon, and will greatly influence, the future surgical work of the heart.

5. The application of surgical principles in certain cases of aneurism of the heart, will, no doubt, be accomplished by suture electrolysis, or the injection of gelatine or something of a similar character.

6. The removal of a certain class of foreign bodies, whether they have formed within or

have entered from without, should, and no doubt will, be accomplished.

7. That a cardiac abscess should be incised and drained there can be no doubt.

8. Tumors of a pedunculated character on the external surface of the heart can and should be removed.

9. Pedunculated tumors within the cardiac chambers can also be successfully removed.

10. Parasitic cysts (animal or vegetable) when upon the external surface of the heart or in its wall, should be incised and drained.

11. Mitral stenosis, hypertrophy and dilatation of the heart will sooner or later find complete or partial relief within the domain of surgery.

12. Injuries involving the myocardium are subject to the same surgical principles as injuries to other important organs of the human body.

13. Lacerated or incised, penetrating and non-penetrating wounds of the heart should be sutured.

14. Suturing or any other surgical procedure should not be discontinued because the heart should cease to pulsate. The work can and should be completed within a much shorter time on a quiescent heart.

15. All means should be resorted to, while the suturing of the myocardium is being completed, to re-establish the heart's action.

16. Drainage of the pericardial sac is necessary in many cases of injury of the heart.

17. Exploratory incision of the pericardial cavity and its contents has been shown by both experimental research and operations upon the living human body to be exceedingly rational, valuable and justifiable.

18. Exploration of the heart itself by puncturing it with a needle or knife to locate a foreign body or to detect pathologic conditions within the myocardium or its chambers, will, at no far distant day, be found useful, necessary, and recognized as an accepted surgical procedure.

19. Why should these conclusions be fallacious when it has already been shown that nine of the twenty-seven cases of heart wounds treated by suture have recovered?

## SOME PHASES OF MODERN MEDICINE.\*

By R. L. PAYNE, M. D., Norfolk, Va.,

Surgeon to St. Vincent's Hospital; Ex-President of the North Carolina Medical Society, etc.

As I stand in the presence of this distinguished audience I feel myself the recipient of the highest honor, in that I have been chosen to address you, and no one save myself can know how I long that, for this one time at least, my lips might be touched with the fire of eloquence divine. I can only hope, however, to speak to you in the language of a plodding every-day workman, who knows more of the pill-box and scalpel than of the arts of the logician or the flowers of rhetoric.

My theme is, "Some Phases of Modern Medicine." To all of you the subject must be an interesting one. The ladies are all "born doctors," and, no matter how difficult the case, are always ready to make a diagnosis, and prescribe a remedy, while their husbands and friends are the willing victims of their doubtful ministrations. The rest of my audience is made up of men who give their time, their comfort—aye, their very lives—to the study and development of modern medicine.

The history of medicine is almost the history of the human race, for coincident with the fall of man, sickness and suffering came upon earth, and man began to seek remedy for human ill. For many centuries, however, the best efforts were but gropings in the dark, and medical knowledge was a strange mixture of facts, fancies and superstitions. The incantations of the sorcerer were mingled with more rational therapeutic measures; mysticism and charlatany walked hand in hand, and the sum of medical knowledge was made up of isolated facts bearing little relation to one another. The evolution of our art has been hampered at every step by the superstition, the ignorance, and the absolute intolerance of the people. Its votaries have often been the objects of suspicion, of persecution, and always, even down to the present day, of scant appreciation, so that it is wonderful how through all ages the doctor has gone on working, observing, investigating, devoting life and energy, sacrificing all of life's pleasures, laying his all upon the shrine of human need and asking no higher boon than a life snatched from the hands of death. Strange that such

high purpose and such holy aim should oftentimes have suffered its most serious antagonism at the hands of the Church. For several centuries in the early years the Church forbade the study of anatomy, declaring it sacrilege to dissect a body "made in the image of God"; and even late in the nineteenth century the Scottish clergy reviled the great and good Simpson for administering chloroform in the awful pains of maternity, basing their opposition on the primeval curse, "In sorrow shalt thou bring forth children."

Slowly prejudice began to yield to the benefactions of our noble art; slowly out of chaos light began to dawn; from the correlation of isolated facts fixed principles began to be deduced; from careful study of the human body, both living and dead, its functions and powers came to be understood; from the study of diseased conditions, both in the living body and in the dead house, we have learned more and more of the ultimate causes of disease and its termination, death; from the study of cause and effect on living animals, by means of vivisection, we have been able to unravel many mysteries; and to-day medicine is rapidly approaching the level of an exact science, and is showing a beneficence of purpose and result greater than that of all other human agencies combined. And yet modern medicine is hindered, as of old, by the lack of appreciation on the part of many people. In part, this is due to unreasoning prejudice, but in greater part is it due to lack of intelligent understanding of the high aims of our profession and the necessary effort which must be made for its development. Again, the advancement of medical science is constantly hindered by lack of intelligent discrimination, and the ease with which people are gulled by all sorts of uneducated and misguided men—charlatans—who, under the guise of Christian science, osteopathy, and such like cults, prey upon the diseased and suffering in our communities unhindered by the law, which should protect the ignorant and helpless. Witness the effort made at the meeting of the last Legislature of the State of Virginia to have a law enacted forcing the so-called doctors of osteopathy to come before a Board of Medical Examiners, and show at least some rudimentary knowledge of the human body, and the laws of health and disease, before being permitted to diagnose and prescribe for the sick! Such a law has been for many years binding upon the regular medical profession and upon homeopathic physicians, neither of

\*Annual Address to the Public and Profession, delivered September 23, 1902, during the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News Va., September 23-26, 1902.

whom are permitted to apply for examination until they have had many years of general and special study. Therefore there is nothing unreasonable in requiring the same standard from all who deal seriously with human life. What was the result? In the Senate Committee on General Laws this bill was killed by a vote of 7 to 1. Shame on this committee! In shame let its name go down to posterity and let the epitaph of each man be, "He voted to make Virginia the dumping ground for the quackery of the universe."

Again, witness the effort made so recently in the Congress of the United States to have passed an anti-vivisection act, which would at once end, or prevent, by unwise and injurious restrictions, this most important method of investigating the most difficult of all questions in the pathology and treatment of disease. When we recall all that has been accomplished for humanity by experimental work upon animals—practically all that we know of the fundamental facts of physiology; all that we know of intestinal surgery; much that we know and execute successfully in brain and in bone surgery, and well-nigh all that we know absolutely of the physiological action of remedies and of the ultimate causes of disease as shown by bacteriological investigation and control experiments, we shudder to think that the ignorant and maudlin sentiment of a few people should seek to curtail such important sources of information.

Shall I adduce other evidence in proof of my position? Think, then, of the widespread dissemination of small-pox throughout our country to-day, and remember that in persons properly vaccinated all are immune except about 7 per cent. Think of the great loss of life and of treasure, in part expended in efforts to cope with this dread malady, and in part lost by disturbed business conditions, incident to the various epidemics, and remember that such a state of affairs is entirely due to the ignorance or indifference of the people to the protecting power of vaccination.

"*The Review*," a Church paper published in St. Louis, in a recent issue, goes out of its way to indulge in a rabid anti-vaccination crusade, even condemning the Catholic Archbishop, who advocated vaccination, and speaking of docters who advise vaccination as "humbugs," "criminals," guilty of "fiendish inhumanity," etc. These expressions are but a revival of the spirit which pervaded the ages of barbarism, and one would have expected such opposition to have

disappeared in the blaze of intelligence which has ushered in the twentieth century.

Then there are many difficulties in the way of the advancement of medicine which are inherent to the very mystery of life itself. What is life? What is death? The beginning and end of function in definite organs and tissues, if you will, but the mystery remains. Gradually in the light of modern methods of investigation, however, we are peering deeper and deeper into the mystery of hidden things. Some one has well said: "This is an age of doubt; its coat of arms a question mark; its motto 'query.'" This is peculiarly true of modern medicine. Antisepsis and asepsis have made possible hundreds of life-saving operations, until now there is no organ or tissue in the body which the surgeon holds too sacred to pay tribute to his skill in added years of human life. Bacteriology, vivisection, serum therapy, organo-therapy, cellular pathology, are daily bringing new light, and making us more and more able to cope with disease. The mortality in every disease has been slowly but steadily reduced, until the average of human life, which, in the sixteenth century was as low as twenty years, is now more than forty years; and this we have every reason to believe will be steadily increased under knowledge, each day growing more and more definite; and method, each day growing more and more perfect. But still, the cry is for more light. What we need is to get rid of the maudlin sentiment as regards vivisection and post-mortem investigation.

Only think of the great good to humanity that has resulted from the antitoxin treatment of diphtheria. That terrible scourge, once the "pestilence which walketh in darkness and the destruction which wasteth at noon-day," has had its mortality so reduced that we now have little fear of it; and yet these results could never have been reached without the study of cause and effect on the lower animals. Behring and Kitasato demonstrated by repeated experiments that an animal inoculated with the toxins of diphtheria till no reaction followed would itself become immune to the disease; and further, that if the blood of such an animal be injected into another animal affected with the disease a cure would result. From these experiments has developed the antitoxin treatment of diphtheria, which promises to blot out this one time terrible malady from the face of the earth. With such results can any one question the propriety of such studies? We must experiment or stand

still. We must try new methods; give new drugs; perform new operations or learn to do old ones in a better way. These experiments must be tried on living bodies, and the question is, Shall the subjects be men or animals? Christison well-nigh lost his life trying the effect of calabar bean on himself, and poor Toynbee, so testing prussic acid, was found dead in his laboratory. Only a little time ago, during the investigation of the means of propagation of yellow fever, Lazear, a young army surgeon, volunteered to test the mosquito theory on his own person, and permitting himself to be bitten by a mosquito which had been feeding on the blood of a man sick with yellow fever, he quickly sickened with the dread malady, and with his life paid the penalty of his zeal for science. Such men are noble martyrs in the cause of human weal; and in the innermost sanctuaries of our hearts we erect monuments to their memories. But it is none the less true that we must not experiment with human life or health, and no man has a right to even subject his own life to the uncertainties of scientific investigation. What, then, shall we do? Certainly it is better that a few animals should die than thousands of human beings may be saved.

But we cannot stop here. What we need is more opportunity for investigation along many lines. Let large laboratories be endowed where disease may be investigated by every means at our command. Make it possible for these laboratories to be filled with a corps of trained workers, who shall be paid sufficient salaries to permit their devoting every energy to the task in hand, unhindered by the cark and care attendant on the struggle for daily bread. Medical men, as far as possible, are already working along these lines, but the work is hampered for lack of means, and most of the investigators are constantly turned aside from labors, pregnant with great possibilities, for the relief of sick and suffering humanity, by the grim necessities of existence.

Let the philanthropist take hold of these matters. Already, Mr. Rockefeller has endowed a large laboratory in New York city, which will make such studies possible, and we have reason to hope that Mr. Carnegie's munificent gift to education may find one of its objects in this direction, but there still remains the need of a great awakening to the needs and possibilities in this field.

Very hopeful signs in this connection are that the State of New York has endowed a laboratory

for the investigation of cancer, and very recently, in the early summer of this year, Congress enacted a law constituting the Marine Hospital Service a department of public health, and making it possible that this department of our government may add much to the efficient work it has already accomplished in a sort of voluntary way. The vital question now is, will this department of State be given men and means to prosecute its work? We have long had an efficient Department of Agriculture and a Bureau of Animal Industry. Only a little time ago Congress on three different occasions voted an appropriation of \$100,000 for the printing and distribution of a rather indifferent work on diseases of the horse. Active legislation has been enacted to protect cattle from ticks, and so we can but wonder that the great government of the United States has moved so slowly and so poorly in the matter of protecting her people from disease. Let each one of us feel it his personal duty to bring these subjects home to the attention of our law makers.

After all, however, I fear we shall have still to look almost entirely to the voluntary labors of medical men for the upbuilding of modern medicine, and in the future our greatest triumphs and greatest hopes lie not so much in the cure of disease as in preventive medicine. Along these lines are our best efforts being made. Here, again, our greatest achievements and best hopes lie in laboratory investigation, where the patient worker with microscope, culture medium and inoculation test has worked out many of our most difficult problems and opened the way for a great harvest of results, which will be quickly reaped by succeeding toilers. In the laboratory Eberth discovered the bacillus of typhoid fever; Klebs and Loeffler the microbe of diphtheria; Koch the bacillus of tuberculosis and the germ of the dread Asiatic cholera, and Haffkine worked out the principles of his cholera prophylaxis, which has so materially reduced the death rate of the English army in India. Many other germs have been discovered, and thus preventive medicine, armed with definite knowledge of the cause of such terrible diseases, is waging successfully a war of extermination. The investigations of Reed and others have shown that it is possible to stamp out yellow fever in its very hot bed. The lately demonstrated truth that malaria is spread by a certain variety of mosquito leads us to believe that the control of malaria is almost within our hands; and, more and more evidence is accumulating each day en-

couraging the hope that the dread malady, tuberculosis, so long regarded as the inevitable child of heredity, may yet be banished forever. And so the good work goes on from triumph to triumph. In spite of all opposition, in the face of every difficulty, overriding every prejudice, scorning neglect and scant appreciation, to-day medicine is attaining such perfection of method and such glory of results as makes our hearts swell almost to bursting that we are named her sons and votaries.

Incidentally, it may not be out of place in this day, when we hear so much of the intellectual superiority of the North over the South, to refer to what Southern physicians have accomplished for modern medicine. I need only point you to the discovery of Crawford Long, of Georgia, who gave to the surgeon that most blessed of all boons, anæsthesia, and lulled to sleep the agony of the world. I need only refer to that grand old man, McDowell, of Kentucky, who devised and executed the first ovariectomy, and thus took the initial step and blazed the way for all the grand achievements of abdominal surgery, adding countless millions to the sum total of human life. I need only to hold up to your gaze the brilliant work conceived and executed in a little country town by the illustrious Sims. I need only recall the names of Emmett, Thomas, Sayre, Kinloch, Chisholm, Wyeth, our own Mason and McGuire, and a host of other names bright in the galaxy of American medicine, to show that the South has borne a lion's share in all the labors and triumphs of modern medicine. To you, worthy sons of worthy sires, my co-workers in this great and glorious battle with disease and death, I bid you God speed. You cannot content yourselves except you be in the thickest of the fray. It must not be said of us that we have been content to simply enjoy the work that others have accomplished, or that "Thoughts great hearts once broke for, we breathe cheaply in the common air."

No, each of us has some duty to perform, and to meet this duty nobly must

"Be up and doing,

With a heart for any fate;  
Still achieving, still pursuing,  
Learn to labor and to wait."

## THE MANAGEMENT OF CASES OF EMERGENCY ARISING FROM RUPTURE IN ECTOPIC PREGNANCY.\*

By AUGUSTUS P. CLARKE, A. M., M. D., Cambridge, Mass.

The occurrences of the more desperate cases of rupture of the sac in ectop coming under the care of any one obstetrician do not appear to have been very frequent; for many physicians who have had quite extended experiences have scarcely met with any such cases. Operators have not infrequently recognized the difficulty, which may be encountered in the differentiating of the various forms of ectopic pregnancy, if not as to the certainty of its real existence. In many of such cases, therefore, measures may have undoubtedly been delayed as regards the proper management that should have been employed. Hematocele is often the result of this variety of pregnancy. Such a condition is more likely, however, to take place at the beginning of the tubal form of gestation.

The author makes mention of two cases of sudden rupture, attended with the more alarming symptoms, such as shock, hemorrhage, and cardiac depression. In both cases abdominal section was early resorted to for overcoming the hemorrhage and for the removal of the fetal remains and clotted blood. Three other cases of sudden rupture occurring in the early stages of pregnancy are mentioned by the author. In two of the cases the patients recovered without having to submit to radical operative measures; in the third case the ending was fatal, the patient's family refusing to have an operation undertaken.

Another class of cases mentioned was that in which patients had recovered from the immediate effects of rupture, and had subsequently presented unmistakable evidence of having suffered from such mishap. The author mentions other experiences bearing both upon the question as to the propriety of waiting and the advantages of resorting to immediate operative interference in cases of such severe and sudden shock or collapse. He says that in estimating the amount of danger the rupture of the sac or the sudden occurrence of shock may entail much, will have to be taken into consideration as regards the quantity of blood that may have been lost and the probable degree of hemorrhage which may still be going on in any particular

\*Original Abstract of a Paper read at the Fifteenth Annual Meeting of the American Association of Obstetricians and Gynecologists, held at Washington, D. C., September 16-18, 1902.

case. The loss of only a little blood will sometimes produce apparently as much collapse as that of a larger quantity. In the lighter grades of hemorrhage the collapse is not likely, however, to be so continuous or so profound as it is in cases in which a larger volume of blood has escaped. In the former grade, the employment of stimulants can be used with greater advantage. If, on the other hand, it becomes reasonably manifest that serious hemorrhage is still in progress and is not likely to cease, an abdominal section should, when the circumstances and surroundings are not unfavorable, be resorted to at the earliest possible moment, especially after other measures appear to have been unavailing.

The author concludes that, judging from his own experiences, as well as from those of his conferees, no hard and fast rules alike should be established for the management of all cases in which great shock or collapse from rupture occurring in extra-uterine gestation may have taken place.

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### HAY FEVER.\*

By GEORGE BARKSDALE, M. D., Ph. G., Richmond, Va.,  
Professor of Botany and Materia Medica, etc., University College  
of Medicine, etc.

The subject upon which this paper is written we must confess is hackneyed, and we would believe, from the voluminous literature already written upon the subject, that it had been thoroughly exhausted. Nevertheless, despite this fact, there yet remains a deal more to be said and freshly said, with a better knowledge of the subject, than has been the case hitherto.

After one recalls the various theories advanced as the probable cause of this particularly annoying and distressing malady, he cannot help being amused, for the causes have been almost as various as the remedies used in the treatment of the affection.

It has been observed by the writer that persons having an irritable temper are frequently victims of the affection, and especially if along with this disposition is coupled some intra-nasal disorder, such as polypi, deflected septum, hypertrophied turbinate bones, etc.

While this is variously called vernal asthma, catarrh, bronchial catarrh, or asthma, it is really an asthma due to some disturbance of the ner-

vous system, owing to some irritating agent in the blood, which brings about the effect, or else it may be the irritating effect of the hypertrophied tissues within the nose that are responsible for it.

It has been the case that such gases as nitric oxid, sulphurous acid, etc., have tended to serve as irritants, provoking the patient to coughing and bringing on a characteristic paroxysm of the disorder.

Persons living in cities are most prone to be affected, probably owing to the dust, vapors, smoke, etc., with which they are constantly coming in contact.

For a while the writer lived in the vicinity of a sulphuric acid factory, and he had repeated attacks of the asthma, presumably on account of his proximity to the vapors that escape constantly and to such a pronounced degree as to be detected by their odor frequently—especially in damp weather; and it is then usually that the victim suffers the most. Since residing in a different locality he has been immune from these attacks, though he confesses to a deflected septum that causes excessive sneezing whenever a slight cold is taken.

The attacks come on most frequently in spring or early summer, remain through one or several attacks, to return again as soon as cool weather comes.

The theory that pollen produces the disorder is preposterous, except that it be the cause of exciting the neurotic patient into believing it so, and to forever after be the cause in his own mind, and then he must needs have the affection whenever he comes near pollen to maintain his reputation.

The old story of artificial flowers exciting an attack in a neurotic person is too familiar to more than mention. The person liable to trouble is to be pitied, for he does not indulge in pleasures that others may without the risk of subjecting himself to an attack which may bring upon him hours, if not days, of suffering.

Sometimes a fit of laughter or coughing or the mere act of climbing stairs or a hill will be quite enough to bring on an attack, as may also violent exercise, exposure to smoke, etc.

The symptoms are too pronounced to be mistaken, yet it may be confounded with asthma produced from other causes; for instance, heart disease, in which the valves are affected, a very similar group of symptoms may result, for there is cough, probably expectoration, dyspnoea and great distress due to the improper oxygenation

\*Read before the Church Hill (Richmond, Va.,) Medical Society, September 11, 1902.



of the hyperstatic blood in the lungs and there is air hunger just as we have in pneumonia and empyema.

*This may be differentiated* from the asthma produced by the neurotic element that is the factor in hay fever with comparative ease. The patient with heart disease suffers more or less all the time from the stasis, and when compensation is lost dropsy, of course, is the result, which, with the history of long established heart disease, will very seldom permit the careful observer to lapse into the mistake of confusing the two. Chronic nephritis will produce an asthma in a very similar way, for when the kidneys have become so diseased as scarcely to be able to perform their function of filtering the blood more work is given the heart; it dilates, and eventually compensation is lost, stasis ensues in the lung, and so the most distressing asthma ensues. Whatever its cause, there is probably a no more frightful affection visited upon the human race than asthma, for it does render its victim so utterly exhausted that death would be a benison.

Of course, an examination of the urine and heart is necessary to distinguish the cause of an asthma. But when the patient complains of being waked at certain hours of the night, usually about 4 o'clock in the morning, and usually with the precision of an alarm clock, and he has to sit bolt upright in bed and cough violently, raising in his efforts a quantity of foamy mucus that contains the jelly-like "perles" of Lænnec, in which may be seen the spirals of Curschmann, and crystals of Charcot with the microscope, there is left little room for doubt as to the diagnosis. Directly this is raised the sufferer begins to struggle for breath, as the annoying wheezing prevents his sleeping if the attack be a slight one.

If severe, the patient tries to get better air by leaning out of a window or sitting up in a chair. As the attack grows worse, the sufferer becomes bathed in sweat, his face congested and clammy, hands and feet are cold, and eyeballs almost start from their sockets.

The breathing is labored and the cough that accompanies it is suppressed and muffled as if the patient coughed into his hands. The urine is scanty, probably because of the unusual diaphoresis and expectoration, and the ability to talk on the part of the patient is wanting, because each word uttered is an effort, and seems to excite rather than palliate the paroxysm. When at last the poor sufferer has about decided

that he cannot possibly draw another breath, he suddenly feels a lessening of the difficulty of breathing, and thoroughly exhausted he falls asleep, or in a short while becomes as free from any symptom of the disorder as if he had never had it.

When we are not sure of the kind of remedy to use in a disease we seek to apologize for our ignorance by giving a multiplicity of drugs without reasoning why; apparently reasoning from a foolish standpoint, that since such and such drugs are recommended in the treatment of certain diseases that a small quantity of each must be given with the faltering hope that some one of them will, as a stray shot, fetch down the game we are hunting.

All such reasoning is, of course, purile. This malady is one for which almost every drug, medical agent, and climate, has been called into requisition for the treatment of, but now the remedies have dwindled to comparatively few, and these are often faulty in results, but the remedy, the specific, is yet wanting. Recently the introduction into therapeutics of extract of suprarenal gland as a preventive of this affection and a remedy during the attacks has proved useful; so has the active principle obtained from the gland, which is made into solution and applied locally to the nasal cavities, while relief may be had by the internal administration of the extract in five grain doses.

The followers of Haig and the alkaline treatment believe sincerely in dieting the patient during that period, and dosing him liberally with bicarbonate of potassium and lithia salts. This, of course, does not cure the patient for good and all, and it is no easy matter to diet one for weeks in anticipation of an attack.

First, the patient should have any growth in his nose removed, and should lead an out-of-door life, and avoid those causes known to excite attacks. For the paroxysms of asthma the writer has found that blotting paper dipped in the following, after being first put in a saturated solution of nitrate potash and allowed to dry, will, when burnt, relieve the sufferer very much:

R	Ext. Belladonna Fl.	.....15	c.c.
	Tr. Benzoin	.....20	
	Ext. Stramonium Fl.	.....15	

M.

Hypodermatic injections of morphia, in even half grain doses, may be tried when the asthma is very bad. Recently the writer removed several ounces of blood from a patient, who found such relief from the bleeding that on having a

subsequent attack, he implored to be bled again. The administration of extract of ragweed is advanced by some writers, and according to their reports, success has followed its use. Personally the use of a large dose of Dover's powder to begin with, a purge of jalap and calomel, and the continued administration of iodide of potassium for several days usually accomplished the desired end—that is, it mitigated the attack and prevented others, but the cure is still wanting.

### THE UNITY AND INTERCOMMUNICABILITY OF HUMAN AND BOVINE TUBERCULOSIS.\*

By MAZYCK P. RAVENEL, M. D., Philadelphia, Pa.,  
University of Pennsylvania, etc.

Proof of unity of human and bovine tuberculosis is found—

(1) In the study of pure cultures from man and bovine animals. While certain differences may be ordinarily recognized, they are due to the soil in which they have grown and the resistance they have encountered. Cultures on artificial media lose their distinctive features gradually, and become so much alike that it is difficult to tell them apart.

(2) In the action on animals, cultures from both sources produce essentially the same disease in all experimental animals. The chief difference noted is that cultures from bovine sources have a much greater pathogenic power.

(3) The gross pathology of the lesions produced is essentially the same, such differences as are seen being due to the resistance of the animal rather than to any difference in the cultures.

(4) The pathological histology of the lesions is the same, as shown by Schuppel, Baumgarten and others.

Proof of unity *presupposes intercommunicability*; but we have further proofs, as follows:

(1) Infection from man to animals.

(a) By sputum from attendants, as in the cases reported by Cozette, Cliquet, Huon, etc.

(b) By inoculation, as shown by Chauveau, Klebs, Crookshank, Bollinger, Sidnev Martin, Thomassen, Nocard, de Jong, Arloing, and in the work at the laboratory of the State Live Stock Sanitary Board of Pennsylvania.

\*Original abstract of a paper read before the State Medical Society of Pennsylvania at Allentown, September 16, 1902.

(2) Infection from animals to man.

(a) By inoculation, as in cases reported by Pfeiffer, Tscherning, Mueller, Hartzell, Joseph and Trautmann, Ravenel and others.

(b) By food, as reported by Nocard, Demme, Gosse, von Ruck, Law, etc.

The statistics of post-mortem examinations prove the same thing. The tubercle bacillus may enter through the digestive tract without leaving any injury at the point of entrance. This is shown by specimens from monkeys fed at the Laboratory of the State Live Stock Sanitary Board, in which the lungs are extensively diseased, while the intestine shows no sign of injury. In children also the mesenteric glands are often found to be tuberculous, while the intestine is perfectly normal. Infection often takes place through the tonsils also.

The two diseases are the same, caused by the same germ, and are intercommunicable. Tuberculosis of cattle is, therefore, a menace to public health, and every effort should be made to suppress and eradicate it. At the same time, the greatest danger is in tubercular sputum from man, and this must be guarded against also. We must not lose sight of one danger while watching out for another. No efforts for the prevention of tuberculosis will be entirely successful that do not embrace all sources of infection.

### SOME CASES OF APPENDICITIS AND THE LESSONS THEY TEACH.\*

By MILES F. PORTER, M. D., Fort Wayne, Ind.,  
Professor of Surgery, Clinical Surgery and Gynecology, Fort Wayne College of Medicine, etc.

*Case I. Chronic appendicitis, eleven years' duration.*—On operation an abscess was found behind the cecum, with a small stump of the appendix attached to cecum. Complete relief resulted for six months; but then there was return of symptoms, which were relieved by spontaneous opening of abscess.

The return of the symptoms in this case were probably due to the distal end of the appendix or to a fecal concretion left behind.

*Case II.* A simple drainage operation was done eleven months before, followed by frequent recurrences of pain, etc., which were re-

\*Author's abstract of paper read before the American Association of Obstetricians and Gynecologists at Washington, D. C., September 17, 1902.

lied by spontaneous opening of the sinus. Operation revealed a large fecal concretion and the distal end of the appendix free in the centre of the abscess.

Detached appendices or fecal concretions should be searched for in chronic cases, and drainage kept up for some time in case neither is found.

*Case III.* The only tender point in this case was discovered between the bladder and the rectum by rectal examination, although prior to this symptoms were fairly typical of appendicitis. Operation revealed a detached necrotic appendix enclosed in adhesions at this point. Microscope was necessary to decide the nature of the necrotic tissue.

*Case IV.* This case emphasizes the remote dangers of delay in thorough operating. The first operation consisted of simple drainage of the large pus cavity; two weeks later a second cavity in the left iliac region was drained. Recovery seemed well established when a bowel obstruction necessitated the third operation, when the bowel had to be opened to allow replacement into abdomen. Five years later a fourth operation was necessary for the bowel obstruction. Recovery followed, and there has been good health for three years, since the last operation.

*Case V.* *Case of appendicial colic due to seed of unknown kind.* Tenderness was very circumscribed. Pain and tenderness were out of proportion to the constitutional symptoms. Appendicectomy was done, and complete relief ensued. The appendix was not inflamed, but the mucosa was injured in several places by the sharp corners of seed.

*Case VI.* Complete occlusion of lumen of appendix. Some adhesions were noted, but there was no sign of present inflammation, but a history of possible previous attacks. Appendicectomy was performed incidental to diagnostic celiotomy. Occlusion was probably due to inflammation, but may have been consequent on lack of development.

*Case VII.* There was nothing unusual in this case save that the tumor, composed of a mass of omentum, inclosing the inflamed appendix, was spherical and freely movable; it could be pushed to the left of middle line.

The danger of mistaking a similar case, if chronic, for tumor, was pointed out. A similar case, thought at first to be one of malignant tumor, was related to the writer by Dr. A. J. Ochsner.

*Case VIII.* Cancer of the ileo-cecal valve was mistaken by several doctors, including writer, for appendicitis. Relative absence of tenderness as compared with pain, together with anemia and loss of flesh, which were out of proportion to inflammatory symptoms, would lead in another case to correct diagnosis.

*Case IX.* Girl, age eleven, has had three previous attacks, each of which came on suddenly, and disappeared in the same manner. No tenderness was left after the pain had gone. A small tumor exquisitely tender was noted just above Poupart's ligament. Diagnosis, appendicitis. Operation proved the case to be one of ovarian cyst with twisted pedicle and commencing gangrene.

*Case X.* This was a case of first attack, and the symptoms were mild. Appendicectomy was performed. The appendix was the site of a small retention cyst of inflammatory origin, with very thick covering.

*Case XI.* This also was a case of first attack. Vomiting, tympany, etc., were among the signs and symptoms denoting severe and spreading infection. Operated at end of 48 hours, when first seen. Appendix was perforated and gangrenous, and there was a free muddy fluid in the abdomen. Recovery.

This is not an unusual case, and but one of many in the writer's experience. What would have been the result of starvation treatment in this case? Can any method corral germs, already widely spread, and pen them up securely within a small space? Will any medical treatment secure with certainty circumscribed abscesses in all suppurative cases? Can any one foretell the result in a given progressing case with certainty? The writer believes this case would have ended fatally had operation been delayed. The sooner a case of appendicitis, which is growing progressively worse, is operated on the better. No man can tell exactly what is occurring until he sees—the pathologic changes that have obtained.

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## Correspondence.

### Ptomaines in Buttermilk.

*Mr. Editor*,—The article entitled, "Wholesale Poisoning from the Ptomaines of Milk," by Dr. T. M. Baird, of Sweet Springs, Va., appearing in the *Virginia Medical Semi-Monthly* of date the 12th of September, 1902, was read by me with much interest from the fact of having had like experience several years ago, and again a few months back in a gentleman from the North, who insisted on drinking buttermilk, and pronounced it "delicious!" In a few hours he suffered so intensely that he is not likely to forget it.

For generations, Virginians have been putting milk in tin pans, and do it now, every day, without any deleterious effect upon the milk. I think the doctor will find the cause of the illness not in the milk receptacles, but in the buttermilk itself.

No one will undertake to say that buttermilk cannot be drank at times without unhealthful effects; neither can any one affirm that it will not make one deadly sick at any time. The best way to do is not to drink it.

Country people do not often drink it; they put it in bread. The milk after churning is dangerous at times.

WM. S. STOKLEY, M. D.

*Cheriton, Va., Sept. 15, 1902.*

## Analyses, Selections, Etc.

### Pelvic Diseases in the Young and Unmarried.

Dr. C. L. Bonifield, Cincinnati, Ohio, read a paper before the American Gynecological and Surgical Association during its session, September 16-18, 1902, of which the following is an original abstract:

The paper deals only with gynecological diseases, which occur in women not subjected to sexual intercourse. Physicians are now more frequently consulted about such troubles than formerly, but this is probably because the modern woman bears discomfort less well than her ancestors did, rather than that there is an increase in the number of patients suffering from such disorders. Disorders of menstruation, undeveloped uterus, tubercular disease of appen-

dages and acute displacements are the most common pelvic affections in such patients.

When menstruation does not make its appearance at the age it is to be expected, a thorough investigation of the general condition of the patient is indicated, and her health should be made as nearly perfect as possible. A local examination is not required unless there are severe local symptoms. The same is true of amenorrhœa occurring after menstruation has been established. The possibility of pregnancy is always to be borne in mind.

*Dysmenorrhœa* may be of constitutional or local origin. Local treatment is not required in the first variety, and the endometritis, which causes a majority of the latter cases, can often be relieved by hygienic and medicinal treatment.

*Menorrhagia* is often caused by a depraved state of the blood or an interference with its circulation by disease of heart, liver or kidneys. The uterus, whose development has been arrested at the time of puberty, is the most important type of undeveloped uterus. It is generally sharply anteflexed, but occasionally retroflexed, and the cervix is long and narrow, the body dilated. *Dysmenorrhœa* becomes a prominent symptom. Thorough dilation, curettage and tight packing, repeated one or more times if necessary, form the basis of the best treatment. See author's paper, *American Journal of Obstetrics*, May, 1902. *Tuberculosis of the pelvic peritoneum* is often mistaken for typhoid fever or appendicitis. When tubercular peritonitis begins in the uterine appendages they should be removed by abdominal section. Acute prolapse or retro-version of the uterus is found as a result of a fall or heavy lifting in young woman of lax fibre.

Young unmarried women are best examined under anaesthesia, and when possible the treatment of their local disease should be operative.

### Treatment of Pre-Senility.

Fergusson details (*Medical News*, New York and Philadelphia) a case of impotence following a prolonged attack of gonorrhœa. It was his third attack, and his virile power was almost lost, and he suffered from frequent micturition. He had in addition orchitis on both sides. The case was peculiarly obstinate, and many remedies had been used to no purpose. He had already exhausted the resources of several quacks. Sanmetto was prescribed in teaspoonful doses three times a day, and improvement and recovery followed.

## Surgery of Thyroid Gland.

In a paper read before the Ohio State Medical Society, Toledo, May 27th, 28th and 29th, 1902 (illustrated by fifty lantern slides), B. Merrill Ricketts, Ph. B., M. D., of Cincinnati, Ohio, after reviewing the human and comparative anatomy (microscopical and topographical) many assigned causes are given, the most common being heredity, acute infectious diseases, and malignant neoplasms.

All vertebrates are subject to the same laws concerning disease and abnormalities of the thyroid gland.

Nephritis from any cause is a common cause, and when it is a common cause the growth is of rapid development. Thyroiditis is rare, and, when present, follows an operation or injury. Of the parasites, echinococcus and cystercus are rare causes, while the bacilli of pneumonia, typhoid fever, tuberculosis, and micro-organisms of a selective type are more frequent.

The results of disease of the thyroid gland are insanity, infection, hemorrhage, dyspnoea and rupture.

Death may be due to any one or all of these causes.

The thyroid gland is subject to nearly all forms of benign and malignant neoplasms.

The treatment is classified as (1) medicative, and (2) operative.

*Medicative.*—This is of but little avail except to palliate. Extracts will benefit, but not cure. They will lessen the size of the neoplasm, and are only commendable in a certain class of cases as a palliative measure. Other remedies are useless. Fresh glands on ice do not produce toxic effects, and best results are in chlorotic patients when raw sheep glands are used.

*Operative.*—Dyspnoea, stridor, rapid growth, dysphagia, deformity, exophthalmic goitre, malignancy and emaciation, one or all indicate operation. Removal of all or a part of the gland should be given preference to the injection of iodine, zinc, iodoform, alcohol, or any other solution. Excision is more radical, safer, and requires less time for recovery. Then, too, none of the neoplasm remains to be the seat of new growth, malignant or benign. All forms of new growth of the thyroid gland should be removed. Even in cases of exophthalmic goitre it should be operated. All operative experience

leads to this conclusion. Great relief has been given in exophthalmic goitre.

*Method.*—If the disease is confined to one of two lobes without an isthmus the diseased lobe may be completely removed without much likelihood of recurrence of the growth. If an isthmus be present the other gland may become involved. It is probable that the disease being confined to one lobe may be due to the absence of the isthmus.

So far as possible the presence or absence of the second lobe should be determined at time of operation. If the second lobe cannot be found the entire diseased lobe should not be removed unless it be malignant.

The probabilities are that one or more supernumerary lobes are more frequently present in persons possessing but one normal lobe, no matter where the abnormal ones may be located. Supernumerary glands are more frequent upon the left side. The presence of supernumerary lobes may account for the absence of ill effects in those persons who have been subjected to the removal of an entire right or left gland.

Division of the capsule will permit of a thyroid gland being enucleated with ease and with the loss of but little blood.

The rapid pulse following removal of a thyroid gland is probably due to the rapid absorption of the thyroïdine in the process of repair. The pulse will some time become much more rapid for forty-eight to one hundred hours, reaching at times 160 per minute, but it will at the end of this time subside to 80 or 90. If there is any pathologic tissue that should be excised it is that of the thyroid gland. There are none of the major operations in which the mortality is less.

## Gray's Glycerine Tonic,

Being free from anything like drug effects, is one of the strongest reasons why the profession adopts it for routine administration where there is impairment of general health, lack of nervous energy, general exhaustion, etc., as shown in anæmia, neurasthenia and chronic wasting diseases generally. Nearly all other tonics and reconstructives have some secondary effects, which detract from their clinical value. Gray's Glycerine Tonic is of pleasant taste, agrees with sensitive stomachs; patients, as a rule, do not tire of its continued administration, and it is effective in restoring tone and vigor to the system.

### Removal of the Gall-Bladder Through the Lumbar Incision.

At the last meeting of the American Association of Obstetricians and Gynecologists, held at Washington, D. C., September 16-18, 1902, Dr. W. P. Manton, of Detroit, reported a case of removal of the gall-bladder through the lumbar incision. The patient, aet. 38, five children and two abortions, had never been robust, but was able to attend to her domestic duties. She had suffered from a number of gastric attacks, but there had been an entire absence of symptoms pointing to disease of the biliary tract. Examination showed the left kidney to be loose, while the right kidney appeared to be double its normal size, displaced downward and inward, and with certain projections, which led to the diagnosis of nephroptosis, with probably cystic metamorphosis of the renal substance. At the operation through the nephropexy incision, the fatty capsule of the kidney was found to be embedded in a mass of adhesions, a condition which gave rise to the appearance of enlargement. The kidney, which was normal in size and structure, was delivered onto the back and placed astride the wound. Below the kidney pouch, a distended gall-bladder containing fluid and 19 gall-stones the size of hazelnuts, was found surrounded by adhesions. This was enucleated, tied off at the cystic duct and removed. The fluid contents of the sac contained a bacillus having the morphology and staining qualities of the colon bacillus, and a long, large rod which stained violet by Gram's method; no staphylococci or streptococci were found. The kidney capsule was split and peeled off to the lateral line, fixation sutures introduced, and the organ returned to its place. A strip of gauze for drainage was carried from the upper angle of the external wound to the stump of the cystic duct. The patient made a good recovery. It is impossible to state whether the condition was a congenital anomaly or the result of the walling off of the gall-bladder by adhesions. The operation was entirely extra-peritoneal.

This is the first recorded instance of cholecystectomy through the lumbar incision. Dr. Manton believes that, on account of the anatomical position of the gall-bladder, in uncomplicated disorders of the biliary tract the anterior abdominal incision is the one of choice, but that when nephroptosis or morbid condition of the kidney exists, demanding operative treatment, together with enlargement of the gall-bladder

from stones or fluid accumulation, the lumbar route offers certain advantages. He pays tribute to Edebohls, whose pioneer work has opened up this previously uncultivated field of surgery.

### Physiological Action of "Quinoliv."

Competent authorities agree that the sulphate of quinine is the most thoroughly reliable of all forms of that chemical. It is, therefore, a step forward to clothe this useful remedy in a more palatable and grateful form, and at the same time make it more acceptable to the stomach, thus causing it not to lose one bit of its therapeutic value.

This requirement is fully supplied in *quinoliv*, and large experience has taught that we have "built better than we knew."

*Quinoliv* is a combination of the purest sulphate quinine and olive oil, so combined that when administered, the system gets the good effects of both remedies without the disturbing ones of the quinine.

A great many people cannot take raw sulphate quinine, and it is well to know why such is the case. When pure sulphate quinine is administered it passes into the upper stomach, and is there absorbed, quickly, in an acid medium; at any rate, a considerable shock is here produced, and the nerve centres are all disturbed and the digestive organs become impaired. This condition increases with each successive dose; then the brain becomes dizzy, the sight dimmed, the ears ring with noises, and the devil generally is to pay.

Bartholow says that all quinine in passing out of the upper into the lower intestine is wasted, and therefore worthless. This is true. Now, *quinoliv*, owing to its oleaginous character, is absorbed mainly in the lower intestine, and enters into the system as pure sulphate quinine, while the olive oil is here absorbed, too, as a food product; but all particles of the sulphate quinine not thoroughly incorporated with the oil (and the per cent. is small), are absorbed in the upper intestine. Consequently, *quinoliv* becomes, in a measure, soluble throughout the entire intestinal tract, rendering a valuable service as an antiseptic.

Again, a patient is thus more thoroughly and effectually quionized than by any other form of quinine.

Suppose: A patient is sick with typho-malarial, or æstivo-autumnal fever, or any of the

other types of malarial fever. Some are so nauseated at the beginning of these fevers that they cannot even retain ice water. Quinine is surely indicated, and the doctor heretofore had to give such forms of it, experimentally, as his patient could retain without the proper regard for its quickest, safest and best value. The question often arises with him, will the patient die (considering the nausea) before he can thoroughly quinonize him; or will he hold on for weeks, thus treated, and finally recover, and for a long time be an emaciated physical wreck.

It is a fact, that all patients surviving these long spells of malarial fevers, and who were treated with any other form of quinine than "quinoliv" recover slowly, and are very much emaciated, and are possessed of a pallor very much the likeness of a ghost.

Not so with the "quinoliv" treatment. The patient retains it well, and it soon allays the nausea; it is absorbed in the lower intestine, and does not therefore disturb the nerve centres nor the digestive system. The olive oil is here absorbed and makes more red corpuscles for the malarial parasite to prey upon, while the royal sulphate now gets in its work, and the germ becomes an easy mark for the quinine. The patient thus gets up and out with a red color in the face in shorter time compared to a similar case where the raw sulphate of quinine was used. More than that, "quinoliv," though 20 per cent. of it is a disguisant, is grain for grain as effective compared with the raw sulphate, and bulk for bulk, it occupies one-third the space of that form of quinine.

### Adrenalin Preventive and Curative of Hay Fever.

It is difficult to conceive of a more miserable creature in all the world than the hay fever sufferer. The attack not only makes him exceedingly uncomfortable, but renders him unfit for business or the pleasures of society. Aside from the annoying and continual discharge from the nostrils, the eyes are suffused, the secretion of tears is increased, the nasal passages are obstructed, and an intense burning sensation is experienced: the latter is not entirely limited to the mucous membranes, but not infrequently involves the cutaneous surfaces of the forehead, cheeks and nose. Violent attacks of sneezing occur, which are so prolonged at times as to completely exhaust the sufferer and bring on severe

headache. The condition is one of utter wretchedness, and there is extreme malaise, amounting occasionally to complete prostration. The lightest duties become irksome tasks, and many an active, industrious and useful member of society is completely incapacitated while "the season" lasts.

For years some convenient means of relief has been sought. Change of scene does very well for those unfettered by business, who can afford to travel. But to many very worthy people a change of scene is out of the question. Naturally the greater number of the afflicted are accustomed to look to the medical profession for the help they need. But what has the medical profession actually accomplished for the permanent relief of the sufferer or the cure of his ailment? There is scarcely a sedative, astringent, tonic, nerve, or alterative drug in the materia medica that has not enjoyed an evanescent reputation as a useful remedy in the treatment of hay fever. Until the discovery of "adrenalin," each had been as much of a disappointment as its predecessor, and none had afforded more than the merest temporary relief.

There is increasing evidence that adrenalin fully meets the indications as a remedial agent in hay fever. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise so frequently a prominent feature in cases of long standing.

In the treatment of hay fever the solution of adrenalin chloride should be used. This preparation is supplied in the strength of one part adrenalin chloride to one-thousand parts normal saline solution, and is preserved by the addition of 0.5 per cent. chlorethone. The 1-1000 solution should be diluted by the addition of four parts normal salt solution, and sprayed into the nares with a "cocaine" atomizer. In the office, the 1-1000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened

with a few drops of the solution (1-1000). The speculum is then introduced, the patient's head is tilted backward in a position most favorable for thorough illumination by the head mirror, and the visible portions of the lower and middle turbinate bodies, and the septum are carefully and thoroughly brushed. The same application is made to the other nostril, when usually relief follows, in a few moments. Should the benefit prove only partial, the 1-5000 solution may now be sprayed into both nares, and a few drops instilled into both eyes. The effect of this treatment may be expected to last for several hours. Indeed, some physicians report that it is necessary to make but one thorough application daily to afford complete relief.

It is also recommended that solution adrenalin chloride be administered internally in 5 to 10 drop doses, beginning ten days to two weeks prior to the expected attack. In explanation of the beneficial effect of the drug when used in this manner, the suggestion has been made that hay fever is essentially a neurosis, characterized by a local vaso-motor paralysis, affecting the blood supply of the eyes, nose, face, and pharynx and occasionally of the laryngeal and bronchial mucous membranes. Adrenalin overcomes this condition, restores the normal balance in the local blood pressure, and thus aids in bringing about a cure. The profession is to be congratulated that it has at last an agent that, if not a specific, fulfills the therapeutic indications more completely and with greater satisfaction than any other remedial measure recorded in the history of medicine.

### Unilateral Renal Hematuria.

Dr. Augustus A. Eshner, of Philadelphia, in a paper read before the Pennsylvania Medical Society, September, 1902, pointed out the various conditions that give rise to the appearance of blood in the urine, dwelling especially upon the hematuria that occurs from one kidney often without obvious cause, and has been variously designated essential or idiopathic, hemophilic or angioneurotic. He reported the case of a girl, twenty years old, who, for twelve years, had suffered from pain in the right side of the abdomen and from recurrent hematuria. Renal calculus was suspected, but on exposure of the kidney no foreign body was found, nor was the organ the seat of obvious disease. The wound

was closed, and the hematuria ceased in a short while, and had not returned for a period of two years. A collection of forty-six other cases of similar character from the literature was presented, and an analysis of these showed that the disorder occurs about equally in the two sexes, and to come under observation between the years of eighteen and seventy-six, the average being thirty-six. The blood comes from either kidney with about equal frequency. In most cases a diagnosis of calculus, neoplasm or tuberculosis was made. Various operative procedures were undertaken, from simple exposure to nephrectomy, and recovery was almost invariable. In a number of cases no lesion was found, but in numerous others vascular and inflammatory changes, and in some displacement or undue mobility of the kidney were present. No satisfactory explanation of either the hematuria or its cessation without removal of the bleeding organ is applicable to all cases.

### Peritoneal Tuberculosis in Women.

Dr. Rufus B. Hall, Cincinnati, Ohio, read a paper before the American Association of Obstetricians and Gynecologists, during its session at Washington, D. C., September 16-18, 1902, of which the following is the abstract:

He believes that peritoneal tuberculosis in women is not a rare disease. It occurs often enough to make it necessary to consider it in the differential diagnosis of all obscure diseases in the pelvis and abdomen. In a large majority of cases coming under his observation there were no appreciable manifestations of the disease in other parts of the body. The symptoms of this disease simulate several other conditions in the pelvis and abdomen, and it requires patient and careful study to differentiate one from the other.

The diseases most likely to be confounded with this disease are the recurrent attacks of appendicitis of the catarrhal form, small fibroid tumors, with old tubo-ovarian disease and recurrent attacks of pelvic inflammation. An ovarian cyst of moderate size may be confounded with encysted tubercular dropsy. But if the case is one of tuberculosis, the temperature chart will suggest this disease if the temperature be taken every four hours for a period of ten to fifteen days. In no other condition is there the exact regularity in the afternoon rise



of temperature as in tuberculosis. He insists that all cases of peritoneal tuberculosis in which there is encysted dropsy or an accumulation of pus or serum should be operated upon, and after the necessary surgical repair the abdomen should be drained. He advocates vaginal drainage in women. First, because it gives perfect drainage; and second, it prevents ventral hernia, which so often follows on account of the fact that the drainage tube must be kept in for so many days.

Of 110 patients operated upon by the author for peritoneal tuberculosis, twelve were for supposed appendicitis—four males and eight females. For other conditions he operated 98 times on the females. Of this number two deaths were directly due to the operation. One died on the seventeenth day of meningitis. One died six weeks after operation from general dissemination. One died in ten weeks from general dissemination. These five cases all died in the hospital. One recovered in four weeks, left the hospital convalescent, and died two weeks afterwards of meningitis after three days' illness. One recovered and left the hospital in the fourth week, and died in thirteen weeks after the operation from general dissemination. Eight died from tuberculosis in various forms in from fourteen months to four and a half years after the operation. Two cases are suffering from pulmonary tuberculosis, and will probably die within a year. The remaining ninety are symptomatically well. A few of these cases have been operated on so recently that no conclusions can be drawn. Taking the cases as a whole, the results are gratifying beyond expectation. A large per cent. of the cases are enjoying the best of health, and from their appearance one would never suspect that they have had tubercular disease.

### The Relation of Epilepsy to the Ocular Muscles.

Dr. Wendell Reber, of Philadelphia, Pa., read a paper on this subject before the recent session of the Pennsylvania State Medical Society. His postulate is that a certain proportion of all cases of non-fœcal epilepsy is due to an irritation proceeding from some point in the visual sphere; that, while a certain percentage of what might be styled "ocular epilepsies" are

undoubtedly caused by refractive errors, there is a remaining percentage of ocular epilepsies that either present no anomaly of refraction or that show no improvement in the epilepsy after wearing a proper correction; that failure of the ophthalmologist up to this point need not necessarily discourage, as imbalance of the ocular muscles often persists in spite of the use of proper lenses, and correction of this unharmonious action of the ocular muscles frequently secures the most gratifying arrest of the epileptic seizures. The author enters a strong protest against indiscriminate drugging and bromidizing of these unfortunates, pleads for the individual as against the institutional treatment of this dreaded disease, and urges the strictest search for every possible source of reflex invitation in every case of epilepsy.

### Etiology and Prophylaxis of Traumatism of the Female Pelvic Tract Following Labor.

Dr. Edward J. Ill, of Newark, N. J., read a paper on this subject before the American Association of Obstetricians and Gynecologists during its meeting at Washington, D. C., September 16th, 17th, and 18th, 1902.

The subject is considered under five heads—namely:

- 1st. What are these accidents?
- 2d. What predisposes the women to them?
- 3d. How are they produced?
- 4th. What is the result?
- 5th. How can we avoid them?

Under the first heading he speaks of cervical and perineal lacerations, injuries and sloughing of the vagina, labia minora, vestibule, bladder, urethra and ureter, beside rupture of the uterus and sloughing of the pelvic cellular tissue. He also touches upon ruptured uteri, injuries of the bone structure and ligaments of the pelvis. Under predisposing causes, he speaks of the chronic inflammatory diseases of the cervix, abnormal configuration of the vagina and previous trauma. He draws attention to the woman of poorly developed muscular and osseous system.

Among the abnormal conditions of the fœtus, he speaks of the importance of the relative size of the fœtal head and structure of the pelvis. The abnormal presentation of the fetus is

touched upon—especially the occipito-posterior position.

Among the abnormalities occurring during the progress of labor the most common are the early rupture of the membranes.

Operative interference are the causes of the most frequent and serious injuries. He now dwells at length upon the causes of instrumental delivery before the cervix has retracted over the head, and of podalic version producing rupture of the lower segment of the uterus.

In speaking of the prophylaxis, he urges, amongst other things, never to apply the forceps to the *undilated* and *non-retracted* cervix except from the greatest necessity.

The severe injuries produced by the forceps on the *non-traced* cervix has prompted the writing of this paper.

### General Consideration of Surgical Patients.

The following is an abstract of paper read by A. J. Ochsner, Chicago, Ill., before the Mississippi Valley Medical Association at Kansas City:

The paper deals with general considerations which have a special bearing upon success in the execution of clinical surgery. It deals, first, with the fact that a given form of treatment is not applicable to every patient suffering from a similar pathological condition, it being necessary for the surgeon to consider the patient himself very thoroughly before applying the methods intended for his relief.

The examination of the patient is discussed at length, and certain measures are condemned as harmful to the patient; among these are prolonged or violent manipulation in the diagnosis, especially of inflammatory conditions or malignant growths, in which cases these manipulations are likely to give rise to extension of the presence of metastasis.

Excision of sections of malignant growths for diagnostic purposes should never be made, because this is very likely to cause an infection giving rise to metastatic growths and changing a relatively harmless condition, which could be relieved by an early operation into an absolutely hopeless condition.

The exploring syringe is discussed and condemned, except in locating abscess of the brain. The same is true to a greater extent of the exploring needle. Certain manipulations, such

as catheterization of the ureters are also considered bad, because the amount of injury to the patient which is likely to occur, is much greater than the amount of benefit which can be obtained if this method is used in preference to other methods, which are perfectly safe.

The weight of certain contraindications is considered, such as old age, infancy, obesity, tuberculosis of the lungs, cachexia, etc. The importance of the loss of blood during the operation is discussed, and the amount of time spent during an operation and the amount of traumatism caused by the operation are considered. Attention is given to the preparation of the patient, the temperature of the operating room, and the other conditions, which are not connected directly with the operation, but which have an important bearing upon the success of work in clinical surgery.

### Substitutors Steal Physician's Patients.

Incidentally, the Antikamnia Chemical Company is after "counterfeiters" and "substitutors" with a sharp stick. Their work in New York city is, no doubt, well known to our readers, and they have now broken up a counterfeit gang in New Orleans.

There cannot be two views on the subject of substitution. It is swindling, pure and simple. Antikamnia (powder or tablets) is made only by the Antikamnia Chemical Company, of St. Louis, Mo., and when a physician prescribes either Antikamnia preparations he means the products of that firm. If his patient does not get them, a fraud is perpetrated, not only upon the company, but upon the physician and his sick patient, for whom the medicine was intended. In other words, the doctor's patient is taken out of the doctor's hands, transferred absolutely to the substitutor's care, and then given whatever remedy the substitutor thinks best—all this, irrespective of the doctor's diagnosis. In short, the treatment is in accordance with the "diagnosis" made by the substitutor. And as all substitutors are thoroughly saturated with avarice, greed and utter disregard of the most sacred rights of others, the fate of their victims can well be imagined. It is the purpose of the Antikamnia Chemical Company to expose and punish this crime wherever they locate it, and they have notified the trade that the least punishment "substitutors" of this kind can expect, is exposure of their guilt.

## Book Notices.

**Practical Medicine Series of Year-Books.** Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School. Vol. VII. *Materia Medica and Therapeutics; Preventive Medicine; Climatology; Forensic Medicine.* June, 1902. Chicago: The Year-Book, Publishers. Cloth. 12mo. Pp. 270. \$1.50.

This series comprises ten volumes on the year's progress in medicine and surgery, issued monthly. While each volume may be purchased separately at its own price, the price of the series of ten volumes is only \$7.50. The volume before us is a useful one to every practitioner. The section on *Materia Medica and Therapeutics* is edited by Geo. F. Butler, Ph. G., M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Chicago, with the Collaboration of Geo. S. Browning, B. S., M. D., of Alma, Mich. It takes up about 140 pages, naming new remedies or older remedies about which something new has been noted, in alphabetical order. Henry B. Favill, A. B., M. D., Professor of Therapeutics and Preventive Medicine in Rush Medical College, Chicago, is the editor of the section on *Preventive Medicine*, in which such subjects as tuberculosis, alcoholism, State supervision of marriage, venereal disease, modern theories of immunity, small-pox, typhoid fever, malaria, yellow fever, school hygiene, etc., are considered. The section on *Climatology* is edited by Norman Bridge, A. M., M. D., Emeritus Professor of Medicine, Rush Medical College, now of Los Angeles, Cal. The chief subjects discussed are tuberculosis and climate, specific climates, and general climatological papers. The volume concludes with a short section on *Forensic Medicine*, by Dr. Harold N. Moyer, Assistant Professor of Medicine, Rush Medical College. The questions constantly arising in this department are always interesting, but often not instructive to the doctor other than to show how lawyers and jurists disagree. The full index added to the book is most useful.

**Diseases of the Intestines—Their Special Pathology, Diagnosis and Treatment.** By JOHN C. HEMMETER, M. D., Philos. D., Professor in the Medical Department of the University of Maryland, etc. *In Two Volumes. Vol. II—Appendicitis, Tuberculosis, Syphilis, Actinomycosis of Intestine, the Oc-*

*clusions, Contusions, Rupture, Enterorrhagia, Intestinal Surgery, Atrophy, Abnormalities of Form and Position, Thrombosis, Embolism, Amyloidosis, Neuroses of Intestines, Intestinal Parasites, Diseases of the Rectum. With Plates and Many Other Original Illustrations.* Philadelphia: P. Blakiston's Son & Co. 1902. Large 8vo. Pp. 679. Cloth. \$5 net. Set Complete (both volumes), \$10.

In our issue of December 13, 1901, Volume I was favorably noticed. Now that the work is complete, we find that our praise of the first volume was not too much, for the two volumes, taken as a whole, make a work of inestimable value to the practitioner and to the scientist in medicine. It will be noticed that, in great part, this Vol. II embraces pathological conditions occupying the border line between internal medicine and surgery. While our author, in reference to such troubles as appendicitis, points out the best known methods of medical treatment, he unhesitatingly refers most of his cases to the surgeon—unless he can be sure that he has a case of catarrhal or stercoral affection of the mucous membrane to deal with. The work is especially valuable in the matters of direct and differential diagnosis—calling attention to the modern evolution of the exact methods of clinical diagnosis. But the technics of the microscope, and chemical and physiological investigations leave large vacancies in the pathology of the intestinal function; "and when these exact methods desert us, there is but one beacon light for the general practitioner, and that is *clinical experience.*" As the best of the books on intestinal diseases, for text or reference, for practitioner or scientist, we point to Hemmeter's two volume work on "*Diseases of the Intestines.*"

**Cellular Toxins, or the Chemical Factors in the Causation of Disease.** By VICTOR C. VAUGHAN, M. D., LL. D., Professor of Hygiene and Physiological Chemistry, University of Michigan, and FREDERICK G. NOVY, M. D., Sc. D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. *Fourth Edition, Revised and Enlarged.* Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 495. \$3 net.

The three former editions had as their title "*Ptomaines and Leucomaines, Toxins and Antitoxins.*" It was formerly believed that the basic products of bacterial growth constituted the chief factors in the causation of the infectious diseases. But recent discoveries have shown that this idea is erroneous; and we now

look for the specific bodies among the synthetic substances formed within the cells of the micro-organism. This advance in knowledge has rendered it necessary to change the title of this fourth edition, and has compelled the re-writing for the most part of the book. Several new chapters have been added, developing subjects which were wholly unknown at the writing of the third edition. Cell-poisoning is now recognized as the starting point of infectious diseases. Micro-organisms act not directly, but by synthetic substances formed within their own cells. A knowledge of these facts in the cure and prevention of disease has revolutionized all the doctrines of the causation of infectious diseases especially, and rendered a new book necessary—a book which must hold its place of the standard authority. The authors present their points and make their descriptions in the same plain, practical way that characterized their authorship of former editions. This fourth edition is composed of 16 chapters—treating successively of the etiology of bacterial diseases, the classification and definition of the chemical products of bacteria, a historical sketch of the bacterial poisons; then the bacterial poisons of some infectious diseases are described. The germicidal properties of blood serum, the specific precipitins, the lysins, the agglutins, etc., are described. The subject of immunity is next discussed. Food poisoning, the examination of poisonous foods, methods of extracting ptomaines, the importance of bacterial products to the toxicologist, chemistry of ptomaines, and of leucomaines, are all well described. A description of the autogenous diseases concludes this most useful and instructive book.

**International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles.** By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., with the Collaboration of Nine Practitioners of Eminence in Europe and America, etc. Vol. II. Twelfth Series. 1902. Philadelphia: J. B. Lippincott Co. 1902. Cloth. 8vo. Pp. 295. \$2.

This quarterly forms an invaluable library for every practitioner of medicine, surgery, obstetrics or the specialties. The first 80 pages of this volume are devoted to *Therapeutics* in the form of clinical lectures on the treatment of diabetes mellitus, Gersung's method of prothe-

sis by subcutaneous and submucous injections of vaseline, treatment of bladder and rectal trouble in nervous diseases, treatment of acute urethritis, passive movements and massage for the treatment of fractures, treatment of simple ulcer of the stomach, two cases of immediate death caused by the spinal injection of cocaine, selected prescriptions. About 97 pages are devoted to *Medicine*, including these subjects: Pachymeningitis hemorrhagia as a cause of drunkards' death, pseudolenkæmia with chronic relapsing fever, classification of cirrhosis of the liver, hepatic sclerosis, auscultatory percussion, pancreatic cysts, presence and significance of beta-oxybutyric acid in the urine of diabetics in its relation to the coma, aortic aneurism, experience gained from post-mortems in the practice of medicine and surgery, bradycardiacyclic albuminuria, gastro-intestinal antitoxication. About 51 pages are given to surgery; 12 to obstetrics and gynecology; 2 to biographical sketches, and 44 pages to three special articles—one giving an outline of the organization and work of the Medical Department of the U. S. Army; another gives some notes upon the management of a modern private hospital; and the third considers the functions of the digestive glands. There is not an article or lecture above referred to from which the doctor may not learn something of practical value.

**Text-Book of Practical Therapeutics.** By HOBART AMORY HARE, M. D., B. Sc., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia, etc. Ninth Edition, Enlarged, Thoroughly Revised and Largely Rewritten. Illustrated with 105 Engravings and 4 Colored Plates. Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 857. \$4; leather, \$5; half Morocco, \$5.50 net.

This work should be considered an indispensable work in the library of every practitioner, and as a consulting text-book in the colleges, it is most valuable. The first edition was issued late in 1890. That the ninth edition should now be demanded shows the favorable impression made by each succeeding edition. Part I contains general therapeutic considerations. Part II—covering about 400 pages—is taken up with a description of drugs, their preparations, effects, uses, etc. In this part, we find some illustrations worthy of a place on every doctor's desk. One plate shows carbolic acid gangrene as it affects a finger. Another

shows the shrivelling and dry gangrene of a rooster's comb produced by an active specimen of ergot on the capillaries, thereby cutting off the blood supply. Plate III shows the effect of opium in controlling the mellituria in a case of diabetes mellitus. Part III discusses remedial measures other than drugs, and foods for the sick. In this part, all such matters as acupuncture, antiseptics, antitoxins, cold, as a remedy, etc., are defined and their uses given. Part IV refers to the selection of remedies for various diseases. In this part a plate shows the effect of antitoxin on the local diphtheritic process—how the deposit fades away in 36 hours after the use of a sufficient dose of antitoxin. This part also gives the doses of medicines, index of drugs and remedial measures, and the index of diseases and remedies. So much of the book is rewritten as to make it have the appearance of a new book. The work being up-to-date, and thoroughly practical in all its teachings, illustrating by drawings what can thus be better brought out—such as method of anæsthetic administration, hypodermic injections, the application of cold in the form of baths, etc.—we recommend it as the best of the books on *materia medica* and therapeutics, etc., at present known to us for either the practitioner or the advanced college student.

**Compend on Special Pathology** (Quiz Compend, No. 18). By ALFRED EDWARD THAYER, M. D., Assistant Instructor in Gross Pathology, Cornell Medical College; Pathologist to City Hospital; Formerly Fellow in Pathology, Johns Hopkins University; Professor of Pathology and Bacteriology, West Virginia University. Containing 34 *Illustrations*. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street. 1902. Cloth. 12mo. Pp. 322. 80 cents *net*. Interleaved for taking notes, \$1 *net*.

This compend of special pathology is intended as a companion book to the compend on general pathology edited by the same author, and noted in the May 23, 1902, issue of the *Semi-Monthly*. Although referred to as a "quiz compend," we find the text matter arranged for straight reading, there being none of the question and answer classifications. It is a good book for the class-room, the laboratory, or the party wishing to review the subject with reference to examinations, etc. Professor James Ewing's *Clinical Pathology of the Blood* has been freely used in this compend, and the chapter on Pathology of the Skin has been rewritten

by Dr. J. C. Johnston, of Cornell Medical College.

**Manual of Otology.** By GORHAM BACON, A. M., M. D., Professor of Otology in Cornell University Medical College, New York. With an Introductory Chapter by CLARENCE J. BLAKE, M. D., Professor of Otology in Harvard Medical School, Boston. New (3d) Edition. In one handsome 12mo. volume of 437 pages, with 120 engravings and 7 plates in colors and monochrome. Cloth. \$2.25 *net*. Lea Brothers & Co., Publishers, Philadelphia and New York.

This makes the third edition of Dr. Bacon's Manual on the Ear to be issued in little less than four years. Each edition has been revised as published, "both in text and illustration, to reflect the latest and best in its subject," and, though the size of this volume is small, "sufficiently full consideration is given to those particular diseases of the ear with which the student and practitioner will frequently meet to enable them properly to understand the condition and apply the appropriate treatment." To mastoid disease and intracranial complications considerable space has been given, because of their importance. Lumbar puncture and the significance of leucocytosis are among new subjects treated in this last edition, besides having added four plates, and a number of reproductions of photographs of cases, specimens, etc.

**Johns Hopkins Hospital Reports, Vol. X, Nos. 3, 4, 5.** Baltimore: The Johns Hopkins Press. 1902. Paper. Large 8vo. Pp. 192. \$5 per Volume.

These *Johns Hopkins Hospital Reports* are of special value in that they contain original investigations of a highly scientific character, coupled with the work of other authors on the subjects treated. The Nos. 3, 4 and 5 of this Vol. X, bound in one book, treat of "*The Pathological Changes in Hodgkins Disease, with Especial Reference to its Relation to Tuberculosis*" (Plates IV-VII), by Dorothy M. Reed; "*Diabetes Insipidus, with Report of Five Cases*," by Thomas B. Futeher, M. B. (For.); "*Observations on the Origin and Occurrence of Cells with Eosinophile Granulations in Normal and Pathological Tissues*." (Plate VIII), by W. T. Howard, Jr., M. D., and R. G. Perkins, M. D.; "*Placental Transmission, with Report of a Case During Typhoid Fever*," by Frank W. Lynch. These reports are worth to the practitioner everything charged for them.

**Diseases of Infancy and Childhood.** By HENRY KOPLIK, M. D., Attending Physician to the Mount Sinai Hospital, etc. *Illustrated with 169 Engravings and 30 Plates, Color and Monochrome.* Lea Brothers & Co., New York and Philadelphia. 1902. Cloth. 8vo. Pp. 675.

This is about the latest of the new books on pediatrics. The author is familiar to all practitioners as having established among other things the pathognomonic sign of measles—known generally as “Koplik’s spots,” which are well described in this book—both in text and by illustration. While the world’s recent literature of practical value has been systematized and made available, yet each section is so written as not to impress the reader that only the new is being brought out. Indeed, it may be said that what is of practical value has been retained, and well presented as a text for the student and practitioner—especial prominence being given to questions of diagnosis and treatment. This is an excellent book for the doctor.

**Kathlemet Texts.** By FRANZ BOAS. 4to. Pp. 261. Cloth. Washington, D. C.: Government Printing Office. 1901.

This is Bulletin 26 of the Bureau of American Ethnology, issued under the direction of J. W. Powell, of Smithsonian Institution. This Bulletin is the first of a new series authorized by Congress. While the book before us is scarcely medical, still there are many in the profession who will not fail in interest in the study and translation of a practically new language in the great Northwest of America. This ethnologic science is constantly bringing out facts of importance. And it is fortunate that the government has taken interest in it—an interest, however, which would scarcely been manifest had it not been for the establishment of the Smithsonian Institution. We welcome such books as helping us to understand the history of races and of tribes.

**Gibson & Russell’s Physical Diagnosis.** *Third Edition. Revised and Rewritten.* By FRANCIS D. BOYD, C. M. G., M. D., F. R. C. P., Ed., Assistant Physician Edinburgh Royal Infirmary, etc. *With 144 Illustrations.* New York: D. Appleton & Co. 1902. Cloth. 12mo. Pp. 448.

This is a most worthy standard hand-book of *Physical Diagnosis*, taking in integumentary, circulatory, respiratory, urinary, nervous and

alimentary systems—the latter including the abdominal viscera. Chapters are devoted to methods and terms, temperature, examination of the blood, the special senses, clinical bacteriology, etc. To the first and second editions, new sections have been added on examination of the blood, examination of gastric contents, intestinal parasites, the cranial nerves, etc. If the book had no other value than its magnificent and useful system of examination of the patient it would be worth much more than its cost. The illustrations all through the book are well selected, and the eye that traces them to keep the lines in memory as to what lies beyond and around, will have fixed a great deal of permanent value.

**Eighteenth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution.** 1896-97. By J. W. POWELL, Director. *In Two Parts—Part II.* Washington: Government Printing Office. 1899. Cloth. 4to. Pp. 997 for both parts.

The Report relates to “Indian Land Cessions in the United States.” It is a volume of interesting historic facts about each of the States of the Union. The “Introduction,” “by Cyrus Thomas,” on the “Right to the Soil Dependent on Discovery,” discusses the question from the legal standpoint. But all through the Report we find instances of violation of agreement by the whites, and their invasion of Indian territory contrary to treaties made with them. Much useful historic matter regarding the early States, etc., is in this book, compiled by Charles C. Royce from authentic data. It is a book suited to any library, for in the family circle it will give information to the young as to how their great, great grand parents became possessors of this continent.

**Diseases of Infancy and Childhood.** By L. EMMETT HOLT, M. D., LL. D., Professor of Diseases of Children in College of Physicians and Surgeons (Columbia University, New York, etc.) *With 225 Illustrations, Including 9 Colored Plates.* *Second Edition. Revised and Enlarged.* New York: D. Appleton & Co. 1902. Cloth. 8vo. Pp. 1,171.

The first edition of this work, issued only a few years ago, “for the use of students and practitioners of medicine,” established itself as worthy of the doctor’s constant reference library. Such advances have been made in these few years that in some instances the chapters

have been entirely rewritten—especially the chapters on milk and infant feeding. “Realizing from his own experience the great value of post-mortem observations in connection with clinical work,” numerous drawings and photographs of pathological conditions have been introduced. An immense amount of detail has been given space, which very materially strengthens the work, and simplifies the text. It is the class-room book in many colleges, and is the practitioner’s help in general or pediatric practice. The author dwells fully upon questions of diagnosis, symptomatology and therapeutics—remedies selected being all well tested and as far as possible are remedies found in the reputable drug stores of the country.

**Physical Diagnosis—Diseases of the Thoracic and Abdominal Organs.** By EGBERT LEFEVRE, M. D., Professor of Clinical Medicine, etc., University and Bellevue Hospital Medical College, etc. *Illustrated with 74 Engravings and 12 Monochrome Plates.* Lea Brothers & Co. 1902. Cloth. 12mo. Pp. 448.

This is a good book, and deserves a place among the recognized authorities. Especial emphasis is laid on the altered anatomy of the organs under examination, and its relation to physical signs. The respiratory and cardiac sounds, their productions and their modifications—normal and pathological—are perhaps more fully discussed in this than in books of like scope. A brief account is given of the morbid changes in different organs, as well as their secondary effects—both immediate and remote. Numerous radiographs are given, and other useful illustrations abound, which greatly assist the student in reading the text. This will be a popular book as well with the practitioner as the student.

**Progressive Medicine.** *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 Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. LANDIS, M. D. Vol. III. September, 1902. Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 431.

Our readers must be familiar by this time with the characteristics of this quarterly of *Progressive Medicine*. Of not an issue have we had less to say than of this—that it is thoroughly up to the times. This number treats of “Diseases of the Thorax and its Vis-

cera, including the Heart, Lungs and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System; Obstetrics.” The contributors to this volume are William Ewart, M. D., F. R. C. P., William S. Gottheil, M. D., William G. Spiller, M. D., and Richard C. Norris, M. D., each eminent as the author of the diseases successively named. The articles are all practical, and due attention is given to matters of diagnosis and therapeutics under each head.

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## Editorial.

### Medical Society of Virginia.

The thirty-third annual session of this Society, held at Newport News, Va., was one long to be remembered, because of the large attendance—nearly 300—the high grade of papers and discussions, the eminence of the authors, the goodly addition to the membership of the Society—nearly a hundred—and the social features, which exceeded by far those of any previous session. These social features, provided by the profession and ladies of Newport News and Hampton, consisted in boat excursions to various points of interest about the historic Hampton Roads, the Norfolk Navy Yards, the several ship building yards, Fortress Monroe; in trolley car rides to Hampton, Old Point Comfort, Soldiers’ Home, etc.; in receptions provided for the ladies accompanying the visiting doctors; winding up with a banquet for all guests at “The Chamberlain” at Old Point Comfort, and the return to Newport News by trolley cars early in the morning of September 26th. These social features were so arranged as scarcely to affect the attendance of the doctors upon the several daily sessions of the Society.

We regret that our notes have to be so hastily written as to refer only to a few of the items of general professional interest. The *Address to the Public and Profession*, by Dr. R. L. Payne, of Norfolk, Va., is given in this issue. Its careful reading will be of profit to all. The *Address of the President*, Dr. R. S. Martin, of Stuart, Va., was received too late to get into this issue, but will appear in the first October issue. Its title was “*Some of the Benefits of Thorough Organization of the Medical Profession—Both to the Laity and Profession—With Men-*

tion of Some of the Most Prevalent Causes of Sickness, Race Decay, and their Prevention." We know of no abler presentation of the subject than this address—and is of as much interest to readers outside of Virginia as in the State.

The officers elected for the new year are: *President*, Dr. John N. Upshur, Richmond, Va.; *Vice-Presidents*—Drs. Wm. F. Cooper, Newport News; R. W. Sanders, Max Meadows, and Junius F. Lynch, Norfolk; *Recording Secretary*, Dr. Laudon B. Edwards, Richmond; *Corresponding Secretary*, Dr. J. F. Winn, Richmond; *Treasurer*, Dr. Richard T. Styll, Newport News. Dr. Wm. S. Christian, Urbana, was chosen to deliver the *Address to the Public and Profession* at the next annual session. *Delegates to the House of Representatives of American Medical Association*, to be held at New Orleans during May, 1903, Drs. J. R. Gildersleeve, Tazewell, Stuart McGuire, Richmond, and R. S. Martin, Stuart.

The retiring President, Dr. R. S. Martin, of Stuart, Va., and Dr. Edwin Ricketts, Cincinnati, Ohio, were elected Honorary Fellows.

Petitions were received from the Old Dominion Medical Society, composed of colored practitioners, and from the Society of colored practitioners in and about Newport News, asking recognition, so that they might also be recognized by the American Medical Association. After much debate the petitions were laid on the table by a vote of 52 to 23.

Dr. J. B. DeShazo, Ridgeway, Henry county, chairman of the Committee on Reduction of the Special License Tax on Physicians in the State of Virginia, reported progress; but requested the appointment of a larger and permanent committee. The request being granted, the President appointed the following committee: Drs. J. B. DeShazo, Ridgeway, (chairman), M. D. Hoge, Jr., Richmond, Wm. S. Gordon, Richmond, Jesse Ewell, Ruckersville, Greene county, Rawley W. Martin, Lynchburg, W. D. Turner, Fergusson's Wharf, Isle of Wight county, R. S. Griffith, Basic City, R. L. Payne, Norfolk, and Leigh Buckner, Roanoke.

Dr. C. W. P. Broek, Richmond, Va., introduced the following, which was adopted:

"Resolved, That the attention of the Governor of Virginia be called to the fact that the physicians of the State are not represented on several of the Board of Visitors of the various public institutions."

Among the firms represented in the Exhibi-

tion Hall were: Sharp & Dohme, Baltimore, Md.; Parke, Davis & Co., Detroit, Mich.; Horlicks Food Co., Racine, Wis.; Mellins Food Co., Boston, Mass.; Lea Brothers & Co., Philadelphia, Pa.; Virginia Pharmaceutical Co., Richmond; Powers & Anderson, Richmond; Antigua Chemical Co., Richmond; C. W. & R. W. Bowen, Providence, R. I.; Chase City Water Co., Richmond, etc.

An influential legislative committee will give earnest effort this winter to the securing of legislative enactments of importance to the profession and the people.

Our limit of space does not permit even mention of the numerous papers read and discussed. These will appear in subsequent issues of this journal. The Committee on Publications will start to work on the *Transactions* as soon as the stenographer's report of the discussions, etc., is received. It will be found that there was a valuable contribution of papers, etc., ably discussed. If there is a criticism of the programme—so far as the scientific side is concerned—it may be said that it was a little surgically top-heavy—only one or two papers on medicine or common, every-day practice of the physician being presented.

All city and county medical organizations in affiliation with the Medical Society of Virginia are requested to make the facts known at once to the Recording Secretary of the Society—each with a full post-office list of their members.

#### Church Hill (Richmond, Va.) Medical Society.

Under the Presidency of Dr. Ramon D. Garcin, with Drs. St. Julian Oppenheimer and A. L. Leftwich, as Vice-Presidents, and Dr. B. L. Leftwich as Vice-Presidents and Dr. B. A. Hord, Secretary, and Dr. B. L. Taliaferro, Treasurer, this local Society has gotten out an attractive programme for the winter of 1902-1903. Articles recently prepared by Drs. Moses D. Hoge, Jr., and Barksdale, appear in this issue. Drs. St. Julian and W. T. Oppenheimer, Garcin, Gay, Wm. Parker, Blankenship, J. P. and Ennon G. Williams, Beazley, Hord, Taliaferro, Leftwich, Curd. Collins, Cosby, Kern, Virginius and J. P. Harrison, Ferrell, Gee, Crane, George Ross, D. A. Kuyk, etc., are among those who have promised papers—each on a subject of practical importance to the profession. It is extremely seldom that authors who promise papers are so punctual as those who are members of this Society.



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## Original Communications.

### Some Benefits of Thorough Organization of the Medical Profession, Both to the Laity and Profession; With Mention of Some of the Most Prevalent Causes of Sickness, Race Decay, and Their Prevention.\*

By R. S. MARTIN, M. D., Stuart, Va.,

President Medical Society of Virginia; Secretary of the Virginia State Board of Medical Examiners, etc.

The Medical Society of Virginia has imposed upon me the greatest honor and most difficult task of my life—the honor of filling the highest office within its gift, and the task of delivering an address on this occasion. I accepted the honor, and am here to fulfill the task, and perform as best I can the high and honorable duties as your President, and to return my sincere thanks to each member of this Society for this great distinction. Few doctors are trained in the art of oratory; it falls to their lot to spend their time in the sick chamber, where the voice is trained to a gentle whisper.

I shall relate no fine spun theories about new remedies or new diseases, but will content myself by making a plain talk on "*Some of the benefits to be derived by a thorough organization of the medical profession, both to the laity and the profession, with mention of some of the most prevalent causes of sickness, race decay, and their prevention.*"

I wish to say in the beginning that I am glad to be here. Newport News has sprung into existence as if by magic in the last twenty years. She has now 25,000 inhabitants, and the largest single railway terminal in the world, and the greatest shipbuilding plant. Some of the largest vessels that float upon the Atlantic come into and leave her ports for almost every civilized nation; and judging the future by the past,

\*Being the "Address of the President," delivered before the Thirty-Third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

it is safe to predict that she will at no distant day be one of the chief seaport cities of the United States. These facts lend inspiration to my theme, and cause me to predict that the great medical profession of Virginia can, by proper organization and working in harmony, in less than half the time consumed in building this city, so entwine itself in the hearts and affections of the people of this State that all the modern, up-to-date fakirs, 'pathies and quacks can never again have any prestige nor receive any patronage from the people in Virginia.

With these ends in view, it is well for us to ask ourselves the plain question, *Has the medical profession attained that high and honorable position to which it is entitled? If we are not what we should be, then, what are the reasons? Who is to blame, and what is the remedy?*

It is true that the progress in our profession in the last twenty years has been something wonderful beyond the conception of any human mind. We have accomplished more for the cure and alleviation of disease in the last decade than has ever been accomplished since the foundation of the world. To quote a few lines from an address delivered last June before the National Confederation of Examining and Licensing Boards, I said: "The history of the movement for the regulation of the practice of medicine and for the elevation of the standard of medical education has been an interesting one. When I graduated in 1881 only a two years' course was required. There were at that time only five schools of a three years' course, and 103 schools of a two years' course, and *not one* school of a four years' course. In 1899, we find 141 schools with a four years' course, 10 schools with a three years' course, and only two schools with a two years' course. Twenty years ago from 7 to 9 teachers and three to five months was the rule; *now*, four years, scores of teachers, and six to nine months. Few, if any, laws were in existence twenty years ago restricting the practice of medicine. I remember I ear-

ried home with me after my first course of lectures the usual paraphernalia of the first course student of those days—a pair of saddlebags and a limited supply of medicine. I was permitted to practice, and it is now a great wonder to me that I did not do more damage than I now remember doing.

#### LAWS REGULATING PRACTICE OF MEDICINE.

The first laws enacted gave the right to practice to those holding diplomas from any chartered medical college. Then the right to practice was limited to those graduated from colleges with a specified standard. The next laws enacted were those creating boards of medical examiners, and requiring all applicants to pass their examinations before they could offer for practice. Thirty-eight States now require examinations, and nine others require either an examination or a diploma from a recognized college, and the number of such colleges in some States is very limited, and soon the college diploma will not be recognized in any State as a sole qualification. This condition of affairs is very satisfactory, and the profession should congratulate itself on what has been done. But in my opinion if we, in Virginia, wish to keep abreast of the times and keep our profession equal to any in the United States, and I might say, *in the world*—then there are some other things that should be done.

#### BETTER LITERARY EDUCATION NEEDED.

In the first place, we should require the young men seeking to enter the profession to possess a better literary education. Only 7.5 per cent. of the medical students of the country, according to the Commissioner of Education, have academic degrees. An entrance examination as to educational qualifications, by an independent board, separate and distinct from any medical college, should be required by law from those not having a literary degree from a reputable literary college. Nine years' experience as a member of the Medical Examining Board of this State has convinced me that the educational qualifications of a large number of the applicants have been woefully neglected, and this is the case in most all the other States. Ohio, New York, Pennsylvania and Minnesota have laws requiring an entrance examination, and in Michigan a movement is on foot to have such a law.

*Dr. N. R. Coleman*, of Ohio, president of the National Confederation of Examining and

Licensing Boards, and ex-president of the Ohio State Medical Society, says that since their laws, requiring an entrance examination, went into effect, the number of medical students entering the medical colleges has been cut down fully 50 per cent. He further says before the law went into effect they were issuing 700 certificates a year. Since the law requiring an examination of all—and you will notice it does not require an examination of all on account of the exemption clause—we have issued 300 certificates a year, and next year he predicts they will not issue over 250, and when the exemption clause ceases to be effective, which will be the year following, we will not register 200. New York, Pennsylvania and Minnesota are having the same experience.

#### QUALITY, NOT QUANTITY, DEMANDED.

There are too many inferior doctors. No one will deny the truth of this assertion. The 160 medical schools of the United States are graduating annually about 6,000 physicians. There is now on an average about one doctor to every 500 inhabitants. There will always be plenty of room for good physicians. The quality, and not the quantity, is the demand of this age.

We have no complaint to make of the medical teachings in this State. This is equal, if not superior to, any in the United States. As a proof of this, I refer you to the report of the Medical Examining Board of this and other States as to the standing of the graduates from the Virginia schools. A law regulating an entrance examination as to the educational qualifications will be a tremendous step forward, and will have to come in Virginia, as it has in other States.

#### AMEND STATE LAWS AS TO QUALIFICATIONS, ETC.

But just now I believe it would be wiser and better to devote our efforts to having our present law so amended and enforced after being amended as to drive from Virginia cancer quacks, osteopaths, christian scientists, and all forms of quackery, which stalk through the State unchecked; and when we have built up a spirit of public fealty and loyalty to the profession in this State by the completion and enforcement of our present law, then we can do the other things most necessary for the continued elevation of our profession.

The great question which confronts us to-day, and one upon which the future of the profession will largely depend is, How are these results to be

accomplished? I don't know that I have found the remedy, but I am firmly convinced that we can never hope to place our names in the Hall of Fame, nor reach that high and honorable position as the equal, and I might say, the leader of the three learned professions of the world, without we change our present mode of procedure and advance in one solid phalanx—doing away with personal differences and petty jealousies, and all working for one aim and one purpose. The one thing we should desire above all others, the one grand effort of our lives, should be to help redeem Virginia from quacks and charlatans and elevate our profession, and thereby benefit the people.

With these grand and noble aims in view, I declare to you my belief that the solution of this difficult problem lies in a *thorough and a complete organization of the profession* in the State. "In union there is strength." It is a fact that only one in ten of the medical men in this country belong to the American Medical Association, and about one in three or four are in affiliation with either their State or county societies.\* There are about 80,000 regularly licensed physicians in this country who have never been members of any kind of organization—county, district, State or national. This vast number consists of about two-thirds of the entire medical profession in the United States. This bare statement of facts is a criticism of professional leadership and

\**Note by Editor.*—There are about 2,250 licensed practitioners of medicine in Virginia. Of these about 1,125 are Fellows of the Medical Society of Virginia; and there are 450 or 500 other regular doctors, members of local—county or city—Societies in affiliation with the Medical Society of Virginia. There are about 125 or 150 other regular doctors in the State who adopt the Code of Ethics of the American Medical Association as their guide, but who, for one reason or another, are not members of any Medical Society—State or local. In addition to the above, there are about 150 colored licensed practitioners in Virginia—most of whom are organized into medical societies, adopting the Code of Ethics of the American Medical Association. It may be further estimated that there are about 50 or 60 homeopaths, eclectics, etc., having honorable reputation as men, etc. Thus the State of Virginia is well organized for work—with about 1,600 of the regular profession members of the State and local societies. As the homeopaths, eclectics, and colored physicians make about 200 more who are in sympathy with the grand movement suggested to crush out quackery, charlatanry, etc., from the State, and about 125 or 150 other regular practitioners not members of any Society, who favor the advance proposed, we find in Virginia a grand army of about 1,900 licensed practitioners who wish to see all forms of medical tricksters shut out from the pale of professional recognition, it would seem easy, if the doctors will get to work, to accomplish the high aims of the noble profession of medicine.

management which should be frankly met and honestly investigated. It may be truthfully said that no serious effort has ever been made in Virginia at organization. It is true that all that has been done or attempted for the elevation and advancement of the profession and the consequent good of the people, has been in the right direction, but there has been no concert of action from the profession in general which will be necessary to bring about the result desired.

#### COUNTY MEDICAL SOCIETIES.

Each county in the State should have a society organized on the plan advised by the American Medical Association. Eight States have already adopted this plan—viz., Kentucky, Tennessee, Missouri, Ohio, Wisconsin, Michigan, Illinois and California. To quote from the by-laws: "These societies should endeavor to educate their members to the belief that the physician should be a leader in his community in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled." *Organize* and have the medical laws enforced.

#### ILLEGAL PRACTITIONERS IN VIRGINIA.

It is a well known fact that there exists to-day in many of the counties of Virginia more illegal than legal practitioners. The enforcement of the medical laws in this State is a *farce*. I speak from several years' experience. The blame, in a great measure, is due to the fact that the physicians living in the counties where the illegals practice will not take the necessary steps to see that the law is enforced. The Commonwealth's attorneys are not anxious to prosecute a doctor, for they have a certain amount of political influence, and I have been informed of grand juries refusing to make indictment when the proof was sufficient. The only remedy for this evil, and I have given the subject a great deal of thought, is through a well-organized profession.

This, I believe, to be a solution of the whole question, and Virginia will never be rid of illegals and quacks until the doctors feel interest sufficient to organize and have a committee from each society whose duty it will be to see that the law in each county is enforced. This committee at first may find trouble, but I assure you a few convictions will work wonders, and soon you will find the quacks and illegals wending their way to a more congenial clime. *Organize*, and

bring about a better feeling between the members of the profession.

#### PETTY JEALOUSIES AND ENVY AMONG DOCTORS.

There is nothing that so lowers us in the eyes of the world as the petty jealousies and envy existing in our profession. A prominent lawyer told me not long ago that lawyers settled their disputes in open court and left friends. I would that some wise and good man would learn my profession to respect the Scriptural saying, "Love thy neighbor as thyself," even if that neighbor be a doctor. Physicians need each others' advice, help, upholding and sympathetic influence as no other profession in the world; and yet we find a spirit of contention, often pitched upon the lowest possible plane, and so infecting and dividing the physicians in nearly every community as to be utterly destructive of that public respect and confidence which all should co-operate to deserve. It affects every interest which tends to elevate and refine our otherwise noble profession. It interferes with it from a business standpoint and brings about poverty where there should be comfort. Loss of public respect and confidence is directly traceable to it. It dwarfs the men who practice it both from a moral and mental standpoint. Gradually they grow smaller and smaller both with the profession and laity until finally they drop out of the race and become the unkempt and self-satisfied medical degenerate to be found on every hand. "Dr. A. and Dr. B. may both be good men and reliable physicians, but if each of them confidentially informs everybody every day that the other is not only ignorant, but dishonest, the community will finally agree with both of them, and rate the entire profession accordingly."

And what does the young physician find when he locates? He is often met with sneers and complete ostracism from those already established in practice. If he proves a failure this hostility will not last long, but if he succeeds, it grows in violence and threatens to become a consuming flame. Physicians often quarrel over patients who will not pay either of them, and finally one is afraid to collect his bills for fear the other will inherit some of his offended patients. This curse of envy goes on and on and clings to the profession and blights all to which it clings, and destroys, in a measure, his happiness and usefulness.

This picture is not a pleasant one, but believing these deplorable evils result from faults in our organization and methods, which are reme-

dial, I have simply told what I have found, and hope that the defects may be cured, and that some future worker in the same field may be able to paint a glorious counterpart representing our great profession redeemed from its hereditary curse of envy and jealousy.

#### RECIPROCIITY BETWEEN DIFFERENT STATE BOARDS.

*Organize*, and help to bring about reciprocity between the different State Boards. A National Examining Board is not authorized by our Federal Constitution. A voluntary National Examining Board, as suggested by Dr. Rodman, of Philadelphia, is not feasible; so our only hope of an interchange of State Board certificates will be by organization, not only in Virginia, but in all the States; and when the profession is organized, as it is going to be in the next few years, this problem of reciprocity which all the boards advocate and want will be solved, and the legal practitioner of any State having the proper certificate and diploma can go wherever the flag goes, register and practice without having to submit to additional examination.

#### LEGISLATION NEEDED TO EXCLUDE OSTEOPATHY AND LIKE CHARLATANRY.

*Organize*, and we can secure better medical laws. Our present law was thought at the time of its passage sufficient for all cases, but soon we had an opportunity of testing it in the city of Richmond and in the county of Halifax. In both cases the judges instructed the jury that the party indicted was not practicing medicine within the meaning of the medical laws, as they did not give drugs for the cure and alleviation of disease, and consequently we lost both cases.

These decisions, which let down the bars to all kinds of quacks and impostors to come into Virginia, led us to ask the Legislature last winter for an amendment to our present law. This was introduced by Senator Harvey, and the failure to have it the law in Virginia to-day is one of the sad disappointments to the medical profession of this State. We are not discouraged. We can't afford, and *will not* take a step backward. The tendency of modern times is to raise rather than lower the standard of the educational qualifications of the professional men; and surely Virginia, one of the first States to pass laws for the elevation of the medical profession, will not fall behind her sister States in the onward march to higher and better qualified physicians. The public has long suffered from

poorly educated physicians, and no one has labored more earnestly and faithfully than the medical profession in Virginia to bring about a much needed change, and we don't propose to turn backward. We claim osteopathy so-called is an agent used in the treatment of disease, and as such, has no right or reason to be separated from the general practice of medicine, and should never be used only by or under the direction of the scientific physician.

Every part of the human body is connected sympathetically with every other part. An affection of the eyes or stomach may be due to disease in the pelvic region. Eye strain may produce pains in distant parts of the body, and so on indefinitely. The protection of the public health demands that no one should be allowed to treat diseases in this State unless he can make a diagnosis based on the study of the general science of medicine as taught in the incorporated medical colleges in this or other States. The medical laws of the State of Virginia were enacted to protect the people of the State from charlatans, quacks and pretenders of all sorts; but unless we secure the passage of the Harvey bill, or one similar, the people will remain at their mercy.

A few members of this Society remember well the fight we made on March the 12th before the Senate Committee on General Laws for this bill. Speeches in behalf of the bill were made by Drs. Geo. Ben. Johnston, Stuart McGuire, Ed. McGuire, Hugh M. Taylor, John N. Upshur, Landon B. Edwards, H. M. Nash, and others. We witnessed a scene in the Senate chamber of Virginia, on that day, in this, the beginning of the twentieth century, which to the learned men of my profession, was, to say the least, disgusting. It carries us back to the eighteenth century, when Mesmer claimed to possess in himself occult force derived from the stars, which he exerted upon his patients by stroking their bodies with magnets. Gassner, the wonder doctor, lived in that age. He affected his cures alone and exclusively by manipulation. He was the original osteopath, and were he alive could sue Dr. A. T. Still for infringing his patent or pirating his trademark. History tells us that Gassner converted Mesmer to his way of treating cases, and that in Paris, Mesmer practiced upon his patients by manipulation, aided by dimly lighted rooms and soft music, and that hysterical women and nervous men were greatly benefited by his treatment. Finally the French Govern-

ment appointed a committee to investigate Mesmer, and his system of manipulation was exposed and shown to be a downright system of charlatany.

When the laws of Virginia permit men to practice medicine who claim to cure diphtheria, typhoid fever, pneumonia, appendicitis, and all other diseases with massage and manipulation, I think it time for scientific physicians, aided by intelligent people, to demand of the Legislature of this Commonwealth a law which will stop such dangerous and foolish proceedings, and require all to be qualified, and that qualification tested by a competent Medical Examining Board. I don't believe there is a doctor within the sound of my voice who is not ready to organize for the fight before the Legislature this winter. Last winter we were defeated. Our bill sleeps with the committee, but *it is not the sleep of death.*

I am glad of the privilege of beseeching you here to-night to get ready for the fight. It is not a theory, but a condition that confronts us. We must look at matters as they are, and not as they ought to be. Organize in each of the counties of this Commonwealth, and as surely as God reigns, we will redeem Virginia.

#### POLITICAL POWER OF DOCTORS.

There is no power that can defeat the medical profession of this State if properly organized, and if it works in harmony. We can wield an influence with the people which will control the political destinies of this State. One of the Virginia Congressmen has told me repeatedly that if he could always have the physicians in his district for him, he was sure of election if they would use their influence in his behalf. I am told the late John S. Barbour, once chairman of the Democratic party, and one of the wisest and most astute politicians in his day, in the great fight made by his party to redeem the State from Mahoneism in 1883, advised his faithful followers in all cases where it was possible to nominate doctors for the General Assembly, and why?—because of their influence with the people and their certainty of election. Mr. Gladstone, the wise man of England, said that no individual was capable of exerting the political influence of a physician.

Knowing the political influence we possess, and being engaged in a cause for the elevation of our profession and defence of the people from quacks and imposters, why should we not succeed? Failure will only come from lack of

proper organization and co-operation. We have asked for nothing but what is right. We simply want a law that will require all who attempt to practice medicine to be qualified. *Let all enter at the same gate and in the same way.* We don't care what they call themselves—osteopaths, hydropaths, magnetic healers, or what not—just so they pass a successful examination before the State Medical Examining Board. In this trying hour, Virginia needs the help of her physicians. This law *must be passed.* History does not record a single instance when a doctor ever shirked a duty. Our profession constantly exposes us to danger; but like a brave soldier, we daily risk our lives that others may live, and in this, the most important epoch in the history of our profession in Virginia, I call upon you to help rescue Virginia from quacks and imposters. The time has come in Virginia when doctors must take more interest in politics. There is no class of men more capable of helping to make and enforce wise and just laws. The Legislature, until last winter, has always, after a hard fight, passed the laws we asked for.

We feel that, in consideration of all we have done and are doing for the people, and our modest and just request, we should not have been humiliated last winter. It seemed that our friends had forsaken us. The "Live Wire," as the newspapers called the osteopathic doctor who testified before the Senate committee, carried the day. Everything was done to belittle our noble profession, and not a voice, except one distinguished minister living in Richmond, and the friends of the bill in the Senate, so far as I know, was raised in our behalf, except from the medical profession. The people did not seem to realize the fight was being made for their protection. The fight will be on again at the next meeting of the Legislature, and *we will not be defeated* if the profession will organize and work in harmony.

On entering the medical profession I was warned by older professional men to keep out of politics. "Trust her not, she is fooling thee," was the warning given by one of my college professors. I have devoted most of my life to my profession, content to let politics alone; but, gentlemen, times are changing. When we see an ignoramus, possessing no scientific knowledge of medicine, but full of quackery, have more influence than a dozen scientific physicians, over a committee of gentlemen belonging to the Senate of Virginia, is it not time to seriously consider

the question of having more doctors in politics? The political doctor who studies politics more than medicine is not my ideal; but doctors should enter more into public life—on school boards, hospital boards, and in legislative assemblies, where their special qualifications are often in demand. Notice the ignorance of the public officials frequently shown on medical matters of highest importance to the public. A united profession can elect or defeat any man for any position in Virginia. This is a broad assertion, but nevertheless, I believe, a true one.

Can you tell me any good reason why we should not have more doctors in the Senate and House of Delegates? Can you tell me any good reason why we should not have a doctor for our next Governor? Had I the naming of the next man to succeed our present brilliant and honored Governor, I would name a doctor and a Confederate soldier—one that the medical profession has justly honored in every way possible; one who as lieutenant-colonel of the Fifty-third Virginia Regiment, enjoys the honor and distinction of, and has crowned himself with immortal glory and eternal fame by being the first soldier in Pickett's Division to scale the rock wall at Gettysburg and to fall within the Federal lines holding his regimental colors—one whose record in peace has been as renowned and glorious as it was in war—one who has the honor of consulting with every doctor in his city, and is loved by every doctor in Virginia; one who gives prestige to the Medical Examining Board of Virginia and the State Board of Health by being president of each; one who is a great physician, a noble Christian gentleman, a maimed Confederate soldier; and his name is Dr. Rawley White Martin, of Lynchburg. And if the physicians and soldiers wish their profession and comrade honored by making this great and good man Governor, it can be done by organization and united efforts. In a few years the Confederate soldiers will live only in memory. Year by year their numbers are rapidly growing smaller, and it is due them that once more one of their number—one of the survivors of the Lost Cause—should be given the highest office within the gift of the people; and the doctors, who have ever been true to Virginia in war as well as in peace, would be proud to see one of their number, so deserving, thus honored.

Two years ago the 6,000 physicians in the great State of Missouri placed Dr. A. M. Doekery in the Governor's chair, and elected a Legis-

lature composed of a great number of physicians who passed the Hall medical bill. This law requires all who profess or attempts to treat the sick and afflicted in any way and by any means, whether administering drugs or not, to stand an examination before the State Board of Medical Examiners as to qualifications. Naturally in this State—the birthplace of osteopathy, magnetic healers and christian scientists—the passage of this law had great opposition; but the profession in Missouri became a *unit*. Personal differences were dropped, sectional lines and factional fights melted away, and by a united effort the passage of the law was secured. I commend to the Virginia doctors the history of this fight and ask them to make it an object lesson in our coming fight this winter.

Reforms for the betterment of mankind and the advancement of civilization are only accomplished by the persistent and untiring efforts of those who understand the methods of political success. Ideas are warriors of the world; but the warrior leads his army to a field of victory only when it is organized, drilled and disciplined—when the raw recruit has become the trained regular. A great movement that marks an epoch in history comes but once in a generation or a century. The opportunity is within our grasp. If we are true to our profession and true to our country, and wish to be the real benefactors of our race, *we must organize and win*. We must have a law which will require all to be examined as to their fitness before licensing them to practice medicine. The future of our profession is within our keeping. Guard well the entrance into the profession; let none enter until he is "worthy and well qualified." Amend our medical laws to suit our present conditions, and when we are organized they can be enforced; work in harmony and thus maintain the honor and dignity of the medical profession, and keep it clear of all pretenders, who reap a golden harvest by exploiting the sick and preying upon their friends.

The osteopath, with his charlatanism, must go. Mr. Jacob Bolin recently stated the matter in a nutshell before the New York Legislature, when he said: "What is good in osteopathy is *not new*, and what is *new* is not good." They are appropriately called osteopaths, for they see a bone loose everywhere. Their pathology seems to be founded on a misplaced bone. May it not be, as Mr. Bolin suggests, it is their own heads that are out of place, and not those of

their patients? Dr. Robert Morris says: "Charlatans first try their treatment on public men in order to use their names. Patent medicine men first try their drugs on clergymen, who are trained to accept things on faith. Responsible physicians first try their theories on dogs."

The medical profession, if well organized and working in harmony, can be a power for good in many other ways than those already mentioned. It should not only "heal the sick, make the lame to walk, and the blind to see," but it should become missionaries—teachers among men—going about doing good in their communities by learning people how to keep well, preventing sickness. That they do, to a certain extent perform these noble deeds, no one will deny; but how much more effectual would be their labors if they were properly organized and working in harmony with the proper State officials, and in this connection I wish to mention *some of the most prevalent causes of sickness and race degeneration*.

(Continued in our issue of October 24, 1902.)

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## SEPTICEMIA AND THE CURETTE.

By H. PLYMPTON, M. D., Brooklyn, N. Y.

To attempt to break up an old established custom in any line of life is at best a thankless job, and one likely to call down harsh criticism upon the head of the daring iconoclast.

To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically oppose such practice, is to invite from some adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in, the argument advanced, on the part of other members of the profession.

This latter is what I hope for, and if I provoke a discussion, or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of afterbirth or other debris has been taught in our medical schools from time immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition is to cleanse the uterus by means of the curette.

That the organ should be thoroughly and aseptically cleansed admits of no argument, but that the work should be done with the curette, I deny most emphatically.

The majority of cases of death following the decomposition of fœtus or placenta in utero, are caused by the use of the curette, and I hold that septicæmia may be avoided if a more rational procedure be resorted to.

The condition of the uterus containing septic matter is one of great congestion; the thickened walls being coated internally and over the os with a thick, brown, tenacious mucus.

The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation.

If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicæmia following in an incredibly short space of time (chemical metamorphosis is marvellously rapid in the circulatory system) and death quickly ensues.

If without using the curette, we can remove the septic matter from the uterus without disturbing the mucus covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion, may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it.

This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100° and a strict avoidance of bichloride, carbolic acid, formaldehyde, or any antiseptic of an acid reaction or astringent nature, which would coagulate the fibrine and albumen of the blood.

My method of procedure is as follows:

First, the gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

Second, the gentle flushing of the uterine cavity with the alkaline solution (110°), the reservoir containing the fluid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few hours (say two or three), the conditions would be more speedily reduced to normal; but the discomfort of the position of the patient (on a douche pan) prevents this, and a

flushing once every two hours with one quart of solution is about the limit of treatment.

For flushing the uterus, I use a small dilating uterine douche, and as there is plenty of room for the escape of fluid and fragments, there is no danger of Fallopien colic or salpingitis.

The first flushing is frequently followed by contractile pains and expulsion of any previously adherent pieces, together with much of the mucus.

A tablet of *Ext. cannabis indica*, gr.  $\frac{1}{2}$ , *Ext. ergotin*, gr.  $\frac{1}{2}$ , every hour till desired effect is produced will contract uterus and alleviate pain.

The bowels should be moved freely, both by enema and catharsis.

During the interval between douches, the patient should be kept on her back with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold.

The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting, and remove offensive odor is marvellous to one who has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly; vaginal douches being all that are needed subsequently to complete the work.

Uterine congestion is speedily relieved, and the uterine discharge changes from brown, thick, bad smelling mucus, to a thin, transparent one, accompanied or followed by more or less of a flow of blood.

A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours, with an occasional uterine flushing, if symptoms indicate it.

The action of exosmosis (and endosmosis, for there is every reason to believe in the absorption of some of the fluid) is what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney, congestion of any mucous membrane, etc., and is the most rational means of restoring to normal condition.

I do not wish to be understood as decriing the use of that most valuable instrument, the curette, but only the abuse of it—to-wit: its employment under such conditions as make it practically a sharp weapon loaded with septic matter, dangerous beyond the poisoned arrow of the Malay, or the fang of the cobra, and utterly opposed to our modern ideas of antiseptics.

2 Macon St.



## SOME THOUGHTS SUGGESTED BY A CASE OF URINARY FISTULA FOLLOWING A VAGINAL HYSTERECTOMY.\*

By J. W. HENSON, M. D., Richmond, Va.,

Professor of Anatomy and Demonstrator of Orthopedics in the University College of Medicine, and Surgeon to Virginia Hospital, etc.

Better facilities for preliminary education, well equipped medical colleges, perfected hospitals, careful State Medical Examining Boards, and an educated public, have each shared in giving the country better physicians and surgeons. These influences, however, cannot be perfect; they only lay the foundation. A professional man's final development is determined partly by his surroundings—chiefly by his own efforts. Tie a child's arm by its side sufficiently long, and the result will be a withered member.

It matters not how thorough his preliminary education, collegiate course and hospital training, one is but a professional child at the end of such training. After this comes the time for real growth. It is the careful study of every case (great or small) that presents itself which produces the successful diagnostician, the man of sound judgment and ready resource.

Whatever line of work is chosen, let us see to it that every qualification for such work is developed, or professional cripples will result—figuratively, men with withered members.

No attempt will be made in this paper to notice all the causes producing the medical and surgical cripples we meet. Attention is invited to only one cause—one operating in the field of surgery. It is this:—the burning desire to do brilliant operations, visceral surgery, without the energy to prepare for any kind of surgery that may present itself, or, worse still, without that qualification which should belong to every surgeon—viz., a desire to relieve human suffering, however tedious and unattractive may be the work indicated. The following case will serve as an illustration:

A colored woman of 40 years of age or more came to me in July last, to consult me concerning a "weakness of the bladder." The urine dribbled constantly, the bladder never retaining enough to be passed voluntarily. Being entirely unfitted for work, the poor woman earnestly sought relief. She gave the history that several months before a surgeon in one of our

largest cities had done for her a vaginal hysterectomy for uterine cancer. The dribbling of urine had begun while in the hospital, after the operation. She stated that both the surgeon and the physician who had referred her to him examined her repeatedly with the speculum, after her convalescence from the hysterectomy, and that each told her there was nothing the matter with her bladder but weakness; that no other operation was indicated, and that in time she would be well with the aid of some medicine which they gave her to take by mouth.

I have questioned her again and again since being in my charge, trying to find a break in these statements, but she holds to her original story. She is intelligent, and I am satisfied is honest in this matter. At her first visit to my office, a urinary fistula was disclosed upon the introduction of a vaginal speculum. A sound was passed through the urethra, bladder and fistula into the vagina, to prove the opening to be vesico-vaginal. Thinking this was all, I made no further examination at the time, in which I was at fault.

The patient consented to an operation, which I did on August 1st, but not the one I had intended doing. When I exposed the whole field with vaginal retractors to begin work, there was revealed another fistula, uretero-vaginal. The left ureter opened directly into the vagina. This was proven by passing a probe up the ureter and introducing a sound into the bladder. The two instruments could not be brought in contact. The vesico-vaginal fistula, a mere slit, nearly a quarter of an inch in length, was three-quarters of an inch or more anterior to the transverse vaginal scar from the hysterectomy, and a little to the left of the median line. The ureteral opening was in the scar and about one-half an inch to the left of the median line.

An incision was made into the vaginal mucous membrane, elliptical in outline, so as to encircle the two openings, one end of the ellipse being one-eighth of an inch or more anterior, and to the right of the vesico-vaginal fistula; the other end an equal distance posterior, and to the left of the ureteral opening. Along the whole line of the incision the mucous membrane was dissected back, each way, so as to leave a raw strip less than one-quarter of an inch in width, outlining the ellipse. The sutures were now placed each one as follows: A needle, threaded with fine silk worm gut, was introduced through the mucous membrane an eighth of an inch or

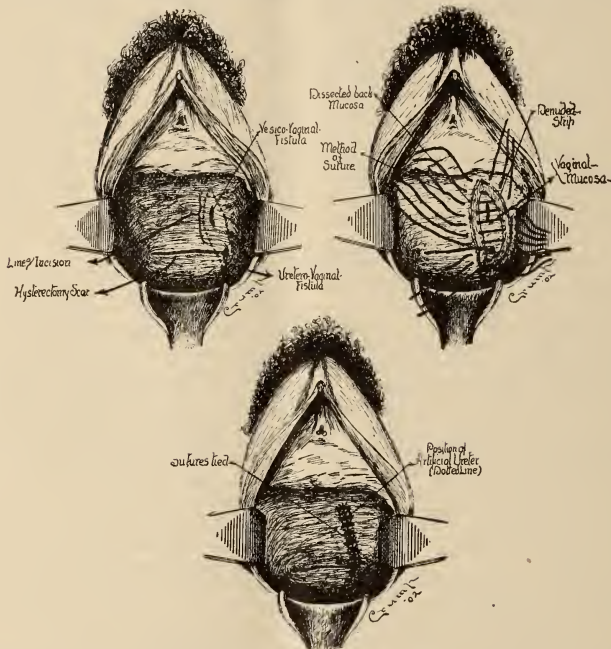
\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

less beyond the outer edge of the denuded strip on one side of the ellipse and brought out at the inner edge of this strip close to, but not engaging the mucous membrane. It was then carried across the ellipse and passed in a manner the reverse of that just described—in at the inner edge of the denuded strip and out through the mucous membrane about an eighth of an inch beyond the outer edge (of the strip).

When the sutures were tied, the elliptical piece of mucous membrane encircled by the in-

has not leaked a drop since the operation, but is doing duty in a perfectly normal way.

The accompanying cuts may further illustrate the operation as performed. The upper *left* hand figure shows the position of the two fistulae, the scar from the hysterectomy, and the dotted line outlining elliptical incision. The upper *right* hand figure shows the denuded strip made by dissecting the mucous membrane back, each way, along the line of the incision, and the sutures in position before tying. The *lower* figure



cision and dissection, as well as the fibrous and muscular tissues of the vagina corresponding to this area, folded upon themselves, forming an extension of the ureter, so that the latter opened into the base of the bladder through the old vesico-vaginal fistula.

Until the eighth day the bladder was drained of urine by Skene's self-retaining catheter, which was removed and cleaned daily. The sutures were removed on the twelfth day. The result is all that could be desired. The bladder

of the three illustrates the appearance after tying.

Dr. X. O. Werder, of Pittsburg, read at the last meeting of the American Medical Association a paper, in which he described an operation for double uretero-vaginal fistula.

Although his operation and mine are not and could not be very similar from the nature of the two cases, yet there is just enough similarity in the incision and dissection to justify me in stating that I was not at the last meeting of the

American Medical Association, and knew nothing of Dr. Werder's case until I saw his article in the *Journal* of August 16th.

I submit this paper for three reasons—*first*, because I consider the case reported a unique one; *second*, because I desire to register a plea that every one who bids for surgery shall take as a motto "thoroughness"; *third*, because I am anxious that the consideration of the subject shall stimulate me to apply to my "withered members," the electricity and massage of careful attention to and close study of cases, that I may not be caught napping by the other fellow.

100 W. Grace St.

### Dependent Drainage in Acute Extensive Intra-Pelvic and Intra-Peritoneal Infection in Men by Incising the Perineum, Separating the Rectum from the Prostate and Bladder, and Puncture of the Recto-Vesical Pouch of the Peritoneum.\*

By HUGH M. TAYLOR, M. D., Richmond, Va.,

Professor of Practice of Surgery and Clinical Surgery, University College of Medicine, Richmond, Va.; Surgeon to Virginia Hospital, etc.

How best to secure dependent drainage in extensive intra-peritoneal and intra-pelvic infections in the male is an important, but to my satisfaction, an unsolved surgical problem. The experienced abdominal surgeon is keenly alive to the importance of this subject. Path finders in surgery in the pre-aseptic era, warned us that along the line of dependent drainage there was hope.

About twenty-five years ago, Dr. Marion Sims noted the fact that in deaths from septic peritonitis there is found an accumulation of bloody serum in the peritoneal sac, and he attributed the death to the absorption of this bloody serum. Dr. Hunter McGuire appreciated the fact (prior to the aseptic era in surgery) that if dependent drainage could be secured, the deaths from septic peritonitis would be lessened. In a paper read by him before the Richmond meeting of the American Medical Association on "Penetrating Wounds of the Belly," he impressed the idea that bullet wounds of the pelvis are less dangerous than similar

wounds of the abdomen, owing to dependent drainage in pelvic wounds. In that paper he advocated early operative intervention and dependent drainage by opening the posterior cul de sac in women and the recto-vesical pouch in men through the rectum.

An early operative intervention and an improved aseptic technique are the crowning features of modern surgery. But in spite of all that has been accomplished through delayed intervention, the number of cases calling for dependent drainage is distressingly large. Our ability to diagnose abdominal and pelvic lesions in their incipency must markedly improve (and notably is this true of the general practitioner, who is called upon to make the diagnosis in the incipency of the trouble), before we will cease to meet with the well called eleventh hour cases, great pelvic pus collections or acute general infection of the peritoneal sac. In the late operation and extensive intra-peritoneal infection met with in connection with gastric and duodenal perforations, in perforations of the gall bladder, in typhoid perforations, in abdominal visceral traumas, including bullet wounds and appendicial infection, we will find most frequently the need for dependent drainage.

All will concede that when and how to drain in widespread intra-peritoneal infection, local and general, is a much vexed question. Many surgical masters advise by one technique or another, "when in doubt drain"; an equal number of intellectual giants urge, "when in doubt not to drain." The uninitiated as well as many who do not belong to that class, lament this wide difference of convictions.

In women, dependent drainage through Douglas' cul de sac, of course, is a well recognized life saving resource. In men with extensive infection it is an open question if drainage does more harm than good. Men of wide experience urge the value of gauze or tubular drainage or both, through multiple incisions and through lateral and posterior stab punctures, just as good men contend that the peritoneum, unhampered by tubes, gauze, etc., will be equal to the task of saving more lives. All will concede that the eleventh hour cases, with extensive infection, are practically hopeless. This is the recorded experience of many whose skill cannot be questioned.

A practice which entails a mortality of from fifty to one hundred per cent. should not, we think, have a firm hold upon professional con-

\*Read before the Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

fidence. I am led to hope that the plan I shall outline may help to solve the important problem of how to secure dependent drainage of the infected peritoneal cavity in men. The plan indicated is not intended to supplant methods commonly in vogue—only to supplement them.

It has been proposed by some one to secure dependent drainage by the perisacral route; to what extent this has been done, I do not know. I only know of it as a suggestion.\* I have seen reported an instance in which the operator opened a pelvic abscess incident to appendicitis by deeply incising the ischio natal fossa.

A brief resume of the peritoneal pouch in the male pelvis may make clearer the method I wish to advocate. If the plan proposed has been urged before, I am only sorry to say it has escaped my notice, for to my mind it possesses advantages so palpable that it should not be neglected until thoroughly tested.

(1st) "It must be remembered that the peritoneum descends upon the anterior surface of the rectum to within about an inch of the prostate, but not quite so far upon the sides or behind; its average distance from the anus is from 2 to 2½ inches in front, and five inches behind." (*Stimson's Operative Surgery*, page 449.)

(2d) "The rectum is loosely attached by loose connective tissue to the lower half of the sacrum and the coccyx, while in front it is more closely attached to the back of the prostate and bladder by firmer connective tissue, the prostatic-peritoneal aponeurosis, connected with the recto-vesical fascia. This aponeurosis, however, allows the separation of the rectum from the prostate and bladder, and if traced upward is found to be attached to the bottom of the recto-vesical pouch of the peritoneum." (*Applied Surgical Anatomy*. Woolsey, page 359.)

(3d) "The anterior wall of the rectum can be separated by blunt dissection from the prostate gland and reflected toward the sacrum." (*Saunders's Medical Hand Atlas*, Operative Surgery, page 376. Zuckerkandl.)

Recalling the fact that the recto-vesical pouch is the most dependent point of the peritoneal sac, that it extends to within an inch of the prostate, and is within from 2½ to 3 inches of the anus, and the further fact that the anterior rectal wall is connected by loose cellular tissue (prolongation of the subperitoneal connective tissue) to the prostate and floor of the bladder,

it will surprise me very much if some one has not urged this as the best route by means of which to secure dependent drainage of the peritoneal sac in men.

A few months ago a little negro boy was referred to my service at the Virginia Hospital from one of the adjacent counties. He had all the evidences of a large pus collection in the right iliac region, a sequence of an acute appendicitis of ten days or two weeks duration. In my absence the abdomen was opened, and, as was anticipated, there was found a great pus cavity extending well into the pelvis. The precarious condition of the child contra-indicated a prolonged operation. As far as practicable the pus was evacuated, the wound left open and free drainage essayed with gauze and a large glass drainage tube passed well into the pelvis. On my return the next day the child was practically moribund, and this in spite of free drainage by the gauze and persistent emptying of the glass tube by suction syringe. A rectal examination disclosed a bulging mass, which brought the anterior rectal wall in contact with the posterior, a trocar was passed per rectum into the mass, and a quart or more of pus was evacuated. In a few hours the child died. I then put him across the bed in the lithotomy position, made a curved incision in front of the rectum, cut through skin and perineal fascia and muscles, and then with the forefinger of my left hand in the rectum as a guide, with the forefinger of my right hand I separated the rectum from the urethra and vesical floor, and with ease carried my finger into the peritoneal cavity. I found that I could separate the rectal wall and push it backward just as easily as you can separate the bladder from the anterior surface of the uterus.

A few weeks ago a negro man was admitted to the Virginia Hospital with a large mass in the right iliac region. The trouble had continued for ten days or more, and was clearly appendiceal in origin. An incision disclosed an abscess cavity adherent to the anterior abdominal wall. A pint or more of pus was evacuated. The peritoneal cavity was not opened. The abscess cavity was gently irrigated, the wound left open and a drainage tube and gauze introduced. The following day evidences of general infection were marked. On opening the abdomen, the pelvic cavity was found filled to the brim with pus, and suppurative peritonitis of the green type was advanced. The pus was evacuated, the intestines removed from the abdomen

\*Dr. Francis I. Kirby, in a paper read before the North Carolina Medical Society, June, 1902.

and subjected to prolonged irrigation. The intestines were then replaced, the patient put in the lithotomy position, a gloved left index finger inserted into the rectum, the perineal incision made, and the rectum separated by *simply pushing* the finger in the perineal wound up to the recto-vesical pouch—a blunt dissection with finger. The finger in the rectum was now removed and ungloved, the left hand was introduced into the pelvis through the abdominal incision, the cul de sac depressed and punctured with sharp pointed scissors from below. This whole procedure can be accomplished in five minutes and prolongs the operation only a few minutes. A large glass drainage tube was easily passed into the recto-vesical pouch through the peritoneal incision. A strong silk ligature was attached to the end of the tube in the cavity and brought out of the abdominal incision. Over this ligature another tube was passed and the ends of the two tubes were brought in contact in the pelvis. The end of the silk was clamped with a pair of forceps. By means of an irrigator the pelvis could be forcibly flushed out through these tubes. The head of the bed was elevated. (Fowlers.)

An unfortunate mistake was made by some one in changing the abdominal wound dressing. The forceps clamping the silk ligature which held the tube in the perineal incision were removed and the next morning the tube was found out. I have no idea that this accident had anything to do with the death of this patient, which occurred in thirty-six hours. It was a forlorn fight from the first. The tube was promptly replaced, and it was found that drainage continued to come through the perineal section even while the tube was out.

My failure to save this life—in fact, should I fail in several such attempts, I would not lose my confidence in a treatment which is easy to secure, and which has sound surgical principles to commend it. My experience, limited, it is true, prompts the conviction that when dependent pelvic and abdominal drainage is needed, it has decided advantages over any plan with which I am familiar. One has to try it to realize how easy it is to accomplish the dissection. With the peritoneal cavity opened and assisted by one hand in the pelvis above, this procedure is as easy to accomplish as opening the Douglas cul de sac through the vagina. With the recto-vesical pouch distended and depressed by intra-pelvic effusion, pushing the pouch down

against the rectum, I believe drainage can be effected without opening the abdomen above and in some cases may tide the patient over a crisis just as is done when we incise and drain per vaginam in pelvic infections. If the recto-vesical pouch is not distended, I doubt if it will be an easy matter to puncture it—its loose attachment will probably result in the peritoneum being pushed inward by the finger or scissors.

I have not thought it necessary to take this precaution, but if greater protection to the urethra is thought essential, it can be secured by passing a sound into the bladder. A more probable accident, we think, would be a rupture of the rectal wall, but this would be very improbable because of the loose attachment and the added safeguard of a finger as a guide in the rectum.

My colleague, Dr. J. W. Henson, has kindly made the dissection called for in this method on the cadaver, and with myself is equally surprised at the ease with which this simple and effective drain route can be secured.

No added shock should attend this dissection. There are no large vessels in the way, and the seminal vesicles should not be impaired by the blunt dissection. To secure the same result by dissecting through the ischo-rectal route blunt dissection cannot be as easily accomplished, and the path is rich in its blood supply.

6 North 5th Street.

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## THE METHODS OF USING ARGYROL.\*

By A. C. BARNES, M. D., Philadelphia, Pa.

In accepting your kind invitation to read a paper before you I am deeply conscious of the honor conferred upon me, because many of your members occupy positions equal in honor and eminence with the leaders in modern progressive medicine. The subject I have chosen was selected for two reasons—first, as a body of practical physicians interested in the extremely important question of the treatment of disease, my subject will probably be interesting; second, my paper will be of the nature of an open letter in reply to many inquiries received from physicians in practically every State in the Union.

\*Read by invitation at the fourteenth annual meeting of the Tri-State (Alabama, Georgia, Tennessee) Medical Society, Birmingham, Ala., October 9, 1902.

The original report of my colleague, Dr. Herman Hille, and myself (*Medical Record*, May 24, 1902), concerning our discovery of a new silver salt, was given considerable prominence in the medical press of America and Europe particularly because of its wide field of application in therapeutics. This salt, now known as argyrol, is chemically silver vitellin, the principal features of which are, the high amount of silver contained, its easy solubility, its intense penetrative action, and its freedom from the irritating properties possessed by the other silver salts. It is beyond the scope of this paper to deal with the chemical nature of the salt, and those interested therein are referred to our original report.

It is to the clinical applications of argyrol that I would now direct your attention, and more especially to the methods of using the product in inflammatory conditions of the eye, ear, nose, throat and genito-urinary organs. The methods herein mentioned are those employed in the various clinics in many hospitals, including the University of Pennsylvania, city hospitals of New York and Boston, Jefferson, Good Samaritan, Berlin Polyclinic, Children's Hospital, Philadelphia, and in some eye and ear infirmaries of several of our large cities, by surgeons whose names and reputations are well known to you—Martin, Thomson, Horwitz, Swinburne, Christian, Lewis, Lederman, Mellor, etc. Most of these surgeons are preparing or have already finished clinical reports embodying their experiences with the salt, which will be published shortly. My paper will be merely a short resume of the methods of using the product now in vogue.

*Disease of the Eye.*—Those oculists using argyrol employ it in the conditions formerly treated by silver nitrate or protargol. The rationale of its use in these diseases is based upon its high proportion of silver, its deep penetrative action, and its entire freedom from irritating properties; for instance, a 20 per cent. solution of argyrol corresponds to about 10 per cent. solution of silver nitrate, yet this strength of argyrol may be dropped in the normal eye without producing irritation or discomfort.

In *purulent conjunctivitis* a 25 per cent. solution has been found to be the proper strength for routine use. Well established cases of *ophthalmia neonatorum* thus treated will be eradicated in two or three days. In the last 10 cases of this affection treated by Mellor at the

University Hospital, one day's use of 25 per cent. solution argyrol sufficed to rid the eyes of pus and effect uninterrupted recoveries. The argyrol solution should be dropped in all parts of the conjunctival sac every three or four hours. With treatment instituted early in the disease corneal complications do not occur.

*Gonorrhoeal ophthalmia* is best treated by strengths of 25 to 50 per cent. solution, according to the stage and extent of the infection. In very severe cases a 50 per cent. solution instilled every two or three hours produces a reduction of the purulent secretion and affords comparative relief from pain.

An ordinary early case of this disease treated with free use of 25 per cent. solution every two or three hours will terminate within a few days. For the catarrhal condition of the conjunctiva resulting from gonorrhoeal ophthalmia many oculists direct the instillation of a 10 per cent. solution of argyrol three or four times daily; this may be done with perfect safety by the patient at home.

The effects of argyrol in *trachoma* are still unsettled. Gilfillan, of New York, used it at the House of Refuge with indifferent results; Thomson mentions one very pronounced case in which the lids were so swollen that it resembled ptosis, and in which he obtained great improvement by painting the affected lids with 20 per cent. argyrol solution; this case had been treated with protargol without benefit.

For ordinary *catarrhal conjunctivitis* a 5 or 10 per cent. solution for use by the patient at home three times daily, with the local application of a few drops of a 25 per cent. solution by the attending physician, produces in most instances prompt and permanent benefit; this same method of treatment is employed in blepharitis, blepharoconjunctivitis and blenorrhœa. The most suitable strength for all round office use in treating corneal ulcers and the ordinary inflammatory conditions of the eye is 25 per cent.; this strength does not cause irritation or discomfort.

The methods of using argyrol in diseases of the nose, throat and ear are perhaps best illustrated by quoting the experience of Dr. M. D. Lederman, of New York, who has been using it for four months in his private work, and at his clinics at the Manhattan Eye and Ear Hospital, and at the New York Polyclinic. Dr. Lederman states: "I have employed solutions from 10 to 50 per cent. in catarrhal manifestations of the nasal, pharyngeal and laryngeal mucons

membrane; the applications were made with the usual cotton carrier every other day. The advantage this silver salt distinctly demonstrates is its freedom from irritation when applied to sensitive mucous membranes. In acute and subacute *laryngitis*, I have used a 10 per cent. solution increasing to 30 per cent. without the least unpleasantness to the patient. After two or three treatments the congested appearance of the membrane gradually left and the voice returned in good volume. I particularly noticed that the harsh and dry sensation produced by silver nitrate was never experienced. The secretion was promptly stimulated by the argyrol solutions and produced a comfortable feeling of moisture in the pharynx and larynx. In *post-nasal catarrh* the character of the discharge was influenced by the argyrol solutions (20, 30 and 50 per cent.). The thick plugs of mucus so frequently expectorated in cases of *naso-pharyngitis* and in *inflammations of the lymphoid tissues* in the pharyngeal vault, became more fluid in consistency—showing the stimulating effect of the drug upon the mucous glands—and thus permitted the re-establishment of the normal function of the membrane and relieved the annoying symptoms of hacking and dropping in the throat; the same effects were noted from applications to the nasal mucous membrane.

"The bland nature of the argyrol solutions was especially observed in cases of so-called 'hay fever.' Ten and 20 per cent. argyrol solutions, while naturally exciting some sneezing, as would result from any foreign element, seemed to lessen the existing hyperæsthesia and retard the excessive flow of secretion; this blenostatic action, I believe, is due to the deep penetration of the argyrol.

"The decided anti-germicidal action of the salt is illustrated by its effects in cases of *chronic purulent otitis media*, with osseous necrosis. In these cases I employ a 50 per cent. solution freely in the middle ear cavity without any annoyance to the patient. The purulent character of the discharge is obviously modified after a few treatments and assumes a mucoid appearance."

In *empyema of the antrum of Highmore*, Hirschler uses a 50 per cent. solution of argyrol once daily and note prompt disappearance of the purulent discharge.

*Genito-Urinary Diseases.*—Dr. Orville Horwitz, Professor of Genito-Urinary Surgery, Jefferson Medical College, treats acute cases of

gonorrhœa by ordering the hand injection of a 5 per cent. solution of argyrol several times daily with whatever modifications and additions to treatment the cases may demand.

In acute gonorrhœa, Dr. H. M. Christian, Professor of Genito-Urinary Diseases, Philadelphia Polyclinic, employs a 2 to 5 per cent. solution by injection (by ordinary hand syringe) three or four times daily; the solution is held in the urethra five minutes. If the entire urethra is involved, he employs daily irrigations of 1 to 1,000 solution.

In *chronic posterior urethritis* he makes deep instillations of 5 or 10 per cent. solutions. Of his first 48 acute cases thus treated, 43 showed complete disappearance of gonococci from the discharge within 14 days; 38 of these patients were discharged cured in from two to four weeks.

In no instance did the injections produce irritation or discomfort.

Dr. G. K. Swinburne, surgeon to the Good Samaritan Dispensary (the largest genito-urinary clinic in New York), has treated over 400 cases of gonorrhœa with argyrol. His methods are as follows: In acute cases he irrigates the urethra daily with a 1 to 1000 or 1 to 2000 warm argyrol solution, and follows this by a 2 to 5 per cent. injection. If the patient cannot report daily, he orders the home use of a 2 per cent. injection. He uses argyrol solution for irrigation where formerly he used potassium permanganate or protargol, because of better results and greater comfort to the patient.

In *posterior urethritis and cystitis* he makes deep instillations of a 5 or 10 per cent. solution. In chronic cases and in those requiring sounds he employs an ointment of 5 per cent. argyrol in lanoline, the ointment being distributed along the urethra by the successive use of several sounds, upon the end of each of which the ointment is placed.

In *acute cases of gonorrhœa seen during the first or second day* of the attack he injects a 20 per cent. solution, and has succeeded in aborting the disease.

Briefly stated, the advantages noted in the argyrol treatment of urethritis are, the shorter duration of the disease, the power of the drug to allay the inflammation, the comparative comfort afforded the patient, and the entire freedom of the injections from irritating properties.

*Diseases of Women.*—In *specific urethritis* in the female, Kevin injects a 10 per cent. solu-

tion into the urethra and bladder. In purulent conditions of the vaginal mucous membrane, the vagina is douched with 1 to 2000 or 1 to 1000 argyrol solution, after which local applications of a 25 to 50 per cent. solution are made through a speculum; these same methods are employed in ulcerations and erosions of the cervix.

Cases of *cystitis* are irrigated with a 1 to 1000 solution, followed by the injection of a 5 or 10 per cent. solution into the bladder, which is retained there for a few minutes and then discharged by urination.

In *obstetrics*, argyrol is probably destined to play an important part because of its usefulness as a prophylactic against *ophthalmia neonatorum*. In several maternity hospitals the instillation of a 1 or 2 per cent. solution into the newly-born infant's eyes is a routine practice.

Other clinical conditions in which the use of argyrol has been suggested and is being tried are *erysipelas* (suggested by Dr. E. B. Gleason, Medico-Chirurgical Hospital as local applications 25 to 50 per cent. solution) and certain pathological conditions of the mouth and teeth (suggested by Dr. W. H. Snider, of the University of Buffalo). It is too soon to make any positive statements of the methods or effects of using argyrol in these two latter conditions.

It will be noted in reviewing my paper that argyrol has been used in almost every branch of surgery, but it will be recalled also that silver has been for many years the principal drug in nearly all of these conditions. Silver nitrate is a very valuable remedy, but its chemical nature necessarily endows it with certain drawbacks—viz., it is irritating, caustic, is chemically changed by the secretions, and is not penetrating much beyond the surface. Argyrol is not chemically changed by the secretions, possesses intense penetrative power, whereby the effects of silver are exerted in the sub-mucous structures (where they are most needed), and may be used in any structure of the body in almost any strength without destroying tissue or producing irritation. Furthermore (as all the surgeons mentioned herein have noted and commented upon), argyrol has one very marked property—i. e., its effects in allaying the signs and symptoms of inflammation.

24 N. 40th St.

## A CASE OF VOLVULUS, WITH TORSION OF THE ENTIRE MESENTERY.\*

OPERATION. RECOVERY.

By GEORGE TULLY VAUGHAN, M. D., Washington, D. C.,  
Assistant Surgeon-General U. S. Public Health and Marine Hospital Service; Professor of the Principles and Practice of Surgery, Georgetown University.

This case was referred to me by Professor Edwin B. Behrend, of Georgetown University, to whom I am also indebted for notes on the case previous to the time I saw him in consultation.

S. S.; white male; aged 22 years; native of Maryland; plumber. Always enjoyed good health until he contracted gonorrhœa, which he treated himself until June 14th, when he developed a severe epididymitis, which had subsided considerably by July 1st.

On June 28th, he suffered severe cramps in the bowels, for which citrate of magnesium was ordered, and he was directed to report next day, but he was not again seen until July 1st, when the doctor was sent for and found the patient in considerable pain, from which, and from vomiting, he had suffered all night. The pain was colicky and more or less general in the abdomen, except the left lower quadrant, which remained free. The pain was intense in the epigastrium, the right inguinal region, and in the back over the lumbar spines. The bowels had moved several times, but the passages had not been examined. Medicine and food given him were at once rejected.

July 2d. Vomiting and pain continue—pain still intense, and the patient cannot lie on the right side. The most tender point is about and below the umbilicus. Had a large bowel evacuation consisting almost entirely of blackish blood. Pulse 84, temperature 98.6.

July 3d. Pain now localized about the umbilicus, but less intense. Vomiting less, but has taken nothing except a little fluid. Right rectus muscle somewhat tense, and an area of relative dullness exists over the right inguinal region. No movement from the bowels. Pulse 84, temperature 98.6.

July 4th. Pain continues, had one or two bloody movements in the night, dull area extends over the entire right side of the abdomen. Pulse 86, temperature 98.6.

July 5th. Condition about the same, patient somewhat weaker. Less pain and tenderness.

\* Read before the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.



Two dark bloody movements, but no vomiting. Pulse 94, temperature 98.

*July 6th.* Two bloody movements in the night. Vomited once—not fecal; no nausea. Considerable pain in the back. Pulse 96, temperature 98.8.

*July 7th.* Vomited once. Pain not severe, but paroxysmal and colicky. Three bloody stools. Rigidity and dullness unchanged. Pulse 96, temperature 99.5.

*July 8th.* Vomited once. Had three bloody stools in the night. Pulse 96, quick and bounding; temperature 101. Urine scant, high-colored, very acid, specific gravity 1030, slightly turbid, odor normal, urobilin in excess, indoxyl greatly increased, large amount of indirubin, small amount of acetone, no albumin, sugar, bile or diacetic acid. The patient was moved to Georgetown University Hospital, and I saw him at 8 P. M. with Professor Behrend. His countenance was somewhat anxious, and he was in considerable pain, but not nauseated. There was dullness on the right side, the right rectus was rigid, the abdomen was tender all over, but worse on the right side below the navel, and on palpation I thought I could make out an irregular mass to the right of the navel. Rectal examination revealed a fullness, fluctuation and tenderness in the rectovesical pouch. There was never any straining at stool.

We discussed the case and concluded that obstruction of the bowels existed, caused probably by intussusception or volvulus. In the absence of tenesmus and of a sausage-shaped tumor, both to rectal and external touch, and considering the age of the patient, the ill-defined mass and dullness on the right side, and the evidence of peritoneal effusion in the bulging of the rectovesical pouch, volvulus was decided to be the more probable cause of the trouble. At 9 P. M. ether was given and the abdomen was opened through the right rectus muscle by an incision  $5\frac{1}{2}$  inches (14 centimetres) long, opposite the navel. Bloody fluid, probably 1000 cc., escaped and the coils of small intestine, which presented were intensely congested, bright red and swollen, with thick walls—so thick in places as to suggest swollen Peyer's patches. After pulling out many coils of the congested intestine, which occupied the upper part of the abdominal cavity, the healthy collapsed coils were found in the lower part. On removing the greater part of the small intestine from the abdomen and pulling open the wound with retractors, the mesen-

tery could be clearly seen, twisted half around ( $180^\circ$ ) on its axis from right to left as the hands of the clock move—so that the lower border was in the place of the upper, and vice versa. The congested intestine extended from the cæcum up, involving at least one-third of the small intestine. It was evident that the twisted mesentery did not seriously interfere with the circulation of the upper part of the intestine, as it was normal in appearance. The point at which the lumen of the gut was obstructed was not made out, but judging from the free bloody stools and the almost entire absence of vomited blood, it must have been near the upper end of the congested portion. There were no adhesions. The mass of intestines was taken in the hands and turned backward, from left to right, a half turn, bringing the swollen below the normal coils and untwisting the mesentery, which was then seen in its normal position, but several dark spots—thrombi or essused blood—were seen in its folds. The bloody fluid was mopped out, replaced with 1000 cc. of physiological salt solution, and the abdomen closed without drainage. Just at this point the patient began to vomit, and from 500 to 1000 cc. of tarry fluid escaped from his mouth and nose, almost causing suffocation. Bloody, tarry stools were passed for two or three days after the operation, but there was no more vomiting. There was primary union, the stitches were removed on the twelfth day, the patient was permitted to get up on the seventeenth day, and was discharged recovered on the twenty-sixth day after the operation, but still with a discharge from the urethra.

Torsion of the entire mesentery seems to be a rare condition, or it is not often recognized. Including the one just reported, I have been able to find only 22 cases in medical literature—two of which I had the good fortune to see; and while at least 18 were operated on, there have been only five recoveries, the others having been operated on by Routier, Brown, Williams and Shepherd, respectively. So far as I am informed, my case is the second operated on in the United States, the first having been reported four years ago (1898) by Dr. John Homans, when he said that it was the first case he had ever seen, and that he had only heard of one similar case since. The high mortality—about 72 per cent.—even of cases operated on, is partly explained by the difficulty of recognizing the condition, not only before the operation, but after the abdomen has been opened. Four of

the 18 operators candidly admitted their mistake, or their inability to understand the true condition—one did not know what it was until the necropsy enlightened him; another thought it was appendicitis; a third mistook the twist of the mesentery for the ligament of Treitz; and the fourth operator thought he was dealing with a retroperitoneal hernia, which he could not reduce, therefore he made an anastomosis between two coils of intestine and found at the post-mortem that he had united the first coil of the jejunum to the last coil of the ileum—thus side tracking almost the entire small intestine.

For a more complete report, including my first case and the varieties of volvulus of the small intestine, complete and partial, see my article on that subject soon to appear in the *American Journal of the Medical Sciences*.

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## PUBLIC CARE AND TREATMENT OF INEBRIETY.\*

By T. D. CROTHERS, M. D., Hartford, Conn.,

Superintendent Walnut Lodge Hospital, Hartford, Conn.; Honorary Fellow of Medical Society of Virginia, etc.

There is no phase of the alcoholic problem more startling than the blundering attempts of the State to solve it. Some conception of the efforts to correct the alcoholic evil by law and legislative methods is apparent from the fact that in the year 1901 over 1,200,000 persons were arrested in this country either charged with being intoxicated, or for crimes committed in that condition. Statistical studies and observations which can be made in every community show that this method is a total failure through the fact that less than one per cent. of all the persons treated in this way receive any permanent benefit.

It is well known that in every city and town the number of persons who are frequently arrested for drunkenness are increasing and are called "repeaters." Such persons appear in the courts for the same offence over and over again as long as they live, and comprise from seventy to ninety-five per cent. of all persons arrested for intoxication. Thus, one person may appear a dozen times in the course of a year and be fined and imprisoned for the same offence con-

stantly repeated. Each arrest and punishment makes the victim more incurable and his restoration less possible. As an example, in a city in Pennsylvania, one thousand arrests in the year 1900 represented only 280 different persons, some of whom were arrested twelve times. The cost to the community of this method of cure amounted to over a \$100 for each person in actual expenses to the tax-payer, to say nothing about the losses to their families and the pauperism indirectly following. In one town in New York, an estimate of the expense of each inebriate punished during the year amounted to nearly \$200, besides the increased helplessness of the victim and the pauperism and degeneration which fell upon the families.

On the moral side there are in religious, political, and other societies over a million persons united with the Church in constant efforts to check inebriety and alleviate the attendant evils. In this confusional state, all sorts of moral theories are urged to explain and sustain methods of treatment by the pledge, prayer, persecution and punishment of the victims. The failure of these efforts is apparent in every direction. Every disclosure of science brings into greater prominence the fact that not only the number of inebriates is increasing, but the losses and degenerations following, both to the individuals and the community, are more startling and serious. A consciousness of the helplessness of the situation and the magnitude of the evils calls for other and scientific methods for the study and treatment of this disease. Already the outline facts indicate that inebriety is a disease following a uniform law of causes and effects, marked by beginning, development and decline, the same as other diseases, and only amenable by scientific care and treatment.

The law, which rightly assumes irresponsibility when the man is intoxicated and arrests him, then treats him as a criminal or one who is dispossessed of his senses and can be made sound and rational by force. As a criminal, he is fined with the idea that the suffering which follows will force him to be temperate and sober in the future. Practically, if he is married, the fines fall most heavily upon his family, making it more difficult for them to live and support themselves, thus increasing the perils of pauperism. The repeated fines and short terms of imprisonment increase the disease and degeneration of the victim, and are actually more dangerous and fatal than the saloons. Physically,

\* Read before the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

the short or long imprisonment of the inebriate simply removes him from the opportunity to use spirits, without giving mental or physical strength or power to resist in the future. The drinking man is always debilitated, and suffers from impaired brain and nerve force. In prison, the hygienic influences are not good, and seldom bring healthy growth to body or mind. The quality and quantity of food are not adapted to restore the weakened organism, and the mental surroundings and associates lower all self-respect and ambition for the future. The removal of alcohol and the substitution of depressing mental and sanitary conditions make it more difficult to recover, and in most cases leaves the victim feebler and with lower vitality.

Thus the first sentence and punishment has often been a switch point by which the victim has been turned to a descending side track farther and farther from the main line of healthy living. Each year this farce of trying to prevent inebriety by fines and imprisonment goes on without a break. Crime is increased, pauperism is encouraged, and the most dangerous sanitary conditions are fostered, and with them the burden of the tax-payers and producers is made heavier. The State, through the faulty theories and machinery of the law, is actually training and graduating classes of incurable inebriates, paupers and insane persons, who are increasing the burdens and perils of life, both to the individual and the community.

The superstition of personal freedom and free will which permits this army of inebriates to go on year after year destroying themselves and forming centres of pauperism, which pass on into the next generation, is one of the most serious imaginable blunders of modern times. Inebriety and the inebriate are medical and sanitary topics, which cannot be ignored. No community can afford to tolerate the presence of one who persists in destroying his sensory activities and general physical and mental capacity to work harmoniously in the community and observe the rights and interests of others. Such a man is a peril from the infection and possible injury inflicted upon his own, as well as his neighbor's interests. He is paralyzed and poisoned, and is a medical subject, not a criminal or sinner. When he is studied and his disease fully recognized, then the remedies and the means of prevention will be apparent. For a long time science has pointed out a new field for the study of this great evil and indicated lines of

treatment which promise a revolution, not only in practically stamping out the drink disease, but in clearing away the pauperism and degeneracy which follows.

The first step in the scientific treatment of the inebriate is to consider every moderate or periodic drinker a public nuisance, not only periling his own health, but also the comfort and the sanitary conditions of his surroundings. Like the small-pox case, he must be quarantined, not only for the protection of the community, but for his own sake. He needs protection, direction and control. He needs medical care and surroundings fitted to secure for him healthy conditions of living. No one should be allowed to destroy themselves by drugs and spirits and so entail upon their descendants degrees of degeneration. All such persons forfeit their personal liberty and become public nuisances and perils to social progress and civilization. Public sentiment should not permit anyone to become an inebriate, nor tolerate him after he has reached such a condition. He should be prevented and forced to come under care and treatment as one dangerous to the safety and welfare of society until he is restored. Every inebriate should have a legal guardian and his personal liberty be restricted as long as he continues to use spirits. Nothing can be more disastrous from a scientific or sanitary point of view than the indifference which permits men and women to continue to their final destruction the use of alcohol and other drugs. Probably the largest class of inebriates in this country are without means of support other than what they can earn from day to day. When they stop producing they become burdens on their friends or the community.

Another class of inebriates have homes and property, which, sooner or later, disappear, and they are then precipitated to the pauper or dependent class. For both classes, the State should build workhouse hospitals and industrial homes in the country upon large farms in the most favorable surroundings. Here physical and mental training, medical care and profitable occupation should be concentrated, and applied to every inebriate. The hospital should be conducted on a military plan, each patient being given some duty and required to exert himself in helping to contribute by his labor and care towards the support of himself and others. Employment of some kind and duties requiring military exactness should be a part of the work.

Each man should be organized into the working force of the hospital and made a producer in some way, and kept in training, not only for the purpose of his self-development, but also for increasing the value and usefulness of the institution. All the conditions of life should be regulated with military exactness. Every source of debility and disease should be removed. Careful nutrition, baths, exercise, mental and physical remedies, and every possible curative agent which can be found to restore the energies of the body should be enforced. Patients who show a capacity to become more than self-supporting should be placed where any surplus earned could be credited to him and his family. These hospitals should become industrial centres for the production not only of the food required by the inmates, but of products that could be exchanged for other necessities. Patients should be sent to these hospitals on a legal commitment before a local magistrate or judge of the city or county courts. This commitment should be based on the testimony of two physicians, the members of his family, and of the community in which he lives, that the person is an inebriate and uses spirits and drugs constantly or at intervals to excess. The judge should sentence him to such hospital for periods of from one to three years with the provision that when he exhibits a degree of restoration he may be allowed to go out on parole. On relapsing, he should be returned, and after a reasonable time of experiment, if it was found that he could not live a sober life outside, his commitment should be permanent. These hospitals should take not only the pauper classes, but those able to pay, treating them substantially in the same way, combining labor with restraint and military care, and also with every condition known to build up both body and mind.

The professional man and the laborer should be placed in conditions and surroundings suitable to build up and restore his diseased state in the same or different hospitals, and all be mutually self-supporting. Every town and city should have special industrial homes for inebriates built on the cottage system with ample power of control.

Every inebriate in the community should be regarded as having forfeited his personal liberty and become a public nuisance and an obstacle to civilization and progress. The disease which he suffers from not only affects himself, but the community, making it necessary that he should

go into a hospital on the same principle that small-pox or other infectious diseases are quarantined. This is simply a law of self-preservation for the strong and healthy. The money to build these hospitals should come from the license revenue, on the principle that every business should be made to provide for the accidents and expenses which follow it. Railroad companies and other corporations are forced to pay damages for the accidents which occur in their business, and this is always conceded to be just; but to-day the money received as licenses for the sale of liquor is used to support courts and jails where the inebriate by fines and imprisonment is made worse and more incurable. Thus, literally, the business of selling spirits is increased by the efforts of courts and jails, which make permanent patrons for saloons of all who are punished. Every man or woman who is arrested for intoxication is henceforth a customer of the saloon, and the very object of the State to diminish inebriety by this means is defeated.

Private enterprise should be encouraged by legislation to provide smaller hospitals for the more fortunate classes, who are able to pay for better surroundings and are unwilling to enter public institutions. Here the commitment should be forced also, and the restraint should be military and home-like with all the appliances of science that experience has sanctioned and used to build up and restore the lost health. Already there is evidence that a large per cent. of all inebriates can be restored to health, and nearly all can be made self-supporting in properly conducted asylums. The seclusion and restraint of the incurable inebriate, which now infest every community, would be felt in the diminished numbers of inmates in every asylum and almshouse and hospital in the land. This would be practically checking the great fountain head of insanity, criminality and pauperism, and would stamp out much of the evil and misery which now prevails. To the tax-payer, there would be an immense gain in the diminution of the burden of the criminal and pauper classes.

Physicians in every community should strive to form a public sentiment for the enactment of laws recognizing the disease of inebriety, and giving cities and towns power to build hospitals, and raise the license fund to pay for them. Ten per cent. increase of the license fund would build and put in operation a number of hospitals of this class. Industrial work-houses along

economic lines on large farms in the country conducted on military principles, where the labor of the inmates may be directed to the support of the institution, will stop the tides of pauperism, criminality, epilepsy and insanity. Then every inebriate who becomes a burden on his friends and the community should be forced into this industrial community and made to be a producer where now he is a consumer and burden.

Long ago, a noted physician wrote, "No man in any community has a right by personal conduct to peril the interests of others." Society gains nothing by tolerating the presence of any one whose liberty is dangerous to them. Human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family and neighbors. What we need to-day are tests and gauges of this fitness or unfitness. The remedy which should be applied and which is already indicated in a thousand ways is that we must regard this army of inebriates as diseased and dangerous, and the highest interests of society demand that they should be quarantined and their liberty restricted, not as criminals to serve out short sentences in jail, not as wilful sinners to be cured by fear, suffering and punishment, but as diseased and mental cripples, needing guardianship, medical care and the direction and control of others. Like the insane, or cases of infectious and contagious disease, they need isolation and treatment in special surroundings.

The time is not far distant when this vast army of 1,200,000 persons who are punished legally for intoxication and the crime following will disappear, and the inebriate in every community will be forced to go to the hospital before he becomes a criminal and pauper, and this will solve the major part of the great problem. The whole subject must be taken up by physicians, and studied on its physical side from existing conditions. Corporations and capitalists are alarmed and refuse to trust their interests to drinking men. They assert positively that all drinking persons are unsafe and dangerous, and should come under special care and restraint, yet the mass of the community are still indifferent and tolerate them.

The treatment of inebriety in industrial hospitals is no experiment or novelty. Its practical character is apparent in many of the institutions where these classes are received in this country. The Massachusetts Inebriate Hospi-

tal, at Foxboro, annually treats from five to six hundred patients of this class. Nearly all of these persons have been and would be repeaters in the lower courts of the State, spending their time in jails, station houses or saloons. Under confinement at this hospital, they remain from one to five years, and are thus forced to temperate living. It would be difficult to estimate in figures the relief and gain to both the families and communities by the forced restraint of these persons. The Elmira Reformatory is another pioneer hospital, where the work-house principle of treating inebriates and criminals is practically demonstrated. Who can estimate the relief and gain to the community which follows directly from the housing of these classes, and yet this will be a reality and practical necessity in the near future. Recently, the great wave of empericism, which has swept over the land, claiming to cure inebriety by some secret remedies, has clearly pointed out possibilities of cure, not in the number of persons restored, but from the fact that any were benefited by such blundering efforts.

For years the treatment of inebriates in private homes, asylums, and even home treatment by the family physician, based on theories as diverse as the men who urged them, and by methods and appliances of the most imperfect character, have been followed by a measure of success which is most encouraging for the future. These and other efforts are very hopeful indications of what can be done from a more exact knowledge of the disease of inebriety and its progress.

The medical profession have hardly yet taken up this topic. Their efforts so far have been mostly confined to the relief of the acute symptoms without thought of the possibility of prevention and cure. In the mean time, every advance of science brings into greater prominence the influence of alcohol as a very large factor in the causation of acute and chronic diseases. Public sentiment recognizing in a dim way the failure of the legal and moral efforts, turns insensibly to the medical profession for means of more successful treatment. There is no theory or sentiment in the facts of disease, and the burdens and losses which follow from the inebriety of the victim. It is a condition with consequences that must be recognized. Indifference and toleration or childish efforts utterly inadequate can make no impression. Each advance of science brings out the fact of disease more

sharply, and the need of exact means and measures to reach it. In this study the fact I wish to emphasize is, that inebriety is one of the most serious diseases of modern times and one that is most curable by special surroundings, and by special means. One of these means to control and cure the incurable classes is industrial hospitals situated in the country, built from the licensed fund, and supported by its inmates. Laws must be enacted to organize and conduct such institutions.

This disease must be reached and controlled, and the medical profession should lead in a new crusade for the exact care and treatment of the inebriate. Public sentiment will sustain efforts of this kind, and the only objectors will be the inebriates and the moderate drinker and the liquor dealers. We have come to a point when a radical revolution is demanded in our current theories and methods of regarding the inebriate.

The success at Havana in driving out yellow fever is only a object lesson of a larger and more complete preventive work in the housing of the inebriate and his medical treatment. The high rate of the mortality, pauperism, criminality and a vast host of diseases will practically disappear when the inebriate is treated and cured in such hospitals.

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## Analyses, Selections, Etc.

### Notable Improvement in the Therapy of Typhoid Fever.

The recent discovery, by Duval and Bassett, of the presence of the bacillus dysenteriae (Shiga) in forty cases of infantile summer diarrhoea awakens renewed interest in the subject of intestinal antiseptics. But a few months have elapsed since Drs. P. C. Freer and F. G. Novy, of the University of Michigan, demonstrated the enormous germicidal power of benzoyl-acetyl-peroxide, more familiarly known as *acetozone*. Although the preliminary reports of these investigators were of necessity based upon results of laboratory experiments, their expectations are already being realized in clinical work, in the treatment of typhoid fever, particularly.

In the city of Chicago, where a large number of cases of typhoid have been reported, acetozone has been used exclusively in the treatment of

about 300 of them. The consensus of opinion is that it causes the temperature to decline earlier than usual in the condition of the patient, in all probability by controlling the toxemia.

Two Chicago practitioners, Drs. I. A. Abt and E. Lackner, have thus far reported (*Therap. Gaz.*, Oct., 1902) forty cases of typhoid in children treated with "acetozone," with but two deaths, a mortality of 5 per cent. One of the patients that died succumbed to pneumonia and pulmonary edema; the other to great pyrexia on the fifth day. Stupor and tympanites were almost entirely absent in all the cases; the characteristic typhoid fetor of the stools was markedly diminished, and the hemorrhage occurred but twice, and in the same case. The average duration of the febrile period, in 37 cases, after beginning acetozone treatment, was 13½ days. The drug did not seem to act upon the heart or respiratory apparatus.

Early this year, Dr. Eugene Wasdin, of the U. S. Marine Hospital Service, Buffalo, N. Y., reported 27 cases (*Amer. Medicine*, Feb. 8, 1902) of typhoid fever, 24 of which were treated with "acetozone," all of the patients recovering. The writer says: "Its application in typhoid fever has been followed by very happy results; its use has been directed to the destruction of the germ in its primary lung colony and also in its secondary intestinal colony; and it has been used by hypodermoclysis to combat terminal expressions, with the result that in 24 cases the disease has been limited almost entirely to the expression of intoxication from the primary focus, the intestinal symptoms remaining entirely in abeyance, and the disease has been shorn of many of its most disagreeable features."

In the second paper (*Therap. Gazette* for May 15, 1902), the same writer states that his patients were given from 1500 to 2000 cc. of the aqueous solution of acetozone daily. The diet was milk diluted with the same solution. The first influence of the drug is observed in the increased secretion of urine. That this is not due wholly to the ingestion of large quantities of water necessitated by the use of the saturated solution is evident from the author's assertion that the same result was observed when acetozone was administered in capsules. The second influence to which attention is directed is the very pronounced decrease of the odor of the stools, while plate cultures from the dejecta showed comparatively few germs.

The deodorant and diuretic effects of aceto-

zone were also observed by Dr. G. H. Westinghouse, of Buffalo (*Buffalo Med. Jour.*, Aug., 1902), who used it in seven cases. This observer remarks that with the increased flow of urine "a corresponding reduction of typhoid symptoms followed, and tympanites and delirium disappeared." It should be remarked that the diagnosis in all these cases, as well as in most of those reported by the Chicago physicians, was confirmed by Widal's reaction and Ehrlich's test, and in some a blood count was resorted to. Westinghouse concludes his paper by saying that "acetozone, as an intestinal antiseptic, is unequalled by anything I have ever employed. A complete subsidence of all the bowel symptoms followed in every case of typhoid within a few days after beginning its use. The application of the antiseptic consisted, in most cases, in simply allowing the patient to drink the saturated aqueous solution ad libitum; or, in other words, substituting this solution for all other liquids, and urging the patient to partake of it freely when the natural craving was not sufficient to insure the consumption of considerable quantities."

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**A Good Anatomist.**—A doctor once presented himself at the Golden Gates for admission, and after passing a fair examination as to his conduct, St. Peter agreed to permanently admit him if he could pick out Adam and Eve from the assembled angels. The doctor looked around and soon found his progenitors. Peter asked him how in the name of the golden harp he had managed to recognize them. "Oh!" said the doctor, "that is easy; they are the only ones without an umbilicus."

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## Editorial.

### Interne Wanted.

A good position as Interne may be secured by the proper physician at the West Virginia Miners' Hospital No. 1, located at Welch, West Virginia. For further information, address the Superintendent, Dr. Alexander Irvine, Welch, W. Va.

### Dr. Crawford Williamson Long's Statue in the Hall of Fame.

It is a great pleasure that the documentary evidence presented by the late Dr. J. Marion Sims through the pages of this journal many years ago has been sufficient to establish the rights of the late Dr. Long as the proper claimant of the honor of having been the "discoverer of surgical anaesthesia" in 1842. Numerous other papers followed with additional evidence—especially by the late Dr. L. B. Grandy, of Atlanta, Ga., and by George Foy, F. R. S., of Dublin, Ireland, who still lives to rejoice with us that the memory of the great benefactor of the human race, Dr. Crawford W. Long, of Georgia, is to be perpetuated in statue, in Statuary Hall, in the National Capitol, Washington, D. C. In this Hall of Fame are to be placed the statues of two of the most eminent from each State of the Union. The cost of Dr. Long's statue is to be about \$7,000, and we presume this is to be about the cost of each of the statues. It is so seldom that a State so honors the memory of one of its physicians—however eminent he may have been in devising new means for the relief of suffering or disease—that prominent mention should be made of this commendable action of the commission appointed by Governor Candler, of Georgia, under authority of a resolution of the Georgia Legislature, which is confirmatory of a similar action of the Georgia Legislature twenty years ago.

### The Doctor in State Legislation.

Readers of the address of the President delivered before the Medical Society of Virginia during its recent session at Newport News by Dr. R. S. Martin, of Stuart, Va., published in this issue, must be impressed with the necessity of having some representative doctors in the Senate and House of Delegates of Virginia.

The ridiculous condition of affairs, resulting from the action of the Senate last winter, permitting osteopaths, faith healers, christian scientists, and all sorts of ignorant fakirs, to practice their fakes in Virginia without being tested as to their knowledge of the human body, while yet requiring examinations of reputable claimants before the Virginia State Board of Examiners, shows a disgusting, as it is a lamentable degree of ignorance on the part of law makers of the State with reference to the profession upon whom citizens depend in the hour of physical danger. Such ignorance on the part of legislators who undertake to control the affairs of the State, and who aspire to higher political honors than they now enjoy, makes their existence in Legislature dangerous to the life and health of the people they are presumed to protect.

The profession of medicine has risen to a higher plane than that of the ostentatious, presumptuous charlatan. It requires of its own members that they shall be reputable citizens, and that their ability to practice their calling shall be tested before a board of examiners selected for the purpose by their own votes, each of whom has proven himself qualified for the task, with fairness to all. This board, elevating its standard, requires of applicants for license that they shall be reputable graduates of medical colleges in good standing that call for the four-year graded course of tuition. Such term of tuition before the student can be examined for his diploma in the college or university he may attend necessarily "rubs into" the student—as he passes each year into succeeding higher class—an immense deal of information that he would not have acquired under the old regime. And then the reputation of the college or university is at stake if it graduates those who seem to be unfit, for no institution can afford to have many of its graduates rejected by the State Medical Examining Board. Thus, of necessity, the doctor of to-day who secures his diploma from a reputable institution and then passes the State Board examinations is an educated person—as much so in his line as the A. M. or the C. E. of a worthy university or college, or the graduate of West Point or the V. M. I., etc., of our own State.

With this degree of scholastic education, and the general moral character he is compelled to maintain in his community, the doctor, as he be-

comes the physician or surgeon of his community, soon becomes the intimate friend of the people—knowing their wants and views. Such a man in the Legislature of his State—if he has congenial members around him—becomes useful to the Commonwealth in suggesting laws which redound to the good and glory of the State. He does not become the trickster or the victim of bribes, nor is he usually allured by the promises of political advancement. He is satisfied if he has done his duty in the promotion of the welfare of his people.

We hope this Presidential address will stimulate reputable doctors all over the State to take interest in legislative matters, and induce some to consent to be legislators.

We wish to call attention also to the eloquent and forceful nominating speech of Dr. R. S. Martin, of Dr. Rawley W. Martin, of Lynchburg, as the next Governor of Virginia. While the names of the two are alike, there is no kinship between them. There is no reason why this great and good man should not be the Governor of this State. And if the applause which resounded to the echo at Newport News, where his name was mentioned in this connection, be an index of popular sentiment throughout the State, there can be no doubt as to the result of the next Gubernatorial canvass. With the nucleus of the over 2,000 doctors of the State—each exerting his influence in the families in which he is the medical attendant—it will be easy to place Dr. Rawley W. Martin where he belongs—Virginia's Governor. No man can be found with a more spotless record, nor one who would more honorably and creditably fill the position. Let him come as the people's choice, and not as the place seeker candidate.

The political influence of doctors was shown in the election of a practitioner of medicine as Governor of Missouri two years ago, when needed medical reforms were enacted. In the address of Dr. R. S. Martin, referred to, it is pointed out what great political leaders thought of the influence of doctors, when organized. Gladstone, "the wise man of England, said that no individual was capable of exerting the political influence of a physician." The late John S. Barbour—"one of the wisest and most astute politicians of his day"—advised his followers to nominate doctors for the General Assembly, "because of their influence with the people and their certainty of election."



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## Original Communications.

### Some Benefits of Thorough Organization of the Medical Profession, Both to the Laity and Profession; With Mention of Some of the Most Prevalent Causes of Sickness, Race Decay, and Their Prevention.\*

By R. S. MARTIN, M. D., Stuart, Va.,

President Medical Society of Virginia; Secretary of the Virginia State Board of Medical Examiners, etc.

(Continued from issue of October 10, 1902.)

#### *Tuberculosis.*

Last winter a resolution, requesting the Medical Society of Virginia to appoint a committee to recommend to the Legislature the best method of treating consumption with a view of establishing a sanitarium, was introduced and referred to the Committee on General Laws. This was a wise and timely resolution, and should have been passed, but nothing more was ever heard from it. I hope this Society will appoint a committee, who will make a report to the Legislature as to the best methods of treating the disease, and that the profession will urge upon the Legislature the necessity of adopting the suggestions made by the committee. We know that this disease is the most common and the greatest destroyer of the human race, killing about one-seventh of all who die and that it is contagious; but can, in a great measure, be prevented, and, I believe, in time practically eradicated, if necessary steps were taken to destroy all the sources of infection. The ways to prevent consumption should be taught in every college, public and private school in Virginia. The expectoration, which is the principal source of infection, should be destroyed, and every means known used to prevent infection. It will require stringent measures, and the watchful care of the doctors and a

\*Being the "Address of the President," delivered before the Thirty-Third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

campaign of education to bring about this most desirable condition of affairs, but the work should begin. I hope this committee in its report will thoroughly investigate the importance of the modern plans of treatment by the sanatoria, and so impress it upon the law-making department of this Commonwealth that some necessary steps may be taken that will, in a measure, prevent the disease and give to those already infected the best means of getting well. The State should provide some way of taking care of its poor infected with this disease. The rich go to Colorado, California, Texas or to some sanitarium; and if not too far advanced and will live right, get well or greatly benefited. The poor stay at home in the close, ill-ventilated rooms, shutting out the pure air, and die, infecting some of those with whom they come in contact. I find people generally don't think it contagious, and if they contract it, are afraid of the pure air, and shut themselves up in close rooms, consult physicians when the disease is too far advanced to hope for a cure, and thereby rob themselves of the opportunity of recovery. I have known of husbands being infected by their wives, of wives contracting it while nursing their husbands, of children catching it from their parents. I would plead for the destruction of the sputum and cleanliness. But the old idea that the disease is hereditary and not contagious, had priority over any argument I could advance; and consequently my advice was not taken; and thus this monster goes on and on, and claims annually in the United States alone nearly 200,000 persons—over 500 per day. The percentage of cures, under our present improved plan of treatment, is growing greater every year. In many of the sanatoria for consumption percentages of cures are reported ranging from 60 to 80 per cent.

#### *Cigarette and Drug Fiends.*

The cigarette and drug fiends are getting to be so common, especially in our cities, that a combined and united effort should be made to

have laws enacted to forbid the sale of cigarettes in Virginia, and forbid the sale of cocaine or morphine except upon physicians' prescriptions. Drug fiends, if they continue to increase, will, in a few years, become as common as drunkards. Conservative estimates, based upon the observations of a large number of reliable persons, placed the number of abject slaves to the morphine habit in one of the large cities of this country at sixty thousand. Nearly every issue of the popular magazines contain a number of alluring advertisements of various remedies or institutions purporting to cure the drug habit. This, of itself, is an indication that there are multitudes of victims to patronize them. Daily we see the results of the cigarette habit upon the constitution of the young men of this country, and it is our duty to wage war against everything which produces disease, shortens human life, and ruins and wrecks the health of the young men of this country. Several States have laws forbidding the sale of cigarettes. Virginia has one forbidding the sale to minors, but it is not effectual because it is not enforced. The great evils done by the cigarette are found principally among the boys and young men, and it is to rescue them that I make this appeal to the Virginia doctors. Of sixty-seven young physicians between the ages of 25 and 28 years applying to enter the medical department of the United States army in 1892, on rigid examination 43 were rejected, having what the physicians called "tobacco heart."

Many diseases are brought on by excessive cigarette smoking. The reasons are obvious when it is known that most cigarette smokers inhale the smoke, and then the lungs present a mucous surface of about 1,400 square feet, and just underneath this delicate membrane passes all the blood in the body, or an amount equivalent to all, every three minutes. Among them we might mention paralysis, dyspepsia, cancer, asthma, imbecility, nervousness, heart disease, blindness, vertigo, laryngitis, pharyngitis, insomnia, angina pectoris, and many others too numerous to mention. Note what was said in the Sunday's Dispatch about the death of the young boy in Richmond. His companion, who shot him, is said to be a cigarette fiend. You, no doubt, will be surprised when I tell you that it is said tobacco does as much, if not more, injury to the human race than alcohol, because of its more universal use, and because of the respecta-

bility of the habit which comes from its use by a certain intelligent part of the race.

#### Temperance.

The Virginia doctors should be on the side of temperance. There is no one thing which deals such destructive blows to the constitution of the human race as the habitual use of alcoholic liquors. Intemperance, more than any other cause, fills our lunatic and idiotic asylums. In the United States the number of insane per million persons has increased between 1850 and 1890 from 673 to 1,700, nearly three times as great as fifty years ago. In France 34 per cent. of the lunacy among the males is due to the use of liquor. In England six out of every ten lunatics in the asylums are made such by alcohol. One-half the inmates of the Dublin asylum owe their disease to the use of liquor.

Dr. Willard Parker, of New York, shows from statistics that for every ten temperate persons who die between the ages of 21 and 30, 51 intemperate persons die. Thus it appears that the mortality of the liquor user is five hundred per cent. greater than that of the temperate persons. These statements are based on tables used by life insurance companies. Mr. Nelson, the distinguished English actuary, says and proves it from statistical data that while a temperate man has at twenty years of age an average chance of living 44½ years, the drinking man has a prospect of only 15½ years of life. At thirty years of age, the temperate man may expect 36½ years more of life, while the drinking man is pretty certain to die in less than 14 years.

Dr. Howe says one-half of the cases of *idiocy* in the State of Massachusetts is due to intemperance. He further states he knew of one family in which there were seven idiots. Both parents were drunkards. One-half of the idiots of England are of drunken parentage. The same is true in Sweden and most European countries.

Physicians should no longer rely upon liquors as a stimulant as in former days. Dr. N. S. Davis, ex-president of the American Medical Association, said, after thirty years' experience, "I have found no cause of disease and no emergency arising from accidents that I could not treat more successfully without any form of alcoholic liquors." Dr. Green says that he feels assured that alcoholic stimulants are not required as a medicine, and as a stimulant they are more than useless. We no longer rely ex-

clusively upon alcoholic liquors for a weak pulse as formerly, but use strychnia, digitalis and other heart tonics.

Don't be deluded into drinking—thinking your lungs are weak. Often I have heard men say that this was the reason they drank. Alcohol does not prevent, but produces a weakened state of the system, which increases the tendency to contract consumption. Men can endure more fatigue and hardship, stand a greater degree of cold without it than with it. These are physiological facts. When a drunkard gets very sick he usually dies. I have, in twenty years' experience, seen a number of men die, directly or indirectly, from the effects of alcoholic liquors.

In view of these facts—and the half nor the hundredth part has been told—what can and will the Virginia doctors do to lessen this great destroyer of the human race? The Church and the different temperance organizations are doing great good, and the physicians should fall into line, and a campaign of education should begin; and the *rising generation should be taught the evil and dangerous effects of alcoholic liquors upon the human system.* Some wise doctor should write a book on this subject, and a law should be enacted to have this taught in all the schools in Virginia, both public and private.

The truest and best friends to the medical profession are the women. They never forget a kindness nor forsake a friend. We owe them—the noblest of God's creation—a debt of gratitude for their loyalty to the profession; and it is due to them that we should exert our influence on the side of temperance—not only for their peace and happiness in their homes, but for the longevity of their husbands and brothers, and the health of their progeny. The "God bless you, doctor," which comes from a devoted mother's heart after we have cured her child, makes the life of the doctor worth living, and is a great stimulus to the tired and careworn physician. It cheers him on to greater and nobler deeds, if such there can be. Yes, I believe in temperance. I talk temperance to my patients, for of all causes I think this is the greatest cause of disease and degeneration of the human race, and I trust the great medical profession of Virginia, which holds the health of this Commonwealth in its hands, will exert its influence against the greatest destroyer of humanity—alcoholic liquors.

According to Dr. Jacobi, various enterprising

patent medicine firms, by persistent and extravagant advertising, and partially by taking advantage of the superstitious reverence which exists in the public mind for drugs put up under mysterious names, annually dispose of two hundred million dollars' worth of nostrums, quack remedies and other more or less harmful stimulants. A large share of the so-called stimulating and tonic properties of these remedies are due to the high percentage of cheap whiskey which so many of them contain. These manufacturers are beginning to discover that the average invalid demands something more effective, and no agent furnishes such immediate relief as opium, and no drug produces such satisfactory exhilaration as cocaine. These drugs are rapidly finding their way into patent medicine bottles and tablets, and they undoubtedly assist the manufacturer very materially in securing reliable and convincing testimonials to the remarkable efficacy which their particular drug possesses in bringing immediate relief from pain and mental distress. Proprietary medicines are sold by every druggist, town and county merchant in Virginia. Their advertisements and almanacs go into every home almost in the State. The very fact that most all patent medicines contain some form of *alcoholic liquors, opium or cocaine is a sufficient reason* to ask the Legislature to enact a law requiring the formula to be published on every label. It has always been a curious problem to me why sensible men and women will take patent medicine day after day without knowing the formula when they are so honest with themselves in every other particular.

#### *Reforms Needed in School Methods, Etc.*

Our system of education could and should be improved. The demand of this age is for healthier men and women. How often is it the case that our sons, and more especially our daughters, leave college physically wrecked, having a cultured mind in a frail, delicate body. Too close confinement, too many studies bring that immense throng, looking for the greatest of on headaches, nervousness, indigestion, constipation, hysteria, and numerous other ailments. I am glad to note that some of the colleges in Virginia realize the importance of developing the body as well as the mind, and have added physical culture to their curricula. Diminish the number of studies and increase the physical exercise under the direction of a competent physician would be a wise course to pursue. A

more practical education is a necessity. Some of you may not agree with me, but when our daughters are taught how to prepare healthful food, how to make and repair their own clothing, and have a practical knowledge of house-keeping, a long looked for and much desired change will have taken place.

#### *Epileptic Colony.*

It should not be forgotten that the bill to have an *epileptic colony established in Virginia* was defeated when it was before the Legislature a few years ago. This bill should be brought before the Legislature again, and the medical profession should act as a unit to have the necessary appropriation made to establish that which has proven in States where it has been used the most rational and scientific way of treating this unfortunate part of our population.

#### *Pure Food Laws.*

*Pure food laws* should be enacted in Virginia. There is nothing of such vital interest to the health of the people of this State as pure food. Our failure heretofore to have what has proven such a boon to the people in other States having such laws is due to our lack of organization and working as a unit for the betterment of our con-

#### *Compulsory Vaccination.*

*Small-pox* is getting to be a very common disease in Virginia, more especially in the counties in the southwestern portion of the State. It has cost the State of Virginia thousands of dollars to stop the spread of this disease in the last twelve months. The expense has been so great that I have known of some counties where the authorities would no longer take active steps to prevent the spread of the disease. It is not difficult to see what would be the result if this policy should long be continued. A law requiring all healthy children to be vaccinated at a certain age and revaccinated when necessary, would, in time, stop the ravages of the disease, but for the present generation more stringent measures will have to be enforced in this State, not only for the protection of the lives and health of the people, but from a business standpoint. This disease should and could be controlled by vaccination, and it would be economy to Virginia, and a wise course to pursue, to have a compulsory vaccination in all counties and cities when a case of small-pox appears.

#### *Children in Factories, Etc.*

According to statistics given by Rev. E. G.

Gardner in a recent pamphlet, *child labor*, especially in textile manufactories of the South has increased during the decade between 1870 and 1880, 140 per cent., and between 1880 and 1890, 106.5 per cent.; between 1890 and 1900, the increase was 270.8 per cent. In North Carolina, out of 45,644 operatives in textile manufactories, 7,996 were under 14 years of age. The estimate is made that 22,000 children are working in manufacturing establishments in the South, and between 9,000 and 12,000 of these are less than 12 years old. These immature individuals are kept at constant work for long hours in the badly ventilated factories, and the outlook for their future can be imagined. It is a bad policy for a State to encourage the degeneration in this way, to say nothing of the question of humanity involved, and some wise laws should be enacted looking to a prevention of this cause of disease and race degeneration.

#### *Effects of Fashion on Female Health.*

The next thing I wish to mention, and I do it with fear and trembling, for I do not want to incur the displeasure of my fair auditors, is the *influence of fashionable dress upon the health of females*. Twenty years' experience in the medical profession has convinced me that, aside from the liquor and tobacco habits, this is one of the most serious deteriorating forces which deals such destructive blows against the constitution of the race as the unphysiological custom in dress which prevails among the civilized American women. I do not know just how this great evil can be rectified, but I do know that something ought to be done to prevent this continued degeneration of the health of our daughters, sisters and mothers. Go where you will in this great land of ours and you will find hospitals and sanitariums crowded with young women physically wrecked. When I look out into the world and see the great throng of women daily growing larger, having to submit to all kinds of surgical treatment, having to undergo some of the most dangerous and difficult operations known in surgery, hovering for weeks between life and death—often the case filling an early grave, or maimed for life, or only partially restored to health—I ask myself the question, Why is all this suffering inflicted on God's greatest gift to man—on pure, noble, loving woman? Was it decreed by her Creator that she should do most of the suffering for humanity? Did a just God inflict this suffering on womankind for the sin of our first

parents? No, the whole world could not make me believe that God ever wanted the best of His creation so afflicted and punished. The physical wrecks we see around us every day, who are our sisters and daughters, are made so, in a measure, by the curse of the nineteenth century—the fashionable dress, which consists principally of tight lacing.

The medical profession stand as sentinels on the tower and cry aloud to the great mass of rushing and surging humanity following the devotee of fashion. They see the innocent victims just crossing the threshold from girlhood to womanhood, with a body well proportioned and healthy and formed by God's own hand, a model which no sculptor can excel. They hear the fashionable dressmakers and society ladies say to those innocent girls, "Your bodies must be shaped." You submit to the shaping process. Right then you start on the journey which in nine cases out of ten leads you by its many charms and fascinations until your life is a physical wreck, and sooner or later you will join all blessings, that without which life is a burden—health. You visit the noted health resorts, take patent medicine by the wholesale, consult doctor after doctor, and finally as a last resort, enter some sanitarium or hospital under some specialist, submit to some dangerous surgical operation, and after weeks and months of suffering, you emerge, possibly partly restored to health. Dr. Kellogg says: "There seems to prevail among the human race a desire for modifying the natural forms of the body." This strange propensity takes a more dangerous direction among the highly civilized races. The Indian woman of Alaska ornaments her upper lip with a pin stuck through it. Among other tribes, fashion demands that a fish bone or a piece of wood be inserted in the under lip. There are other mothers roaming through the forest, shoeless and hatless, without other ornament than a bark apron and the picturesque designs of a tattooer's pencil, whose solicitude for their children leads them to compress their heads in cones, or shape them to fascinating features by the steady pressure of a board against the infant's skull.

Other mothers, less barbarous, but none the less anxious for the welfare of their little ones, squeeze the feet of their daughters into shapeless masses of bone and gristle, in the firm belief that no young lady can make an eligible bride if her feet exceed in measure three inches. Still

other mothers, more civilized, belonging to the greatest race of mankind, with intelligence equalled by none, possessing all the advantages that wealth and learning can give, noted for their deeds of kindness, crying down everything bad and lending their aid and means in upbuilding everything that is good—these mothers, so fondly thoughtful of their daughters' interest, base their expectations of a successful career upon the meager dimensions of their waist as upon the brilliancy of their accomplishments. It is an historical fact that a Chinese woman's feet are no larger than an American child's foot at five years of age, and that the waist of an American belle is no larger than a Chinese child's waist at five years of age.

You American women say the Chinese women are cruel to torture their children by binding up their feet and preventing them from developing as God intended they should; but it is the opinion of the greatest physicians of this age that the mischief done by the corset is far greater and more serious in its results than that which produces the misshaped and shrivelled Chinese woman's foot. You can't mould your waist like it was a block of wood without interfering with the position of some of the important internal organs like you can your foot. For a while you may stand the pressure and displace your stomach, liver and other important organs without serious results, and you may have what fashion terms a beautiful figure, but sooner or later the aches and pains will come. The red flag in front of an engine is a danger signal. When the engineer sees it he blows for down brakes. The druggist puts a red label on his bottles and says handle with care—poison—and you take his advice. When an epidemic of small-pox or yellow fever occurs in our Southern cities, the inhabitants flee for safety. People don't want to die, but how about fashion? Annually it kills thousands, cripples millions and renders more homes miserable and unhappy than most any disease known to mankind. You permit it to enter your household and blight the fairest members of your family by disfiguring their bodies, producing diseases for which the science of surgery sometimes fails to give relief. No danger signal is given. You admit that your daughters are physically weaker than their mother, but you never think that the fashionable dress combined with insufficient exercise is the cause. You may call the man or woman who has nerve to stand before an audience and say

that this is the great cause of physical weakness in females a crank, or you may call it all nonsense; but I tell you—and I speak not of my own knowledge alone—that American women are growing weaker, their lives shorter, and while they do live they are often only physical wrecks. If you doubt me, all I ask you to do is to investigate the subject for yourselves.

In conclusion, ladies and gentlemen, I wish to say to the people of Virginia if they want better physicians their only hope is through the regular scientific medical profession. Osteopaths, magnetic healers, Eddyites, Doweites are fakes, and have nothing to offer. There has existed in all ages some kind of empiricism—faith curers, mind cures, mesmerism, enchanters, magicians, divine healers—all claiming to possess miraculous gifts in the way of curing diseases. The secrets of the occult science—a kind of mysterious knowledge—"Deep truths to others unrevealed, mysteries from mankind concealed"—through and by which they accomplish marvellous cures of all the maladies to which the human family is subject. This age needs no such fakirs. They are not essential to the happiness and health of the people. They practice upon the credulity and ignorance of their patients for revenue only, and it behooves us that they should no longer have prestige or patronage in Virginia. The position occupied by the medical profession gives them the opportunities afforded no other profession to find out the needs of the people. Every time anything is done for the elevation of the profession of medicine, directly or indirectly, the people are benefited. We give our new discoveries, our new remedies and new methods of treating diseases to the world for the benefit all who care to profit thereby. We claim no occult power, mysterious ways of healing the sick, but practice frank and open methods. We demonstrate what we practice by scientific investigation. Our profession goes to every nation and every clime, stands all the examinations required by law, shirks no duty or responsibility, and is ready to learn from the humblest and to render services to the poorest. We are truly the *medical profession of the world*; and like the religion of Jesus Christ, will stand as long as the world stands. And as the religion of Jesus Christ gives to the world the only plan for eternal salvation, so our profession gives to the world the only hope for relief of humanity from disease and afflictions. We are the benefactors of our

race, striving to elevate our profession, relieve human suffering, and prolong human life; and as one doctor talking to other doctors having the same purposes and aims in life, one knowing the weak places in the profession; one having no ambition higher than that of elevating the profession and redeeming the people from quacks and imposters; one wanting to see our great profession the leader of the three learned professions of the world, I beseech you to lay aside petty jealousies, forget personalities and envies, *organize*—work in harmony for one grand and noble purpose.

We should be, we can be, we must be, the leader of the professions of the world. We can, and we *must* redeem Virginia from quacks and imposters, and I believe if we are faithful, ideal physicians in this life, that in the great judgment day the Lord will make our crown a little brighter and our seat a little higher than any of His chosen people.

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### REPORT OF A CASE OF SECONDARY HEMORRHAGE FOLLOWING TONSILLOTOMY—MEASLES.\*

By CLARENE PORTER JONES, M. D., Newport News, Va.,  
 Visiting Ophthalmic and Aural Surgeon to the Newport News Hospital, also the Dixie Hospital, Hampton, Va.; Member Virginia and North Carolina State Societies, Seaboard Medical Association, Richmond Academy of Medicine and Surgery, and Newport News Medical Society, etc.

On January the 22d last I saw Miss J., aged 20 years, a strong, robust looking woman, weighing about 145 pounds. She consulted me for difficulty in swallowing, saying that several times each winter she had a spell of protracted sore throat. On inspection, she exhibited enormously hypertrophied faucial tonsils. No other abnormal condition detected. I removed both tonsils under cocaine, hemorrhage being about two ounces, both tonsils bleeding. The hemorrhage lasted about fifteen minutes. In about six hours, being then 7 P. M., I was summoned hastily to see her, and found that she was having a profuse hemorrhage from the root of the left tonsil. This was stopped with tannic acid applied on absorbent cotton. This recurred at intervals of half an hour, until two and a half hours later, when the bleeding was stopped en-

\* Read before the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

tirely by an application of powdered suprarenal glands applied as the tannic acid had been. The total secondary hemorrhage amounted to about twenty-two (22) ounces. I left her at 11:30 P. M. The next morning she was well broken out with measles, having been exposed, and at this time expecting an attack, which fact she forgot to mention to me the day before. I referred her to her family physician for treatment, and he reported she had an ordinary attack, promptly convalescing, and has since enjoyed good health. There is no specific or hereditary taint in the family, no menstrual trouble, and the above occurrence was ten (10) days before the expected period.

The case is interesting in several phases:

1st. In the eruptive fevers we have a condition of diminished coagulability of the blood.

2d. There seems to be some vaso-motor disturbance in the arterioles, and no surgical operation denuding much surface should be undertaken.

3d. The superiority of suprarenal glands was exhibited over tannic acid in controlling hemorrhage.

Cases in literature are somewhat rare along this line.

Bordes mentions a similar secondary hemorrhage occurring after tonsillotomy, the patient breaking out with scarlet fever some eight (8) hours after operation.

118 *Thirty-second Street.*

## A CASE OF POISONING FROM PENNYROYAL.

By G. W. HOLLAND, M. D., Eastville, Va.

Since the text-books devote such little space to this drug—usually dismissing it with a few lines—and the literature generally is so incomplete on the subject, it occurred to me that the following case may be of interest to the profession. And again, since the habitat of the plant is the northern and eastern parts of the United States, it being found as far South as Georgia and as far West as Dakota, those of us who practice within this region should be especially concerned, since it can be proended and used at will by the ignorant classes as an abortifacient with serious results.

The case in question is as follows:

Married woman; age, 24 years; had never borne children, and greatly abhorred the idea of becoming pregnant; strong and robust. She had gone over her menstrual period about one week. She applied to a fellow practitioner of mine for something "to bring on the flow." The remedy prescribed was oil of pennyroyal. About 3 o'clock P. M. she took seven drops of the drug, with no effect; at 6 o'clock she repeated the dose, and still no effect; at 9 o'clock, she informs me, she took about half teaspoonful and immediately retired. She soon dropped to sleep, and in about an hour roused and complained to her husband of great dizziness and nausea. In a few moments she vomited and began to complain of her extremities becoming stiff and cramped. By this time she had lost consciousness and was seized with a violent tonic contraction of all the muscles, opisthotonos being well marked. This spasm lasted only a few minutes and left the patient talking incoherently and tossing about the bed. The toxic symptoms now gradually began to subside and consciousness was regained in about half hour, but there was no recollection, on the part of the patient, of what had happened during the past hour. Upon my arrival she had regained consciousness, but complained of great weakness and cramps in the stomach, and slight desire to go to stool. The pulse was rapid—108—and feeble; respiration and pupils normal, and toxic symptoms seemed to be subsiding, so I gave nothing, and watched the course of the symptoms. There were no more spasms or untoward symptoms, and I found the patient, next morning, attending to her daily duties.

The toxic dose in this case was half drachm, and from the symptoms produced by this dose, it is evident that the drug should be administered with great caution.

I should have stated that the desired effect of "bringing on the flow" was not accomplished.

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## THE WEBSTER-BALDY OPERATION FOR RETRO-DISPLACEMENT OF THE UTERUS.\*

By CHARLES R. ROBINS, M. D., Richmond, Va.,

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Retro-displacement of the uterus has always furnished a fruitful field for the gynecologist. It is an exceedingly common affection, and gives rise to most distressing symptoms. It is also concerned in other serious affections, the successful treatment of which must provide for some method of retaining the uterus in its normal position. There are two general methods of treating retro-displacements—by pessaries and by operations. It is undoubtedly true that in proper cases the pessary is capable of securing a permanent cure where it is intelligently applied and associated with proper local treatment. But there will be left a very large class in which nothing short of an operation will meet the requirements of the case. We may be prepared to believe, however, that the ideal operation has not yet been discovered when a recent text-book describes fourteen different procedures for correcting this displacement. This does not pretend to be a complete list, but such operations are selected as are a type of a class, or which involve some important modification. The operations which have been most extensively employed are Alexander's and ventro-suspension.

Alexander's operation is theoretically ideal, but unfortunately its field is very limited. Even when it is clearly indicated there is much that can be registered against it, and it not infrequently fails to accomplish the desired result. When it is successfully performed it possesses distinct advantages over any other operation, but there are many disadvantages and causes for failure that are generally recognized. Reports of many operators show that there is marked tendency to suppuration. Adhesions in the inguinal canal sometimes effectually prevent the drawing out of the cord. Sometimes the cord cannot be found; in others when found it is so delicate that proper traction cannot be practiced, and again despite the greatest care the cord will break, occasionally at the uterine cornua, necessitating opening of the abdomen at the internal ring to control bleeding, and preventing the completion of the operation, if the cord is broken off

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

short. The operation is frequently prolonged and tedious.

Ventro-suspension possesses so many advantages that it has held the field in spite of all that has been said and written against it. The opportunity given of exploring the pelvic viscera and correcting pathological conditions, the certainty with which the anterior position is maintained, the ease and celerity with which the operation can be performed are three distinct advantages that have made this the favorite operation of the gynecologist. An ever-increasing list of catastrophies, however, due to this operation cannot be ignored.

Reports of Caesarian sections necessitated by ventro-suspension are of frequent occurrence, and continue to be reported, notwithstanding recent improvements in the technique of this operation. This is such a real danger that we find that Reed, in his recent text-book, advises against this operation where pregnancy is a possibility. Kelly's operation theoretically would obviate such a complication, but practically it is not possible to always gauge the strength of the artificial ligament, which is to be formed. Sometimes it is so slight that the retro-displacement quickly recurs; at others, unexpectedly adhesions take place and the uterus is bound firmly to the anterior abdominal wall. In the majority of cases the conditions which demand this operation preclude pregnancy, otherwise there would possibly be more obstetrical operations to report. My personal experience does not throw much light on this subject, as I have only attended two women in confinement on whom this operation had been performed. In both spontaneous delivery took place.

Other complications that have been reported with more or less frequency are difficult forceps delivery, version, rupture of the uterus, intestinal obstruction and disturbances of the bladder. There can be no more eloquent testimony to the value of ventro-suspension for relieving retro-displacement and its accompanying symptoms than the fact that the operation is performed when these complications are a possibility. The relief is usually certain, the complications problematical. An operation, therefore, which will accomplish all that a ventro-suspension will and possess none of its disadvantage is, I believe, an ideal operation. Such, I am convinced, is that which I wish to present for your consideration. I cannot do better than to use the author's own words to describe it. The operation is an improvement on that described by Webster, of Chicago, and I have used the double name in



designating it. Webster's operation consists in perforating the broad ligament from behind, seizing the round ligaments and dragging them through this opening and uniting them behind and to the uterus. The advantages of this operation are that it tilts the uterus forward, so that intra-abdominal pressure is received upon its posterior aspect, which is nature's normal position. The disadvantages are, as stated by Baldy, "that in carrying this procedure out the round ligaments are doubled upon themselves, and when attached together behind the uterus there is so much tension often as to make it probable that a certain number of the sutures must cut out and retraction of the round ligaments occur. Again, one cannot be sure what will happen as a result of a future pregnancy; both as to the round ligament being torn loose, and, if it holds, as to the ability of the uterus to distend beyond a certain limit and retain its contents."

This operation is then described as follows:

The round ligament on each side of the uterus is picked up and a ligature thrown about it close to the uterus, so placed as to secure the artery. The round ligaments are then severed close to the ligatures. This leaves the uterine ends of the ligaments ligated and the other ends free and bleeding. The bleeding is controlled by a fine ligature to each vessel or by the sutures which fasten them in the next step of the operation. A pair of forceps is now made to perforate the broad ligament from its posterior aspect (at the point at which the round ligament is cut on the anterior surface), and the cut end (the pelvic end) of the round ligament is grasped in the bits of the forceps and pulled through the hole in the broad ligament (made by the forceps in perforating) until it protrudes on the posterior side of the broad ligament. The opposite side is treated in a similar manner. The cut ends of the round ligaments are now attached by means of sutures to the cornua of the uterus on the posterior aspect of the uterus directly back of the original point of attachment of the normally attached round ligament. The point of attachment may be higher or lower than this, as the surgeon may find necessary to accomplish the result. If necessary, as much of the round ligament is cut off, before suturing it to the uterus, as is necessary to take up any slack and give the proper amount of tension and support to the uterus. This ends the operation. The suture is a continuous one, and may be either chromi-

cized gut or silk. The effect of this procedure is to draw the fundus of the uterus upward and forward into a perfect position.

The uterus remains a pelvic organ. It has no artificial supports. It is as free to expand in pregnancy as it was originally, with no greater danger of the tearing away of its supports. There are no adhesions to give future trouble from pain or possible strangulation of bowels. There is absolutely no tension, and therefore no danger of pregnancy or anything else destroying the operation, or an abortion occurring. The tops of the broad ligament are twisted forward, not enough to endanger the Fallopian tubes by strangulation, but sufficiently so (more or less as the surgeon desires) to draw up and suspend most perfectly the ovaries, if they be prolapsed and the ligaments are over-stretched. The results are perfect, both theoretically and practically, and have only to be tried in order to convince.

Since becoming acquainted with this operation I have only had the opportunity to use it in one case. In this it was perfectly successful both in its mechanical results and in relieving the very distressing symptoms from which the patient suffered, and which made her an invalid for a number of years and confined her to bed for the previous six months. The uterus was maintained in perfect position, and that entirely by nature's supports.

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#### For Senile Debility.

- ℞ Syr. Hypophos. Comp. . . . . ʒiij.  
 Celerina (Rio) . . . . . ʒij.  
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 M. S.: Teaspoonful four times daily.

Once the man ate the cream, now they cremate the man.

## DIGESTIVE DISORDERS IN CONSUMPTION, WITH NOTES ON MIXED INFECTIONS.\*

By PAUL PAQUIN, M. D., Asheville, N. C.,

Member American Medical Association; Mississippi Valley Medical Association; American Public Health Association; North Carolina Medical Association; etc, etc; Honorary Member St. Louis Medical Association.

Consumption is usually a mixed infection. As presented to the special clinician, or general practitioners, it is, in the vast majority of cases, a comprehensive exhibition of pathognomonic and pathologic phenomena, immeasurably more complicated than can be realized by either the historic, microscopic, nervous and physical symptoms, or all combined. Indeed, we have in human beings, in our country, at least, no disease capable of permeating so extensively, so overwhelmingly, so persistently and so ruthlessly all of the organs, all of the tissues and overmastering so gravely, in one or many ways, all of the faculties, as tuberculosis. Nor is there another disease of mankind so irregular in its strange complications, or so appalling in the destruction of individuals and the ruin of the human race. It is estimated that from one-fifth to one-seventh or more of the deaths of the people are due to consumption of the respiratory organs alone. We may safely add a large percentage to this deplorable destruction, as the consequence of tubercular affections of other organs or systems; for instance, tuberculosis of the joints, bones, spinal cord, brain, liver, peritoneum, skin, etc., etc. The total death rate, then, due to diseases of tubercular origin or tubercular complications, may be stated as problematical, but as surely predominating above and over other human affection or affliction in civilization, and possibly more devastating than any zymotic disease in the world. Neither leprosy, with the horror of its name; nor Asiatic cholera, with the terrors of its quick ravages; nor yellow fever, with its spasmodic destruction; nor small-pox, with its repellent grossness, has been responsible in equal time for the loss of human life that may be strictly accredited to tuberculosis in one form or another. Indeed, it is doubtful if all these plagues together have sent as many people to the grave as tuberculosis has. In fact, it is the plague of civilization. Say or think what you will, the truth is, that we are all exposed to it momentarily; that its germs are with us always; that the majority escape, *not*

*because they are not attacked, but because they resist the attacks.* And here is the problem of protection: *A condition that will prevent germs of consumption from developing in the system, and if they do get a start in growth, a condition that will stop them.*

I am quite aware the medical men of reputation have of late made capital of the (to them seemingly new) idea that tuberculosis is not due to germs alone, and, that when we speak of tubercle germs as the cause of consumption, we utter things very vague. Well, this pronouncement is wonderful only to those who have not studied pathologic and bacteriologic evolution from their beginning. No enlightened pathologist ever thought that the germ of consumption (the bacillus of tuberculosis) could grow irrespective of soil conditions. Such a notion is, and always was to scientific men, as preposterous as it would seem to any mind to believe in the growth of corn stalks from corn seeds planted in the middle of a paved street, run over continually by vehicles and street cars.

It is an old story, then, that the bacteria that bring about phthisic lesions are plants that cannot grow without proper nourishment and surroundings. It is for this reason that we do not all succumb to their development. It would seem almost childish to have, in 1902, to revert to this old and simple proposition, so often discussed before and which was settled at the very outset of bacteriology—or, at least, as far back as I can recall in my medical studies—certainly as far in the past as 1881, but it appears to be necessary, because, very recently, as I have just suggested, some medical writers have thought, judging from their published statements, that they were bringing forth new points in medicine when they expressed the opinion that tuberculosis could not exist without a proper nutritive field. By their learned talks and print they appear to have disturbed those who have not been fortunate enough to follow at the same time the scientific and practical advancement of medicine.

Now, to come to our topic, digestion and indigestion in tuberculosis.

As first indicated, the digestive apparatus is the system upon which vital energy chiefly depends. If "it does not carry out its functions with sufficient effectiveness and persistency, life is a nightmare. and when sick, recovery is a serious problem. So, with respect to such a disease as consumption (properly named, for it

\* Full abstract of a paper read before the Mississippi Valley Medical Association, held at Kansas City, Mo., October 5, 1902.

does consume the system in every sense of the word), the most vital question is that of nourishment, whereupon one may base such measures of treatment as may be deemed best for restoration. Without nourishment of a sufficient kind in quantity and quality, nothing will avail in therapeutics. You may have proper climatic conditions; your specifics in the form of serum, or any proper and justified drug, you may add to them the various ordinary and extraordinary measures of daily practice, still you cannot arrest tuberculosis without the assimilation of sufficient and proper food. The alimentary canal must, first and above all, be considered and made effective enough to furnish the quota of the fuel necessary to operate the human machine in all its parts, particularly in its defensive forces, which include more especially cellular regeneration, phagocytosis and the antitoxic powers of the structure and circulation.

Phthisis is considered, usually, very loosely. It means, to most of us, only lung consumption. Who thinks of any other organs as being, more or less, invariably or unavoidably involved in phthisis? Yet, the pulmonary form is by no means a disease of the lungs alone. At certain stages of its development far-reaching pathologic changes occur. When breaking down of the lungs begins, for instance, it is *probably never* a disease affecting the respiratory organs exclusively. On the contrary it *probably always* affects the digestive tube the whole length, at least from the œsophagus to the anus, which means practically all of it. And in this statement I do not mean to say simply that in consumption there exists indigestion or dyspepsia; I mean to say that *preceding* consumption there may exist digestive disturbances of a characteristic kind, which are indicative of *coming tubercular manifestations*, and that, in certain stages of tuberculosis, there exists almost invariably, if not *always*, some gastro-intestinal lesions of a most serious kind, which very gravely interfere with the efforts made in the line of treatment. Dyspepsia preceding pulmonary tuberculosis was referred to as far back as 1826, by Wilson Phillip, in a treatise on digestion. After that it was studied by Todd, who wrote on the subject in 1833. Their opinion, endorsed in 1835 by Sir James Clark, and later more or less positively by Hutchinson, Brinton and others, was that there exists an unique form of dyspepsia that precedes pulmo-

nary consumption. Soltan Fenwick, as recently as 1894, expressed himself affirmatively on the subject and mentioned two varieties of anti-tubercle dyspepsia, the atonic and irritable forms.

That a more or less prolonged siege of dyspepsia, involving the stomach or bowels or all of these organs, is often met with prior to the exhibition of consumption symptoms, is unquestionable, and it is very seldom considered by the practitioner. But that, preceding tuberculosis, it stands as a specific causal relationship is quite doubtful. I rather incline to the belief that such a dyspepsia begins, as a rule, after the tubercular infection has begun, but before it is manifested exteriorly, though sufficient to impress the system internally and reduce the digestive powers more or less. We will consider these two forms of pretubercular (?) dyspepsia further on.

The first things to study in the dyspepsia of tuberculosis are the morbid state and the pathology of the alimentary canal. They constitute a most important question, because they reveal not only functional disturbances as we are apt to think, but certain changes that are always more or less rebellious, often irreparable, and which demand generally special therapeutic measures. However, I can only be brief in the treatment of these in this paper.

Dilatation of the stomach is one of the common abnormalities of pulmonary consumption. It appears to exist in at least 50 per cent. of the cases. This organ extends down frequently far below the umbilicus, assuming various shapes according to the distention, sometimes pulling down the pylorus several inches below its natural place. (See casts, Ewald, page 110-111.)

The capacity of the stomach varies from 8 fluid ounces to 56, according to individuals, but, as Ewald says, there is no standard size and the capacity does not have a fixed relation to the size of the body. Consequently, it is difficult to say when a stomach is distended enough to be classed as morbid. A slightly enlarged stomach in one individual may be a source of trouble, whereas in another a seemingly large dilatation may cause no inconvenience. However, the existence of a dilated stomach in tuberculosis, no matter to what degree, should always be taken into account in the work of repairs, for the walls of such a stomach and the secretory structure are more or less diseased. Gross, and sometimes microscopic, changes exist to some extent.

The muscular layers may be thinned out, atrophied or hypertrophied. The cells of the mucosa may be the victims of cystic or other forms of degeneration and exhibit pathologic signs of gastritis. Such a stomach in tuberculosis is usually accompanied with catarrhal manifestations. The inflammation becomes chronic and digestion more and more impaired, until a patient often thinks that the stomach is the seat of the malady itself, instead of the lungs. How many advanced consumptives exclaim to their physicians: "Doctor, it is my stomach that hurts me. My lungs are all right!" And again, "The stuff that I raise comes from my stomach!"

Chronic catarrh of the stomach in consumptives is not limited to cases of dilatation, however; it is more common than that. In the last stages of the disease, particularly, it is a most persistent morbidity, due to various causes, among which is the fermentation of food by bacteria. In consumptives who swallow their sputum or nasal secretions, for instance, numerous extraordinary germs reach the stomach, which, in its enfeebled condition, sometimes suffering from destruction in its secretory structure, it is incapable of destroying them. In the chyme taken one morning from the stomach of a consumptive with cavities, I found the bacilli of tuberculosis in this organ. The production of a mixture of toxins and irritant substances by fermentation in such a case is easily imagined. A catarrhal condition is inevitable in comprehensive disorders of the kind.

Among other morbid states of the stomachs of consumptives at certain stages are "mammillation," by which the mucous membrane is closely beset with minute elevations; the honey-combed appearance in which the membrane is pitted in a peculiar fashion; punctiferous hemorrhages; ulceration and hemorrhagic erosions. The latter two lesions are not uncommon. I many times verified their existence by stomach lavage and microscopic revelations. Those who have had opportunities to study these lesions in the laboratory, claim that they are not due to local tubercular infection, although they seem to be the result of tubercular disease.

Tubercles in the stomach are very rare, and, of themselves, are seldom a source of grave dyspepsia, but they may produce erosions and hemorrhages. The bacilli that reach the organ find there a meagre field for their growth, and meet antagonism in the acids; they go down

into the bowels, where the lymphoids favor them, and whence they may scatter throughout the system. We have, then, during consumption, gastritis due to different factors, sometimes several combined, and our treatments should be selected accordingly.

If the stomach alone were involved in tubercular dyspepsia, we might succeed more readily than we do in correcting this difficulty, but, unfortunately, the morbid state extends generally throughout the intestinal tracts, ending its continuity not infrequently with hemorrhoids. We have, therefore, a form of enteritis also in consumptives, at least in certain stages. The organs involved and the extent of pathologic phenomena warrant us to designate the general complex causes of the usual dyspepsia of consumptives as "gastro-enteritis of phthisis," as Fenwick has it. "The essential feature" of the pathologic conditions of gastro-enteritis, says Fenwick, "consists of an intestinal inflammation of a chronic type, affecting in a varying degree of severity the whole of the gastro-intestinal tract from the stomach to the rectum, with secondary changes in the glandular structures." I might add to this, that even the buccal cavity and the esophagus sometimes participate in this general abnormality, for the salivary glands, gums, teeth, tongue, etc., occasionally exhibit peculiar characteristic signs of digestive distress in consumptives. Eventually the stomach tissues may undergo cirrhosis. In the pathologic process the duodenum seems to suffer the most, becoming also cirrhotic. The rest of the bowels change more or less in a similar manner.

It is a grave problem, then, that we have to deal with when we have to combat dyspepsia in consumptives. It not only evidences more or less intractable physical and organic changes in the volume and structure of the digestive organs, but implies that the tubercular ravages are far advanced.

We have spoken of so-called pretubercular dyspepsia. This kind of dyspepsia is not the same as that resulting from the morbid states and structural changes just described. The latter comes in the vast majority of cases only with the process of lung destruction, such as softening, caseation, excavation, etc. This is a very important fact for us to remember, for it is of value in prognosis in pulmonary tuberculosis.

With respect to dyspepsia *preceding* con-

sumption, we may sum up the situation in a few words. As stated at the beginning, I believe it is due to the first disturbances of tubercular evolution before it is manifest outside. If this is the case, it is not pretubercular. I believe, also, that it is usually functional. In any event, it is more readily corrected than the dyspepsia above discussed. Owing to its seeming connection with the development of consumption, it behooves the profession to be on the *qui vive* in every case of persistent dyspepsia in which tuberculosis is not manifest. Such instances should be watched closely, examination of the lungs made at frequent intervals, particularly if there exists cough, no matter how slight, or disturbances of the circulation such as exhibited by flushing of the face, hot or cold feet, clammy or sweating hands, which are sometimes associated with tuberculosis long before any marked physical symptoms arise.

As stated before, this kind of dyspepsia appears in two forms, the atonic and irritant. The first is more common in females than in males between the ages of 15 and 25, or, perhaps, 14 or 30. It sometimes begins during the convalescence of some fever or other, such as typhoid fever, measles, diphtheria. The first symptoms of importance may consist of acute pain in the epigastrium after a meal. Vomiting may occur occasionally. A catarrhal condition with loss of appetite and increase of thirst arises, eventually followed by its usual train of digestive distress and disturbances. One common form of disorder very early in this dyspepsia is the abhorrence of patients for fats; particularly beef and mutton fats, not so frequently bacon and ham fat. In some instances, the very odor of meat is repulsive. In atonic dyspepsia of persons born with tubercular taint, the pain at the epigastrium is very often absent. There is instead a decided feeling of weight and malaise.

The irritant variety attacks men chiefly from the age of 25 to 40, particularly those slimly built and tall. It also begins with abnormal sensation at the epigastrium. At the start of the disease it is usually a mere uneasiness after meals. Sometimes it occurs only after breakfast. By degrees it becomes worse until it is actual pain. The food ferments, becomes acid, and there occur sour eructations. Finally such troubles more or less serious occur after every meal; vomiting takes place, exhaustion occurs and the patient becomes depressed and irritable.

Appetite gets to be very capricious, being absent one meal or one day and ravenous the next; sometimes aversion to food previously relished occurs. Usually the tongue is deep red and pointed, occasionally affected with injected papillae at the end. Not uncommonly, according to Fenwick, and I can substantiate his assurances, there exists frontal and vertical headache, disgusting taste in the mouth and a feeling of extreme weakness. I have seen besides in such cases, a peculiarly profuse general perspiration towards morning and of the armpits alone under various circumstances not affecting other persons. If one examines the chest of such a patient nothing wrong may be found the first time, but if one persists and examines it often, under different circumstances, some abnormal conditions may be found sooner or later. Suddenly, as a rule—at least it seems sudden to the patient—he complains of a cold in the chest. Then you find congestion of some kind, or infiltration, and soon you have unquestioned evidence of pulmonary tuberculosis.

There is also a variety of dyspepsia which seems to “usher in” or “accompany” the first stages of pulmonary tuberculosis. Notwithstanding the different opinions on this form of indigestion, I am constrained to say, from personal investigation, observation and analyses, that to me it is nothing else than the kind of dyspepsia first discussed—viz., the dyspepsia preceding consumption. The symptoms are simply changed and intensified by virtue of longer disturbances and the complicating factors with the increasing damages of tubercular infection and the consequences upon the nervous system, the circulation, the tissues directly responsible for digestion, etc., etc. So, I will not take your time to describe this special dyspepsia, which might be properly termed, the usher in dyspepsia of pulmonary tuberculosis.

The forms of dyspepsia most important to the physician are those seen *during* the progress of *manifested* consumption, because they are seldom absent when a consumptive comes to a doctor, and need such persistent care when present. In fact, those who treat consumptives scientifically, and aim to cure them, know that *none of them can recover* unless, by some process or other, dyspepsia is prevented or cured. Whatever measures of restoration may be applied to arrest the disease, none can get well without proper assimilation of food, and all treatments

that neglect this question are mere placebos, often worse than useless, even sometimes where they prolong a miserable existence.

When destruction of tissue occurs, the dyspeptic phenomena becomes generally very serious. Then it is simply essential to consider them.

It is scarcely necessary to analyze the dyspepsia symptoms accompanying such tubercular conditions. They are practically those enumerated above, plus still more increased intensity and complications of food fermentation with auto-intoxication. All of us have seen these symptoms, and, if we keep in mind the morbid states and pathology briefly scanned at the beginning of this study, we will form satisfactory opinions looking to restoration. Epigastric distress, acid stomach, tympanitis of various parts of the gastro-intestinal tract, bile regurgitation, mucoid, watery and fragmentary stools, diarrhea, dysentery, hemorrhoids, prolapsed stomach, mental depressions, etc., etc., are all liable to be present, and fever may be increased materially, and very suddenly, too, by the action of intestinal toxemia, added to the biologic respiratory intoxication.

Some authorities, in discussing the various forms of dyspepsia preceding, initiating and accompanying pulmonary tuberculosis, have divided them as if they were each of absolutely separate nature. Of course, there is some reason for distinction, but it seems to me that all of the varieties have a common cause and some common abnormalities and need differentiation only to the end of deciphering the existing lesions and the application of suitable treatments. In a general sense, consumption dyspepsia is an entity with varied lesions and manifestations.

The therapy of tubercular dyspepsia is as varied as the therapy of other forms of digestive disturbances. I cannot undertake to review it here in detail. The best I can do is to suggest to those interested, that a close study of the authorities on gastro-intestinal diseases and close observation of the gastro-intestinal troubles of their tubercular patients will pay them well, and to advise them of my experience in a general way.

Bearing in mind the pathology of the gastro-intestinal affections accompanying consumption, one will realize how futile it is to drug and drug to cure tubercular dyspepsia. One will reason that the normal condition of the mucosa must be at least in a measure restored before good diges-

tion can recur. What can accomplish this feat? It is doubtful if anything can in advanced tuberculosis, but in the beginning decided improvement is possible.

First and foremost among local measures to that end are stomach and high intestinal lavage. Nothing restores the power of digestion more positively and more quickly than this practice properly carried on. I have known patients going down, down steadily from the ravages of consumption and dyspepsia, to gain two to four pounds a week after the beginning of a weekly or semi-weekly lavage of the stomach alone. Some authorities object to this treatment on the ground that hemorrhages may be produced by the occasional straining of nausea. This objection is not well founded. Few hemorrhages of the lungs come after exertion or strain. On the contrary, they come usually at night, when the patient is resting, or, in any event, when free from strain of any kind. I have had recourse to gastro-intestinal lavage in consumption for many years, and I have yet to meet the first accident.

As specific measures, serotherapy, the cacodylates and iodine seem to offer the greatest aid in preventing organic changes. The immunizing anti-tubercle serum, particularly, is effective, because it is antagonistic to the tubercle toxins, which are in a large measure responsible for such lesions.

Mixed infections in tuberculosis offer the greatest complexity in the dyspepsia accompanying them. It is probably due to the effect of the combination of the numerous kinds of germ poisons produced in such cases both in the lungs and alimentary canal.

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## THE ADVANTAGES OF BLADDER DRAINAGE AS ILLUSTRATED BY SOME RECENT CASES.\*

By LEWIS C. BOSHER, M. D., Richmond, Va.,  
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We are often confronted with advanced uræmic conditions and other pronounced complications following an obstruction to the out-flow of urine from one cause or another. Frequently we are approached by patients for relief

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of symptoms dependent upon an obstruction to the escape of urine when, on account of the development of uræmia, as a result of a stricture, an impacted calculus, the presence of a tumor in the urethra or bladder, or an hypertrophied prostate gland, owing to the debilitated condition of the patient, a grave operation is out of the question.

In this class of cases especially will often marked and prompt relief from uræmic symptoms be seen to follow a supra-pubic or perineal drain of the bladder when performed under cocaine anæsthesia—the opening being readily and quickly made without shock to the patient and free drainage of the bladder being satisfactorily established. As a result of the establishment of a free flow of urine, the engorged condition of the kidneys is overcome, the inflamed mucous membrane of the bladder is restored to a normal condition, and a rapid disappearance of the alarming uræmic symptoms follows. The disappearance of uræmia and the rapid and permanent improvement in the general condition of your patient admits later of the performance of a more radical operation for the removal of the pathologic condition causing the obstruction to the outflow of the urine. On the other hand, should a major operation be attempted while the patient is uræmic and debilitated an unfavorable termination will almost certainly ensue.

We have all noted the almost miraculous recoveries that have resulted from a prompt perineal section in cases of extravasation of urine following a rupture of the urethra, when, as a result of the establishment of drainage and the relief of the tension of surrounding tissues, threatened uræmia disappears, and the injured tissues are often restored to a normal condition. Again, cases of chronic cystitis that have nearly exhausted our patients from constant pain, violent tenesmus, and loss of sleep, often respond like magic to the benefits following drainage by either the supra-pubic or the perineal route. The annoying tenesmus, the intense pain, and the constant strain upon the nervous system as a result of frequent and painful urination rapidly disappear and the urine becomes free of mucus, pus, and blood as a result of the establishment of free drainage. Irrigation through the openings made in the bladder can add its influence to combat the inflamed vesical membrane. Vesical tuberculous is also markedly improved and sometimes cured by drainage of the bladder.

Where ulcerations of the bladder occur in conjunction with tubercular cystitis, these can sometimes be successfully treated by curetting or by the application of proper remedies made through the drainage wounds to the ulcerated surfaces.

The evil results following obstruction from enlarged prostate in old men are so well known and so much dreaded, and the prompt relief obtained from a drainage of the bladder properly established so decided that the surgeon hastens to adopt this method of relief where simple ones fail, and where more radical operations will not be considered by the patient. The chances of success in operations upon the bladder or prostate gland, as is well known, are always enhanced when proper bladder drainage can be secured.

The benefits of continuous catheterization, a simple and safe form of bladder drainage, are fully recognized—this method being especially serviceable in some cases of cystitis complicating enlarged prostates. In continuous catheterization the drainage is best secured by the use of a "Nelaton" elbow catheter properly attached so as not to be introduced to too great a distance, and so as to retain its position. Irrigation of boric acid solutions or other remedies can be used once or twice daily through the catheter. In those cases in which pain contraindicates the continuous use of the catheter, continuous drainage is best carried out by means of a perineal or supra-pubic opening made into the bladder.

The following cases, coming under my surgical care, seem to bear out quite well some of the points made above:

*Case I.* W. H.; colored; age, 60 years. Admitted to the Old Dominion Hospital February 5, 1902, suffering from retention of urine dependent upon an obstruction from an enlarged prostate gland. Patient had had retention once before, and failing to be relieved by catheter, was aspirated by supra-pubic puncture. His retention was relieved upon his entering the hospital by the use of a prostatic catheter, and afterwards to the time of the performance of supra-pubic drainage by the same means at regular intervals. Amount of residual urine, 16 ounces. He was decidedly uræmic, and not in a safe condition for general anæsthesia; so, shortly afterwards, a supra-pubic cystotomy was performed under cocaine anæsthesia for the purpose of drainage. An examination of the blad-

der, which was conducted without pain to the patient through the supra-pubic opening, showed the prostate to be markedly hypertrophied and projecting into the cavity of the bladder as three distinct intravesical growths. A small phosphatic calculus was removed from the sac posterior to the enlarged gland. A drainage tube was introduced, and as a result of the drainage established his uræmia disappeared and his general condition so improved that he refused further operative measures and returned to his home.

The supra-pubic wound having become closed and again suffering from inability to completely empty his bladder, with frequency of urination and vesical tenesmus, in May the patient again applied for admission into the Old Dominion Hospital. May 10, 1902, under general anaesthesia, the supra-pubic wound was reopened and enlarged, and the prostate was removed after the manner of Fuller. Patient made an uneventful recovery, and at the time of his discharge from the hospital was passing his urine per urethram, the supra-pubic and perineal wounds having become closed. He only passed his urine five or six times daily and about once during the night. He had little or no residual urine.

*Case II.* C. H. E.; white; age, 42 years. For about twelve months had suffered from vesical pain and difficulty in urination. These symptoms continued to increase in severity until one day while marching with the soldiers during the reunion at Petersburg, Va., he was seized with severe pain in the bladder, which continued off and on until that night, when he passed, by the urethra, a piece of a tumor which was subjected to microscopic examination and proved to be sarcomatous in character. Great relief followed the passage of the piece of growth; but, later, his symptoms returned with increased severity, and with such marked difficulty in emptying his bladder as to necessitate the regular use of the catheter. Uræmic symptoms rapidly developed, and his physician, Dr. M. W. Peyser, having consulted me, as a radical operation could not safely be performed owing to the weakened and uræmic condition of the patient, a supra-pubic drainage, under cocaine anaesthesia, was advised. Great benefit followed this course of treatment, his uræmia disappearing, strength returning and his general condition being markedly improved.

On April 9, 1902, at the Sheltering Arms

Hospital, under general anaesthesia, a supra-pubic cystotomy was performed, and I removed a tumor about the size of an egg, having its pedicle attached near the orifice of the urethra. Drainage was continued for some little time, and the patient has steadily improved, and is now able to go about with freedom from pain and all of his old annoying symptoms. A portion of the growth submitted to Dr. Greer Baughman for microscopic examination proved to be the same—sarcomatous tumor of the bladder—as that passed by the urethra some months before.

*Case III.* S. E. S.; white; age, 75 years. Hypertrophy of the prostate gland. Patient before entering the Old Dominion Hospital gave the usual symptoms of frequent urination, especially at night, etc., of hypertrophied prostate gland, these having annoyed him for four or five years before his entrance into the hospital. Two days before his admission to the hospital his first attack of retention occurred, and this was only partially relieved by his family physician, owing to the imperfect instruments used.

As a result of the delay in bringing him to the hospital his condition on entrance was a desperate one, retention of the urine, hemorrhage from the urethra (the result of catheter traumatism) having occurred and uræmia being well developed. Fearing a fatal termination from the use of a general anaesthetic in his debilitated and uræmic state, a supra-pubic cystotomy was performed under cocaine anaesthesia, and the bladder was drained for about eight weeks. The uræmia, which was pronounced, very slowly disappeared, the patient not recognizing for weeks where he was. Shrinkage of the hypertrophied prostate gland followed to such an extent as to enable him to evacuate the larger quantity of his urine by the urethra, and his general health was improved sufficiently to admit of his returning to his occupation of farming. His supra-pubic wound remained open for months after the operation.

I have operated upon a number of cases similar to the last one cited with equally as good results, but as they present no unusual points of interest they are omitted.

The chief points I wish to emphasize in the report of these cases are the advantages, especially of prompt drainage in threatened uræmia due to obstructive conditions, and the use of local anaesthesia when a general anaes-



thesia would not be safe, reserving the use of general anæsthesia for a more radical operation when the condition of the patient will be so improved as to permit of its use with safety, and with the prospect of a successful result.

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## THE DIAGNOSIS OF CHRONIC INTERSTITIAL NEPHRITIS.\*

By BARNARD E. BAKER, M. D., Charleston, S. C.

The diagnosis of a typical case of chronic interstitial nephritis, with its train of classical symptoms, is not difficult; but, as in most other diseases, intercurrent complications and morbid phenomena often occur, and sometimes mislead to such an extent, that the underlying and primary kidney changes are overlooked or not recognized.

There are two forms of chronic interstitial nephritis—namely, the *primary contracted kidney*, or the small red granular or gouty kidney, as it is called; and the *secondary contracted kidney*, following acute or sub-acute inflammatory processes. It is often a fine point in diagnosis, to determine which of the two conditions we have to deal with; and we are often surprised at autopsy to find the pathological changes in the kidneys quite different from what we expected. But, with a carefully elicited history, both family and personal, and with a careful physical examination and urinalysis in most cases we can safely count on making a correct diagnosis.

The clinical manifestations of chronic interstitial nephritis are so varied, complex and often obscure that we should always be on the lookout for it, especially in adults of middle age and those past the meridian of life; and even in young adults and children the condition is sometimes observed.

Patients often consult us, complaining of loss of weight and failing strength, without any, to them, appreciable cause; or it may be that the disease is manifested in vague symptoms of nerve irritation, sensory or motor, or disturbance of function of one or more organs of the body; or, again, we may be called to patients suddenly, and without warning, taken with convulsions or some form of paralysis. It is then

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important that we should never lose sight of the fact that there are few symptoms known in medical diagnosis which cannot occur in the course of this disease, either singly or in groups.

Heredity plays an important part in the etiology of chronic Bright's disease, and more so in that of arterio-sclerosis; the malady "runs in families," though, perhaps, not to the same extent as phthisis and some other diseases, and the family history, therefore, should be carefully inquired into. Next we should elicit the patient's history in regard to previous disease, syphilis, rheumatism, chronic malarial poisoning, etc., these diseases being precursors if not direct exciting factors; their early life history in regard to environment, hygiene and habits, use of alcohol, exposure to cold and damp, and occupation, and finally the present mode of life, occupation, habits, etc. All of this information in regard to syphilis, rheumatism, chronic lead poisoning, malaria and alcoholic excesses in early life, is a valuable factor in making our diagnosis. Occupation and diet must be looked into. On the one hand, we have the *bon vivant*—fond of his game, and other richly nitrogenous delicacies, and his wines and liquors, jovial and portly, not inclined to over-exercise, and not exerting too greatly the functions of the gray matter of his brain. On the other hand, we have the brain worker, directing huge business schemes or corporations, or plunged in scientific thought and investigation, abstemious in diet, using little alcohol, getting little sleep and too busy for exercise or holiday and mental relaxation. In both the types we find indications of chronic Bright's disease—in the one case usually occurring with symptoms of uremic explosions or paralysis; in the other, often insidious and obscure.

In the *primary contracted kidney* we always find cardio-vascular changes, atheromatous changes in the blood vessels and hypertrophy of the left ventricle, with accentuated sounds, followed later in the disease by dilatation and symptoms of cardiac insufficiency. In the *secondary variety*, these may be much less marked and often absent. Much has been written as to whether the cardio-vascular changes precede or are the result of the kidney changes, but it is probable that underlying conditions of perverted tissue metabolism or excretory functions are causative factors of both.

Next to examination of the heart and blood vessels urinalysis claims our attention. Increase

in the total quantity of the urine is marked—not excessive, however, as in diabetes, but ranging from sixty to eighty ounces or more in the twenty-four hours, of a pale amber or straw color, usually clear, and of a low specific gravity—1004 to 1012, varying with changes in atmospheric conditions or diet and amount of liquids absorbed. Albumen is present in small quantities, not constantly, however; sometimes disappearing for days. Following the so-called uræmic explosions, the amount of albumen is usually increased, but not to any great amount, as also is the ease after congestion of the kidneys or lowered excreting powers, following exposure to cold and dampness, or excessive use of alcohol, drugs, etc. Tube casts of the narrow hyaline form are always present; as with the albumen in conditions of kidney irritation or catarrhal attacks or after uræmic explosions, we find them in greater numbers; also the broad, hyaline, granular and occasionally fatty and epithelial. Kidney epithelia and detritus are usually absent or not abundant. The urea is both relatively and absolutely decreased, ranging from 2 grams to 15 grams in the twenty-four hours. The total solids are greatly diminished, falling as low as 30 grams or even 20 grams in the 24 hours. Diet, as we all know, will influence the amount of solids and urea; but, leaving this out of consideration, it is interesting to note how often the calculation of these will serve as an index of the functional and pathological condition of the kidney. If we remember that in chronic interstitial nephritis large areas of parenchyma are destroyed by the encroachments of the connective tissue, and that on the remaining parenchyma depends the filtrating and excreting powers of the organ, we can easily understand how calculation of the total solids and urea indicate the condition of that functioning portion of the kidney. As a general rule, continually diminished urea is an indication of chronic Bright's disease, even when we find the total solids normal. When, however, we find both the total solids and urea continually diminished, it is an indication of approaching danger. I do not consider the small quantity of urea as indicating danger, provided the total solids are normal or increased. I have had under observation since November, 1899, a patient whose urea has never been above 15 grams for the 24 hours, and as low as 4 grams, but whose

solids never went below 40 grams for the 24 hours, but were usually normal or increased.

Uric acid is not excessive, except in those who are the victims of the so-called lithæmic or gouty diathesis. In regard to the other urinary constituents, they are of little or no importance from a diagnostic standpoint.

In the last year or so cryoscopy has been introduced by our more scientific professional brethren, to show the condition of the kidney as to filtration and excretion. This consists in determining the freezing point of the suspected urine compared with that of normal urine and with the blood of the patient. The freezing point of a liquid is in inverse proportion to the amount of solids in solution in the liquid; and so, when we find in a given case the freezing point of the blood to be below normal and the freezing point of the urine above normal, it is an indication that the kidney is not getting rid of the proper amount of solids. This is, to a certain extent, diagnostic, as it has been observed that in interstitial nephritis the freezing point of the urine is notably elevated, while that of the blood is notably depressed; the obverse sometimes obtaining in chronic parenchymatous nephritis. Cryoscopy, however, is of better import in determining the functional integrity of the kidneys separately, when tumors, etc., are suspected or diagnosed; and a rule as to the relative freezing point of the urine and blood is laid down to determine whether the removal of a kidney is justifiable or not.

The use of methylene blue to test renal permeability has also been investigated, in order to show its diagnostic advantage. In certain lesions of the kidney, notably chronic interstitial nephritis, renal permeability to methylene blue is diminished; but it has also been shown that, while the injection of methylene blue indicates the permeability of the kidney to that substance, yet it does not prove the condition of permeability of the kidney to normal constituents of the urine. So we must conclude that diminution of renal permeability to methylene blue does not prove renal lesion. Uræmia can exist with permeable kidneys; for that reason we must carefully differentiate between uræmia, renal permeability and renal insufficiency, which do not vary in constant ratio to one another.

The estimation of renal function through the administration of phloridzin is also of more or

less diagnostic value. This substance when injected into the circulation is transformed into sugar by the secretory activity of the renal epithelium, differing from methylene blue, which simply filters through unchanged; and, at the same time, the sugar in the blood is the same in amount or lowered. It has been observed that the amount of sugar excreted after the injection of phloridzin is decreased, in a given time, from diseased kidneys, notably in chronic interstitial nephritis, pyelo-nephritis and renal tumor; but the use of it is dangerous, inasmuch as any substance in the circulation which causes a pathological constituent to appear in the urine must necessarily be injurious to the renal epithelium.

Iodine is excreted almost simultaneously in the saliva and urine after ingestion, and might also be classed with the methylene blue and phloridzin. In diseased kidneys its appearance in the urine may be delayed to even eight hours after it appears in the saliva.

All of these tests are of more or less diagnostic value, and impossible for the average practitioner of medicine, and are all far outweighed in value by a careful chemical analysis of the urine.

Secondary uræmia is nearly always present in chronic interstitial nephritis, especially in the later stages, but is of no special diagnostic value, nor are leucocytes of any value from a diagnostic standpoint. Of the chemistry of the blood we know so little that at present we have no methods of analysis to help us in a diagnosis of kidney lesions. Oedema of the face, especially below the eyes, and of the ankles is usually present, but is slight in amount and often transitory. Localized œdemas are sometimes observed elsewhere, probably of vaso-motor origin.

Dyspnea is sometimes an urgent symptom, and oftentimes, when unaccounted for by pulmonary or cardiac lesions, directs our attention to the kidneys.

Symptoms due to gastro-enteric disturbance, disturbances of the special senses, notably albuminuric retinitis, persistent headache, and other nervous phenomena, skin eruptions and hæmorrhages may occur in the course of the disease, but are of no special diagnostic value, except when observed with the cardio-vascular and urinary symptoms.

55 King Street.

## Correspondence.

### Determination of Sex.

Mr. Editor,— For several years I have thought that the reproduction of sex was due to nature trying to repair an injury, and therefore bred to the weaker side. Following upon this theory, I made the experiments below.

During September, 1900, I served a mare to a stallion—after giving the mare a hard drive. On August 8, 1901, she dropped a *female* colt.

Nine days thereafter, the mare was served again by another stallion—this time letting him take a long drive on a hot morning, and he became much worried before going to the mare. On July 15, 1902, she dropped a *male* colt.

On July 15, 1901, I bought a young buck ram. He was brought a distance of ten miles in a cart, and was so tired that at first he would not notice the ewes with which he was placed. I left him that night with eleven ewes, and never let him go with these again. They dropped nine male lambs, one female, and one never conceived.

On August 3d of same year, I bred this same buck to seven ewes—he being thoroughly rested; but I had the ewes driven about the field more or less all that day before the buck got to them. He impregnated the entire lot that night, and I have now on hand seven *female* lambs to show for that.

On October 9, 1901, I served two cows to one bull—the bull being tired, as he had been driven for three miles and was much worried. These cows dropped two *male calves*.

On December 25th, of same year, I had two cows served to the same bull—this time they being carried to the bull; and I now have on hand two *female calves*.

These are all the experiments I have made, and am quite anxious to have an experiment made with the bitch, but have none (and don't want any). Several friends, however, have promised to make an experiment for me on the first opportunity.

If any of the readers of this article determine to make the observations, I wish they would use the dog. If they wish males, then let the bitch be absolutely rested and at rest; but the dog must be tired; and when very tired serve him once in this condition.

Now, Mr. Editor, if I have had such results

among the lower animals, may not the conclusions be drawn that this same kind of result can be reached among human beings?

Yours very respectfully,

W. D. TURNER, M. D.

*Fergusson's Wharf, Va., Oct. 8, 1902.*

## Analyses, Selections, Etc.

### Limestone Cave Air for Pulmonary Complaints.

Victims of pulmonary complaints have heretofore been compelled to make inconvenient journeys to the higher altitudes in search of the pure rarefied air, which is known to be so beneficial to them; but this is no longer necessary. According to the *Scientific American*, October 4, 1902, it has been discovered that the air from limestone caves has all the characteristics of that of the mountains. This discovery has just been made use of in the location of a sanitarium near one of these caves; and the air for the institution is supplied from the underground caverns. This establishment is at Luray, Va., and the system of ventilation is arranged so that each room gets its own supply direct from the cave. The air of these caverns is of a very uniform temperature and remarkably pure and free from all germs and dust particles. In the warmest weather the doors and windows of this institution are kept closed, and a comfortable temperature of 75° is maintained in spite of one of 90 or more degrees encountered outside.

### Sociological Relations of Influenza.

During the session of the American Medical Association at Saratoga Springs, N. Y., June, 1902, Dr. James G. Kiernan, Chicago, Ill., read a paper on this subject, which was highly interesting. The following abstract is given:

"That which causes physical depression is liable to cause emotional depression, thus disturbing the balance of the will and giving sway to impulses and tendencies which otherwise would not rise into consciousness. A germ disorder with a toxin so depressing as that of influenza must lead to many suicides, since persons affected would be regarded as sane, but sad; hence would have abundant opportunity of sui-

cide. Types of insanity due to influenza are, as a rule, of persecutorial and suspicious character. Chronic states of this type are necessarily irritable, hence easily induced to violence. The question of the decrease of deaths from nervous diseases turns on the question of classification. During an influenza epidemic the strain would be on the blood vessels and heart of a neuropath affected by influenza and the death would be charged to diseases of the blood vessels. Tabetics, for example, would have greater tendencies to pulmonary, renal, and cardiac crises, and death from any of these would be credited to disease of the lungs, kidneys or heart."

## Book Notices.

**Practical Medicine Series of Year-Books.** Editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School. Vol. IX—Physiology, Pathology, Bacteriology, Anatomy. August, 1902. Chicago: The Year-Book, Publishers. Cloth. 12mo. Pp. 212. \$1.25. Price of the Series of Ten Volumes, \$7.50.

This is one of the ten volumes "on the year's progress in medicine and surgery." It contains much of importance, but is not so well compiled as some of the issues of this series. While the compilers evidently felt familiar with the subjects, there is an omission of detail or sufficient explanation in a number of the sections to enable the reader to get a clear idea of the meaning or of the facts. What such a section as "normal menstruation and some of the factors modifying it" has to do in the chapter on Anatomy we fail to see—unless the author simply threw it in there to fill up space.

**Applied Surgical Anatomy—Regionally Presented.** By GEORGE WOOLSEY, A. B., M. D., Professor of Anatomy and Clinical Surgery, Cornell University Medical College, etc. *With 125 Illustrations, mostly colored.* Lea Brothers & Co., New York and Philadelphia. 1902. Cloth. 8vo. Pp. 521. \$5 net; leather, \$6 net.

While the study of anatomy, in detail, is without much interest, the mind grasps and easily recollects the dissections made in natural relationship, and when their practical bearings are clearly pointed out. Anatomical knowl-

edge—the basis of medical science—is indispensable in the study of medicine, surgery, etc. Such a book is one that the young practitioner especially needs. The abundant illustrations—mostly handsome colored plates—greatly help the understanding of the book. They give a clear idea of the structures underneath the surface. Such a book, combining anatomy and surgery, is helpful, for the practical applications of the subjects are powerful digestants and aids to memory. A review of this book is impossible within the few lines—space allotted a book notice; but a glance at the arrangement of the subject, the excellence of description in the text, the practical character of the sections, and the graphic illustrations, all combine to make this one of the few essential books for the surgeon as well as the student. Indeed, he is unfortunate who has not a copy of this book for daily reference or study.

**Principles and Practice of Gynecology.** By E. C. DUDLEY, A. M., M. D., Professor of Gynecology in Northwestern University Medical School, Chicago, etc. *Third Edition. Revised and Enlarged. With 474 Illustrations, of which 60 are in Colors, and 22 Full-Page Plates in Colors and Monochrome.* Lea Brothers & Co., Philadelphia and New York. 1902. 8vo. Pp. 756. Cloth, \$5 net; leather, \$6 net; half Morocco, \$6.50 net.

The second edition of this treatise was repeatedly commended as "the best treatise on gynecology extant." This third edition is in many ways an improvement. By judicious pruning, nearly 100 pages have been added, beside new engravings and plates, thus materially increasing the size of the book. The arrangement is original and natural; and in its completeness and thoroughness, the work is encyclopedic. The author emphasizes the importance of restoring the conditions of nature, whenever possible, which may be done with few and simple instruments. Recent advances have been included. Etiology, pathology, symptomatology, physical signs, diagnosis, and differential diagnosis have been rearranged, with extensive additions, in tables and parallel columns. A large number of minor manipulations, and most of the major and minor operations have been illustrated with new drawings to show the several procedures step by step. The present edition is an excellent text-book for the student, and an invaluable help to the gynecological practitioner.

**Typhoid Fever.** By J. T. MOORE, M. D., M. C. P. S., Professor of Theory and Practice of Medicine, Medical Department of Hamline University, Minneapolis, Minn. 12mo. Pages 159. Cloth. Price \$1.00 net. G. P. Engelhard & Co., Chicago. 1902.

This monograph is written to include many of the most valuable conclusions scattered in different works and journals. These conclusions brought together in a brief, practical volume, gives the reader the important results without the expenditure of large amounts of money to procure all the works referred to. While we cannot say that many new facts are brought to light, special importance has been given to facts proven by the author's experience to be of importance. As a monograph—complete as to the subject in hand—we find it a very valuable publication, handy in size, and easily read in a few hours. In therapeutics, a good deal of space is devoted to the matter—arsenite of copper is favorably mentioned. The coal tar derivatives are more or less risky as being too sedative in their action for a disease so prolonged. Cold baths act better.

**Treatise on Diseases of the Anus, Rectum and Pelvic Colon.** By JAMES P. TUTTLE, A. M., M. D., Professor of Rectal Surgery in the New York Polytechnic Medical School and Hospital, etc. *With 8 Colored Plates and 338 Illustrations in the Text.* New York: D. Appleton & Co. 1902. Cloth. 8vo. Pp. 961.

While this book is a specialist's text-book of the highest merit, it is none the less useful—even essential to the wants of the general practitioner. Thoroughness, yet plainness of description, is its characteristic—illustrations on every few pages very materially helping the general practitioner to understand the facts on which diagnosis is made, and the steps of procedure in treatment. While relating his own practices and experiences as the outcome of twelve years' conduct of one of the first and largest clinics on rectal diseases in the world, the author also relates the practices and opinions of other operators—knowing that no one method always succeeds, and recognizing that the practitioner should be conversant with many in order that he may have resources in reserve for all emergencies. "The non-operative treatment of each disease is first described, together with the class of cases in which it will probably be useful; but when such measures are likely to prove futile," he has not hesitated to

say so. It is this feature which gives this *Treatise* its special usefulness to the general practitioner, to whom it will serve as a text and a guide book in all his cases of rectal, anal and pelvic colonic diseases.

**Diseases of the Nose, Throat and Ear.** By CHARLES PREVOST GRAYSON, A. M., M. D., Lecturer on Laryngology and Rhinology in the Medical Department of the University of Pennsylvania, etc. *Illustrated with 129 Engravings and 8 Plates in Colors.* Philadelphia and New York: Lea Brothers & Co. 1902. Cloth, 8vo. Pp. 540. \$3.50 net.

The specialist of to-day is finding out that his books written only for other specialists in his department have but little demand. Hence, like the author of work under notice, he is adapting his books to the wants of the general practitioners as well—so far as those diseases that can be diagnosed and treated by him are concerned. Dr. Grayson's work possesses special merits, which commend it to the home doctor. The anatomical and pathological association of the ear with the nose and upper throat are so intimate that there can be no dispute as to the propriety of the conjoint study of these diseases in one volume. We are greatly pleased with the work before us. Points of diagnosis are succinctly yet clearly stated and illustrated as far as possible, and in therapeutics, when one line of treatment alone seems sufficient, confusion is saved by the author in calling attention almost solely to that one line of procedure or prescription. In fact, it is in the fulness of description in sections on treatment, and the very practical nature of the instruction imparted under the head that gives this book its command upon the necessity of the general doctor as well as upon the claim of the specialist. It is beautifully published, with large, clear type, well "leadet."

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### Remarkable Symptoms.

"Well, Patrick," asked the doctor, "how do you feel to-day?"

"Och, doctor, dear, I enjoy very poor health intirely. The rheumatics are very distressin', indade; when I go to slape I lay awake all night, an' my toes is swelled as big as a goose hen's egg; so whin I sthand up I fall down immajit."

## Editorial.

### Hospitals for Tubercular Patients.

We were much interested in that part of the address of Dr. G. A. Aschman, Wheeling, W. Va., as President of the West Virginia State Medical Association, recommending State provision for sanatoria for indigent consumptives and for those suffering from incipient tuberculosis who are unable to pay for such care, and he urged the appointment of a committee of the Society to memorialize the Legislature of West Virginia (to meet during January, 1903) to provide means for the construction of such a hospital. The committee to whom the address was referred (Drs. C. F. Ulrich, Wheeling; E. T. W. Hall, Weston, and W. S. Keever, Parkersburg), recommended that the Committee on Legislation (Drs. Robert A. Haynes, Clarksburg; W. N. Burwell, Parkersburg, and A. S. Grimm, St. Mary's), "shall use their best endeavor to influence the next Legislature to establish a State Sanitarium for the treatment of consumptives." We hope this committee will get actively to work, and succeed with the plan. But to succeed, every member of the Society, which unanimously adopted the suggestion, must also get actively to work upon his legislator, and show him the need of such a step.

The time has come when general hospitals do not want to take tubercular lung cases—any more than they would take highly contagious diseases, such as small-pox. Such hospitals are not equipped for it. The disease is too contagious, and infects the convalescent from other prostrating diseases in the same room and ward, unless every precaution is taken. If benefit is to come, it must be liberal appropriations for the care of such cases. And while we cannot hope to see very great good come to a State from the establishment of one such hospital, its establishment will be a step in the right direction. The law should go far enough to give authority for the commitment of a tubercular patient; for it is only by segregation of victims to the disease, and undivided attention of doctor and nurse, that systematic treatment can be undertaken. Of course, we attempt no detail of plan, but we wish to lend whatever of influence this journal can to the taking of this first step in the right direction by our sister State.

In the discussion of the symposium on tuber-

culosis before this session of the West Virginia Society, Dr. O. O. Cooper, of Hinton, W. Va., pointed out that Norway is handling this subject. There they can compel consumptives to go into a sanitarium. They take consumptives to the sanitarium and cure them—whether they want to be cured or not. Every State should have a sanitarium for tubercular patients, and every one that goes there will become a teacher until every home in the country will be a small sanitarium of its own.

### Should Licensed Practitioners of Medicine Be Taxed?

We cannot suppose that law makers appreciate what the medical profession is doing for the citizens of any of the States that require specific license tax of doctors, or else they would cancel it. The practice of medicine is not a money making business or profession. The peculiar claims of humanity upon the services of the doctor are such that his time and labor and money are expended almost under compulsion of other circumstances that does not apply to any other class of citizens. The widow and the orphan, the maimed and the halt, the blind and the deaf, the laborer whose daily bread when in health is made by the sweat of his brow, or the clerk or the employee whose salary or wages are just enough to keep him alive when in health, or the man failed in business ventures, and who does not see how to provide for to-morrow's living, the toiler of the sod, whose pittance is not enough, when well, to secure a comfortable home or to provide sufficiently against the storms of winter—these are the classes of people that, for the most part, compose the patrons of the doctor in active practice. The grocer and the clothing merchant, the market man and the fuel dealer, the shoe man and the hatter can all avoid crediting the impecunious, or else they can sell them the fifth rate goods in stock, for which, however, even the penny, with its percentage of profit, is demanded. Such impecunious persons can go to church or to school without payment of money, because States or counties or wealth provides for these things. But the poor doctor, in his struggles to dispense the blessings of his healing art—who helps him? The rich man says he is the poor man's doctor, and therefore does not want him, if another is to be found who can wear better clothes, or make a better appearance in social circles. The State

or the county gives him no help, but oppresses him further with a specific, and, in some States, an onerous tax. It is needless to follow this detail further. For we are all familiar with the good old family doctor, who wears his health and life away in doing good in his community, with no one to provide for his wants when in need—even of books or journals or appliances or instruments or horses or help, etc., to carry on his good work; and yet the State and county and city oppress him by taxes—increasing in amount with the lapse of years!

The time has come when a halt should be called, and a radical change as to this specific license tax made. Unlike any other calling, the medical student has to spend four years of his young manhood—just at a time when he could be making a business start in life—in college, at the expense of tuition, books, board, clothing, etc., without an opportunity of making a dollar. Then he graduates, and neither professional justice nor the consent of the people allows him to begin practice for remuneration or reward until he passes his State Medical Examining Board. By this time—when he is found competent to enter practice—his reserve funds have been expended and probably he is in debt and has to repay the money borrowed for his medical education. All of this expenditure of time and money—for what? Simply that he may contribute his time and ability to the alleviation of the sufferings of his fellow-man, and be instrumental in saving or prolonging human life! For whatever may be the expectaney or ambition of the young doctor as he receives his license, this is about all his life will amount to when he comes to sum up his experience in after years.

Now, we maintain that the specific license tax—State, county or city—on the doctor is not right. Who would think of placing a specific license tax upon the preacher, the professor, the teacher, the editor, etc.? Here and there, it may be, some one of these does tower above all his competitors, and amass wealth enough to make his declining days appear well provided for. Here and there a wealthy congregation provides amply for the minister, or a competent salary is awarded a professor, or some fortuitous circumstances enables the teacher to make money, or the doctor who falls heir to a wealthy clientele receives fees large and frequent enough to let him become well off in this world's goods, etc. But how many such? One can count all

he knows of either calling or profession thus fortunate on his fingers. The great majority are strugglers after an existence. Take your city, or your county, with its full quota of doctors, and see. Indeed, there are some counties and sections where even a full year's work of professional duties does not even afford the doctor enough income to provide for his personal comforts or necessities, and allow him balance enough to belong to or attend his State Medical Society or to take even a few dollars' worth of medical books or journals a year, in order that he may keep himself informed as to the progress of medical science. And yet these thousands of good yet poor men in every State are still striving to do good among their fellow-men with such means as they have!

The Medical Society of Virginia appointed a committee at its session over a year ago, of which Dr. J. B. DeShazo, Ridgeway, Henry county, Va., is chairman, to see if this great wrong cannot be remedied—this incubus lifted from the profession. This committee has done earnest work, and has made an impression. It has gained a foothold upon popular attention in the State. But it needs the undivided help and the pull all together of the medical profession of Virginia to accomplish its laudable purposes. Some doctors, through false pride, we fear, are afraid to let their wants be known. Some people become ashamed, as it were, of their compulsory poverty. They hope the law relating to the specific license tax on doctors will be repealed, but do not put their hands to the wheel to help to give it a turn. A few who do not feel the effects of the law as it now is in Virginia, and a few other States, apparently wish to boast of their better circumstances, and pretend to a feeling of patriotism, which says, "Let us all contribute to the treasury of the State by paying this specific license tax on doctors." But the doctors of many other States wealthier and poorer than Virginia have no such specific license tax, and there is no reason why Virginia doctors should suffer longer under this burden.

### The Legislative Committee of the Medical Society of Virginia

Has important work before it. It is a strong committee, appointed by the retiring President, Dr. R. S. Martin, of Stuart, Va., to do important work that was side-tracked during the last session of the Virginia Legislature. Perhaps

the chief duty of the committee is to so amend the medical practice act as to exclude osteopaths, faith cures, etc., cancer and other quacks from the privileges of practicing their vocations in the State of Virginia without first showing their qualifications to practice the healing art in any of its branches without first passing successfully before the Medical Examining Board of Virginia—as all other applicants for license to practice in Virginia have to do. It is hoped that every Virginia doctor will lend his time and help to the committee by first instructing his legislator before he comes to the session of the General Assembly, to meet during November, 1902. The committee of the Medical Society of Virginia is as follows: Drs. George Ben Johnston and William S. Gordon, Richmond (city); Hugh T. Nelson, Charlottesville; Wm. P. McGuire, Winchester; John W. Scott, Gordonsville; A. S. Rixey, Culpeper; Joseph A. Gale, Roanoke; A. S. Priddy, Marion; F. S. Hope, Portsmouth. We understand that this committee has already begun work.

### Medical and Surgical Society of District of Columbia.

This Washington City Medical Society, during its meeting October, 1902, elected the following officers for the annual term: *President*, Dr. Elmer Sothorn; *Vice-President*, Dr. Johnson Eliot; *Secretary and Treasurer*, Dr. Llewellyn Eliot; *Assistant Secretary*, Dr. Presley C. Hunt; *Executive Committee*, Drs. A. R. Shands, John E. Walsh, Llewellyn Eliot, Presley C. Hunt and Francis B. Bishop; *Miscroscopic Committee*, Drs. John D. Thomas, D. Percy Hickling and John E. Walsh. As our readers are aware, this is one of the most systematic and scientific local medical societies of the country, and we appreciate the compliment of its adoption of this journal for the medium of its publication of papers read before it.

### As Good as Gold.

Druggist—I see you give Mr. Bychloright credit.

Drug Clerk—Oh, yes; he's as good as gold, sir; just returned from a Keeley Institute.



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## Original Communications.

### TREATMENT OF TYPHOID FEVER WITH CASTOR OIL.\*

By C. C. BASS, M. D., Columbia, Miss.

It is proposed in this paper to call the attention of the Association to a treatment for typhoid fever which is at once old and new. The treatment is old in that castor oil has been administered for many years to relieve certain conditions as they arise in the course of the disease, it being often used to relieve tympanites, constipation and accumulation of undigested and hurtful food. Perhaps there are few physicians present who have not used castor oil at some time in the treatment of typhoid fever. It is the equivalent of the established limitative treatment, but it is a better choice of drugs. It is new in that castor oil has never been administered as an exclusive, or nearly exclusive, treatment. The quite considerable inquiry which I have made has failed to find the treatment suggested in this light, except in an article of my own published in the *Mississippi Medical Record*, April, 1902.

This paper will present briefly—first, the theory; second, the method; and third, the result of the treatment.

1. *The Theory.*—Typhoid fever is an acute, contagious, self-limited disease characterized by inflammation, necrosis and ulceration of Peyer's patches and the solitary glands of the small and large intestines. The cases are generally divided into three varieties—the abortive, the mild, and the severe forms. In the abortive forms there is no necrosis and no Peyer's patches. In this form the temperature reaches normal in the second week. This form seldom occurs in the section of the country where I practice. In the mild type, the temperature reaches

normal in the third week, with slight elevations generally extending in the fourth week. The bowel lesions may be extensive, but healing is prompt. In the severe form the temperature ranges high. It may reach normal in the fourth week, but may not do so for a number of weeks longer. In the second or third week, the patient passes into a low adynamic condition characterized by dry tongue, sordes, delirium and muscular disturbances. It is also claimed that severe cases are those in which the absorption of toxins from the alimentary canal is extensive, and the elimination therefrom is defective. In the abortive cases there is seldom tympanites, in the mild ones very little; in the severe ones this is a prominent symptom. The more tympanites, the severer the case, and vice versa. Meteorism arises from two principal causes—first, increased fermentation, which takes place in the intestinal contents; and second, paralysis of the muscular coat resulting from toxemia. If the gases in the tympanitic are not themselves toxic, they, at least, increase the tension in the bowel and increase the absorption of the toxins and the germs that do exist in the canal. It is a firm conviction with me, that the serious nervous and muscular symptoms are, to a very great extent, if not altogether, due to the absorption from the intestinal canal of toxins. The results of the castor oil treatment prove this clearly enough, and, it seems to me, does it conclusively. Take any case of uncomplicated typhoid fever where the temperature ranges above 103° F., and give a dose of castor oil every twelve hours, giving no other medicine at all, and the temperature will invariably be reduced in three days, and will generally be below 102° F., and always below 103° F. Any case with wild delirium will subside in the same length of time. The effects of the oil is confined to the bowel. It accomplishes what it does effect by eliminating from the bowel germs and toxins which would otherwise be absorbed. If sweeping germs and toxins out of the bowels, thereby preventing their absorp-

\*Read before the Mississippi Valley Medical Association, in session at Kansas City, Mo., October 15-17, 1902.

tion, diminishes these symptoms, then surely the absorption of these poisons must be the thing that causes them or aggravates them. The administration of antiseptics, such as have no effect on the nervous system, will generally accomplish the same thing. This is again evidence that the cause of the severe symptoms, or the cause of their severity, is the taking up of something from the alimentary canal. Therefore the theory is deduced that, the more of these gases, toxins and germs that are eliminated from the bowel, the milder will be the case. The thing, then, if this much of the theory is correct, is a drug which will eliminate these poisons from the bowel, and, at the same time, has no effect upon the general system, and will not spend the patient's strength. Castor oil is the medicine wanted. It goes through the bowel practically as a bolus, or en masse, and cleanses them more thoroughly than any other purgative, and it does not draw upon the system or any organ for its purgative property, but acts of itself, and is not absorbed to overload the already overburdened blood with abnormal substances. I feel myself justified amply in saying, after repeated and careful tests, that castor oil does not weaken or injure the patient, and that no other purgative known to me or used by me acts in the same way. In typhoid fever, digestion is very imperfect, and fermentation is excessive. We have in the alimentary canal, therefore, at all times, more or less fermenting and undigested food, which, of course, makes a bad application to the inflamed, necrosed, or ulcerated mucous membrane. Move this off often enough to prevent any accumulation of it, and protect the membrane with oil, and the inflamed spots will not be likely to pass to necrosis, and ulcers will heal more rapidly. The quantity of this fermenting and undigested food will thereby be lessened, and the case thus held to as mild a course as possible. If the ulcers are slow to heal, and the case runs a long course, the patient is not overburdened with toxins to exhaust him before they do heal and the fever subsides. Abortive cases will be kept abortive, mild cases made milder, and severe cases will be converted into mild ones.

2. *The Medical.*—Taking tympanites as my guide, my object was to keep the bowels as free as may be of germs, toxins and fermentation. When I first began the use of the treatment, I gave one dose of castor oil every twenty-four hours. I found that, after giving a dose, tympanites

was partially or wholly relieved, but that it usually began to return before time for the next dose. I also found that the typical typhoid odor of the stool, while perhaps it was partially relieved, was never altogether. I then began to give a dose every twelve hours, and found that in from one to three days these conditions were entirely removed, the stool was rid of the typhoid odor, and was as odorless as that of the healthy man. The presence or absence of the typical odor of the stool became at once another valuable guide in the treatment. These two results—first, the bowels free from tympanites; and second, a stool free from the odor, indicating a satisfactory condition of the canal, can be had by administering a dose of castor oil every twelve hours, but it cannot always be had by less than that.

A dose of castor oil is an indefinite quantity in the treatment of typhoid fever. It varies in different cases, and in different stages and conditions in the same case. It may vary from one to eight drams. Enough to act in three to five hours should be given, but not so much as to act more than twice. If the patient is seen in the first week, when constipation usually exists, the dose will be from two to four drams, but if in the second or third week, when diarrhea is the rule, one to two drams will be the proper dose. After one or two doses have been given, it can be easily regulated. During the second and into the third week, the dose is about the same, but increases considerably during the last week in the bed. In abortive cases the dose is usually larger all through the course of the disease. The taste is very well disguised by giving it in a warm cup with a little boiled sweet milk.

3. *Results.*—The result of the treatment is about as follows: The temperature ranges lower; the tympanitis and delirium do not occur, and if they are present, they soon subside; diarrhea and dysentery are prevented or checked if they already exist; the disease runs a milder course, and the patient does not lose flesh and strength so fast as they generally do under any other treatment. The last named result is its greatest advantage over any antiseptic treatment. The explanation is, that any antiseptic that is effective enough to prevent or materially retard fermentation and germ life will also prevent or generally retard digestion. Castor oil does not do this.

Up to the present time, I have treated thirty-two cases of typhoid fever with castor oil, and,

except in a very few of these cases, in which I gave some other medicine to meet some special symptom, I gave nothing else. In order to be brief, I will report them collectively. Thirteen cases were treated with one dose every twenty-four hours, and nineteen cases with one dose every twelve hours.

Three of the thirteen cases which were treated with a dose every twenty-four hours had a temperature above  $103^{\circ}$  F., delirium and tympanites when the treatment was begun. These symptoms subsided in from three to five days. The temperature came down below  $102\frac{1}{2}^{\circ}$  F. in from two to five days; after that they ran the same mild course that the other ten did. With the exception of one case for one day, and of the three cases in the beginning of the treatment, as just mentioned, the entire thirteen cases had a temperature during their entire course ranging below  $102\frac{1}{2}^{\circ}$  F. Except as mentioned, of the three cases, delirium nor tympanites never occurred. Their temperature reached normal in from fifteen to twenty-six days, and there did not occur a single complication. Of these thirteen cases, four had diarrhoea and one had dysentery when the treatment was begun. In each instance, these symptoms were entirely absent within four days. Afterwards they continued as the other cases, having one or two actions after each dose of oil.

Of the nineteen cases treated with a dose every twelve hours, there were six cases with delirium, tympanites and a temperature above  $103^{\circ}$  F. when the treatment was begun. In all of them, those symptoms subsided within three days, the temperature coming below  $102^{\circ}$  F. There were three other cases in which tympanites was prominent, in which it also subsided. After the third day of the treatment, excepting only in four instances, the temperature in the nineteen cases ranged below  $102^{\circ}$  F. throughout the entire course. It is to be understood that of the fourteen instances referred to, may be one, may be two, may be three, would occur in a single case. The temperature reached normal in from twelve to twenty-one days from the beginning of the attack. In calculating the duration of the disease, I have not taken the date of taking the bed as the first day of the illness, as is sometimes done, but, in each case, inquired carefully as to the first day of the malaise headache, etc., even when there was no knowledge of the fever, and calculated from that date. One of the nineteen cases should have special men-

tion. After a mild course, the temperature reached normal on the nineteenth day of the illness, and on the twentieth day began to rise again, and ran another course of twenty-three days, in which the temperature went above  $102^{\circ}$  F. several different times. Free hemorrhages occurred on the thirty-first day of the illness, and tympanitis followed administration of opium and withdrawal of the oil. Tympanitis promptly subsided when the oil treatment was resumed. In this case the treatment seemed to fail, the duration of the disease and the hemorrhages considered. Six of these cases had diarrhoea when the treatment was begun, which invariably subsided in from one to three days. To sum up the nineteen cases, and leaving out the one specially mentioned, after the third day the temperature ranged below  $102^{\circ}$  F., tympanites and delirium were absent and the temperature reached normal in from twelve to twenty-one days from the beginning of the attack, making them all abortive or mild cases.

It is true this is too small a number of cases to base positive conclusions on, but it is large enough to commend the treatment to us as worthy of further investigation.

## GASTRECTOMY, WITH REPORT OF TWO CASES.\*

By ALBERT VANDERVEER, M. D., Albany, N. Y.

At one of the meetings of the Medical Society of the County of Albany, I think during the winter of 1885, in presenting a number of pathological specimens, I exhibited a stomach, removed post-mortem, a case of carcinoma, and in my remarks I said to the gentlemen present that this organ could have been removed with probable success.

In all my abdominal work from that time on I did not meet with another case that offered any encouragement in doing this operation until the following:

*CASE I. Carcinoma of Stomach, Omentum, etc.—Gastroctomy.*—Mrs. B. S.; Albany, N. Y.; age 42; married H. W. Entered Albany Hospital February 12, 1900.

*Present Illness.*—Over a year ago when eating solid food would afterwards vomit, but liquids produced no distress, nor did she have

\*Original abstract of a paper read by title at the American Association of Obstetricians and Gynecologists, Washington, D. C., September 16-18, 1902.

any pain. During past year no solid food of any kind taken. Occasionally would vomit while on a strictly liquid diet, not much in quantity. Lived mostly on a milk diet. For past two months noticed bunch in left side, which gradually increased. A tumor, lobulated, size of patient's fist, just above umbilicus, little to left of median line easily made out.

*Past History.*—Good. Six children, four living, no miscarriages, menstruation regular.

*Family History.*—Four brothers and four sisters alive and well. No history of malignancy or tuberculosis.

Patient in hospital for observation until operation, vomiting more or less continuously. Diagnosis carcinoma of stomach, omentum and probably involving the transverse colon. Patient and husband readily consented to an exploratory incision. If diseased mass could be removed successfully we were to proceed with the operation. One grain of calomel given, in divided doses, followed by two A. S. & B. pills, producing a good movement of bowels previous to operation. Usual intestinal enemata. Pulse previous to operation never above 100°; slightly increased respiration; temperature normal. Somewhat restless night previous to operation.

Operation February 20, 1900. *Gastrectomy.* Median incision between ensiform cartilage and umbilicus.

A hard mass occupying the greater curvature of stomach and cardiac end found, also a few adhesions, but neighboring glands not infiltrated. Omentum ligated in sections; stomach loosened from all attachments; duodenum and pyloric end of stomach grasped with forceps; section made well below tumor, and stomach gradually worked out of its bed up to cardiac end; cardiac end or œsophagus grasped; stomach removed; duodenum joined to end of œsophagus by means of a medium-sized Murphy button, and very little blood was lost during the entire operation. There was considerable tension, and the œsophagus was loosened by lateral incision of the diaphragm. Wound closed in usual manner. Anesthetic fairly well taken, and operation lasted an hour and a half. Patient cold, with uncomfortable perspiration over surface of body, but relieved by proper treatment. Pulse 126. Had difficulty in breathing, not being able to take a full inspiration.

At 5 P. M., had reacted well, much warmer, and pulse of good volume. Complained of pain through abdomen, and was turned on her side, with a pillow firmly applied to back. Rectal

enemata well retained, and one-thirtieth of a grain of strychnia was continued every three hours hypodermically. Patient slept at intervals, feeling quite comfortable; pulse at 10:45 P. M., 118°, good volume, and she was very quiet. At 11 P. M. voided four ounces of urine; 11:30 had a sharp pain in right side of abdomen, and at her earnest desire position changed, when she felt much more comfortable; 1 A. M. belched up a little gas. No nourishment allowed, but mouth rinsed frequently. At 1:10 A. M., after sleeping ten minutes, awoke with a start, giving herself a severe movement of the body, and from that time on pulse grew weaker, more rapid; and while all possible remedies were used, the patient grew worse and died at 3:20 A. M.

Post-mortem examination showed that the attachment between duodenum and œsophagus had loosened, the upper segment of the Murphy button having separated in its attachment to the œsophagus, and allowing the small amount of fluid contents that were present to escape into the peritoneal cavity.

*CASE II. Sarcoma of Stomach—Gastrectomy, Recovery.*

Transferred from medical side by Drs. Ward and Neuman. Mr. H. M., age, 55; Canadian by birth; blacksmith; residence, Turner's Falls, Mass.

Entered Albany Hospital January 1, 1902. Diagnosis, sarcoma of stomach. Operation, gastrectomy. Result, recovery.

*Family History.*—Parents' deaths occurred at advanced age—mother of "heavy cold"; father, of pneumonia. Sister and two brothers living and well. One brother died age 28 from inflammation of bowels; one brother age 35 from disease contracted from probably a horse-actinomycosis.

*Previous History.*—Uneventful with exception of pleurisy in 1873, occasional attacks of vomiting since 1877, and a hernia, which developed in 1883, for which he has since worn a truss. Uses tobacco very freely, also a pretty moderate amount of whiskey and beer. Is a hearty eater. Bowels always regular.

*Present Illness.*—Began October, 1900. Pain in epigastrium, more marked between 4 and 5 P. M., vomiting any time during day, and which usually relieved pain. Burning sensation after vomiting, with considerable eructation of gas. Appetite poor since onset of trouble. Vomitus tastes bitter and disagreeable. Bowels constipated; no bladder symptoms. Chilly sen-

sation occasionally at night; no cough, shortness of breath or night sweats. Has lost about 44 pounds, and much in strength. Spitting blood occasionally since pleurisy, more especially since present trouble began. Vision and hearing poor, but general sensations normal.

Examination revealed breathing harsh at apices, with prolonged expiration, heart dullness beginning above at upper border of fourth rib, limited externally by nipple line, internally by left sternal border, first sound at apex extremely loud, and second aortic sound exaggerated.

*Abdomen.*—Oval, symmetrical, respiratory movements transmitted; percussion note tympanic; tenderness in epigastrium; muscular resistance all over upper half of abdomen. Reflexes normal.

Gastro-intestinal anastomosis suggested, to which patient readily consented, being desirous of obtaining even temporary relief if possible.

*Operation,* January 4, 1902. Usual anæsthetic and incision. Entire stomach, which was quite movable, with exception of about an inch at cardiac extremity, found involved; also surrounding glands. Gastrectomy thought advisable and done.

Mesentery tied off with fine silk; stomach clamps applied, and after thoroughly walling off surrounding parts with tampons, stomach was excised at about 2 inches anteriorly, and 3 inches posteriorly from the cardiac end, just below the pylorus. Posterior and all involved glands thoroughly removed. Cut ends brought together, sutured with silk sutures, and all raw edges invaginated by peritoneum.

Wound closed in usual manner, one vaginal iodoform gauze left in for drainage, and standard dressing. Anæsthetic well taken, and operation lasted one and one-half hours.

After operation patient at times was restless, weak, highest temperature  $102^{\circ}$ , pulse 126, but he responded well to treatment, and went on to uneventful, complete recovery, the only complication being delirium for a short time after the tenth day, and a stitch-hole abscess. After treatment consisted in giving nothing by the mouth for 48 hours, although he was occasionally allowed to rinse out his mouth with hot water. At the end of 48 hours the dressings were removed and found somewhat stained from drainage from peritoneal cavity. Part of iodoform gauze drainage removed, and the balance at the end of fifth day. No unusual treatment called for.

Pathological report by Dr. Blumer was as follows: Anatomical diagnosis, carcinoma of stomach in region of pylorus.

Microscopical diagnosis, round-celled sarcoma of stomach with metastases to neighboring lymph glands.

Dr. Houle, the attending physician, has kept me well posted regarding Mr. M.'s progress, and patient presented for exhibition at the meeting of the American Surgical Association, Albany, N. Y., June 4th, with the following history: Appetite excellent; bowels in good condition; wound thoroughly healed; patient able to eat any kind of food, and in increased quantity. He has gained over 30 pounds in weight.

*September 13th* his physician stated that on August 1st Mr. M. had purchased a blacksmith shop; is able to work at the anvil, and apparently in full health.

REMARKS.—The rarity of this operation impresses itself upon one who is doing much abdominal surgery. Very few cases present in which the operation of gastrectomy can be performed. Partial resections are not infrequent; gastro-intestinal anastomosis by no means uncommon, and a very satisfactory operation.

My first case presented the most serious complications in regard to the disease extending up to and implicating the diaphragm, and were I to operate in another similar instance I would certainly close the duodenum, bring up a fold of the jejunum, and attach it to the under surface of the diaphragm, including the œsophagus, and not attempt the use of the Murphy button, thus relieving the patient from any strain. Undoubtedly it was this traction that caused her the severe pain in the back and the difficulty in breathing, the parts dragging upon the diaphragm, ultimately separating it from its attachment to the friable portion of the œsophagus. It is a question whether the sudden start from her sleep did not have some bearing upon the action of the diaphragm, causing loosening before adhesions had taken place.

The second case is very remarkable regarding the complete recovery the patient has made, and in the great amount of comfort attained, not only in his ability to attend to his work again, but in his pleasure in the variety of diet he is able to assimilate. His increased nutrition illustrates the fact that the stomach can be removed and the remaining portion of the intestinal tract perform the necessary functions.

## THE SUBCUTANEOUS INJECTION OF PARAFFIN FOR THE CORRECTION OF DEFORMITIES, WITH REPORT OF CASES.\*

By JUNIUS F. LYNCH, M. D., Norfolk, Va.,

Ex-President Seaboard Medical Association of Virginia and North Carolina; Member of Staff St. Vincent's Hospital, etc.

My attention was called to this subject over a year ago by a short account of an operation that had been performed by Gersunoy. At that time I had a patient with a typical "saddle nose," who was anxious to have the deformity corrected, but who had not the time to have an elaborate surgical operation performed. I treated him with the paraffin injection on August 12, 1901, and this case was reported in the September 13, 1901, number of the *Virginia Medical Semi-Monthly*; therefore it is among the first, if not the first, operation of this kind performed in this country.

The subcutaneous injection of paraffin for the correction of deformities is now an assured fact in modern surgery—numbers of cases have been reported from all sections of the country, and I have yet to hear of a single one in which anything but good results have been obtained. Its use is by no means confined to the correction of the deformity known as "saddle nose," for gratifying results have been obtained from these injections for the relief of incontinence of feces following operations upon the rectum; it has been used successfully in cystocele and rectocele and in preventing the reunion of the ends of a resected nerve. For narrowing the inguinal canal it may be found useful in the treatment of hernia and for the relief of hollow cheeks and "bony" necks in ladies who would be plump.

With the exception of an injection for the relief of an unsightly depression following the removal of a cervical gland, my experience has been limited to its use for the correction of deformities of the nose, and in each case the result has been most gratifying to me and to the patient.

The paraffin used is the *soft* paraffin or white vaseline, and *not* the hard substance from which candles are made. It should have a melting point above 99° and below 104° F., for if it is too soft it will be taken up by the lymphatics, and if too hard necrosis will result. The preparation which I use has a melting point of 102°

F. and is prepared for me by Mr. W. R. Martin, of Norfolk.

The technique is very simple. The field of operation is prepared as for any other surgical procedure, and the instruments and paraffin thoroughly sterilized. I usually precede the paraffin injection by the injection of a few drops of a four per cent. solution of cocaine in order to make the operation painless. The melted paraffin is then drawn into the syringe and allowed to cool until it emerges from the needle as a worm-like mass; the needle should be inserted above the site of the depression, and as the injection is made the nose should be moulded to the shape desired. After the withdrawal of the needle an antiseptic collodion dressing over the puncture is all that is necessary. The reaction is very slight—usually a feeling of fullness and tension and tenderness of the nose for a day or two. No unsightly bandages are necessary, no time is lost from business, and in each of my cases the patient left the operating room and went immediately to work.

After a time the paraffin becomes encapsulated and of cartilaginous consistence. The injection is absolutely free from danger if properly done, and with the single exception of my first case, in which a small superficial area of necrosis resulted, I have had no trouble whatever. As a rule, only one injection is necessary, unless the tissues are hard and dense; then the injection of a very small quantity at a time will be necessary to prevent sloughing. In case 4 I made six injections before obtaining the desired result; the tissues were unusually hard, and would only permit of the injection of a very small quantity at a time.

All of my cases were due to traumatism; the same results, however, can be obtained in syphilitic deformities of the nose. In Cases 1 and 3 the profile is perfect, but from a front view the nose looks broad. This is because the base of the nose was so broad—on account of the lateral displacement of the bones—that it was impossible to secure any other result without injecting a very large quantity of paraffin and making an enormous nose. In Case 1 the deformity was due to a blow received on the nose when a child. Case 2 was due to a fall ten years before. Case 3 was due to a fall from a third story window thirteen years before the operation. Case 4 was due to a blow from a baseball bat five or six years ago.

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.



*Case I.*



*Case III.*



## CLIMATIC AND ELECTRIC PECULIARITIES OF COLORADO FAVORING RECOVERY IN PULMONARY AND OTHER DISEASES.\*

By J. E. MacNELL, M. D., Denver, Colorado.

In considering the subject indicated by the title of this paper, the assumption is a plausible one that the large majority of the membership of the Mississippi Valley Medical Association have never familiarized themselves with the physical characteristics and climatic conditions existing in Colorado by personal observation or experience. While much has been written on the subject, and may be learned from study, the time and attention of the large majority of physicians at a distance is too closely occupied by the demands of their local practice to admit of careful study in this direction. It is therefore with the desire to add somewhat to their interest and information regarding the health giving and health restoring advantages of the Centennial State that I appear before you, and with no desire to make any comparisons or statements prejudicial to any other State or locality. Nor is it my purpose to treat the subject as much from a scientific or theoretical standpoint as to state well attested facts calling the attention of medical men, and of all who may be interested, to a State possessing so varied and abundant advantages for all classes and conditions of men, whether in the fullest enjoyment of health or seeking it.

A residence of nearly two decades in Colorado, coming from about sea level, Chicago, where I had resided for a quarter of a century, and had become broken in health and spirits—has year by year added to my convictions that in a large proportion of human ills far greater hope can be held out for complete recovery, and far better results obtained, than in the lower altitudes approximating sea level or in localities contiguous to large bodies of water, resulting in increased humidity, and often to unavoidable malarial and other health detracting influences.

### *Physical Characteristics of Colorado Affecting Its Climate.*

Colorado is an empire by itself. One of the six largest of the forty-five States, with an area of nearly 104,000 square miles. It extends 380 miles east and west and 280 miles north and south. To the north lies Wyoming, to the

south New Mexico, to the east Kansas and Nebraska, and to the west Utah. It includes a territory equal in area to all the New England States, plus Ohio or Illinois—or nearly equal to New York, Pennsylvania, New Jersey and Delaware—or equal to England, Ireland, Scotland and Wales. Of this area about one-fifth to the eastward from Denver, Colorado Springs, Pueblo, Trinidad, Ft. Collins and Greeley, or about 40,000 square miles, is an immense plain, comparatively level and sparsely timbered, while some 60,000 square miles to the westward is largely mountainous, comprising many mountain ranges traversing the State in a general direction from north to south. Included in the mountainous portion are four great systems of natural parks, with an elevation varying from 7,000 to 9,000 feet above sea level. Commencing at the northern portion of the State at 41° north latitude, comes North Park, with an area of 2,500 square miles, or twice that of Rhode Island. It is 75 miles in length by 50 miles in width, with an altitude of 9,000 feet, while the mountain ranges environing it rise from 4,000 to 5,000 feet still higher. In no other portion of the globe is there a more perfect paradise for the hunter, while the many streams winding their way through this great plateau are the homes of myriads of fish.

Next to the southward, and separated from North Park by a mountain range, comes Middle Park, with about the same dimensions and area as the former, and quite similar thereto in many of its physical characteristics. Within this area lies the famed Grand Lake, one of the most beautiful of inland lakes on the continent, and the largest in Colorado. In its centre and covering an area of about a mile square the lake is apparently bottomless, the deepest soundings ever made failing to reach bottom. But ten miles away are located the still more famous Hot Sulphur Springs, six in number, in which the waters boil up from the base of a cliff at a temperature of 117°, and for drinking and bathing possess remarkable virtues in diseases of the liver, kidneys and skin, and in dyspepsia, rheumatism and allied diseases.

To the southward from Middle Park, and separated therefrom by the great Snowy Range, comes the beautiful South Park, some 50 miles in length by 20 to 30 miles in width, with an area of about 1,000 square miles. This lies about 75 miles southwest from Denver, and comprises the area in which was first discovered

\*Read before the Mississippi Valley Medical Association at its twenty-eighth annual meeting, at Kansas City, Mo., October 15-17, 1902.



the rich mines that in the early days made Colorado famous. Here also are found mineral springs in various localities possessing waters of well known medicinal virtues. Its average elevation is 9,000 feet. Some 50 miles farther to the southward and separated by several mountain ranges lies the largest of all these magnificent mountain amphitheatres, known as San Luis Park, with an area of some 10,000 or more square miles. It is elliptical in form and some 100 or more miles in length by 60 in width, and comprises the famous agricultural region of southern Colorado. It is bisected by the great river, Rio Grande del Norte. It also contains a beautiful lake 30 miles in length, and which has no known outlet, although fed by some 18 or 20 streams.

Within its borders are 17 mountain peaks at very equal distances each from the other, the loftiest being Sierra Blanca, standing alone in its magnificence and grandeur, crowned with perpetual snow and rearing its towering head 14,483 feet above sea level, or 336 feet higher than Pike's Peak. The average elevation of San Luis Park is 7,500 feet, and is surrounded by mountains 4,000 to 7,000 feet higher than the plain, which is remarkably level.

Traversing this magnificent plateau of fabulous beauty and resources, nearly through its entire length passes one of the great arteries of Colorado's world-famous scenic railway system—the Denver and Rio Grande, which here presents one of its many remarkable features in railway construction, being a direct tangent 52 miles in length and without cut or fill during its entire length, and this at an elevation of 7,500 feet above sea level.

The lands in all these great parks are rich in nutritious grasses and wonderfully productive in grains, vegetables and fruits of all kinds wherever cultivated.

Those who imagine there are no lakes in Colorado will be surprised to learn that this mountainous area alone contains a thousand or more, besides over 250 rivers and many more smaller streams, that are mostly fed by melting snows that are stored in the mountains thousands of feet above until such time as the moisture is needed below. Truly a wise provision of nature.

Within this area is also stored Colorado's vast and incalculable mineral riches—inexhaustible in extent for many generations to come, secure in their nature encased vaults until the enterprise

and genius of man shall discover and utilize them—gold, silver, iron, lead, copper, coal, petroleum, marble, granite, etc., towards the discovery, exploration and recovery of which scarcely a beginning has yet been made. Centuries will be required to explore their boundaries and values and reveal to the world the incalculable riches of the Centennial State.

It can therefore be readily understood that in this wonderful variety of climatic conditions arising from the differing altitudes of mountain and valley, in the course and direction of its unnumbered mountain ranges, its proximate and remote mountain streams, lakes and water courses, its innumerable resorts at various altitudes more or less protected at any and all seasons of the year from the heat of summer and the rigors of winter, its 300 days out of the 365 each year of sunshine and cloudless skies, its entire freedom from malarial influences, advantages and conditions prevail that cannot be improved upon in any other State or country, conducive to health or to recovery from diseased conditions.

The atmospheric conditions at all seasons of the year are such that by careful study of the requirements of the patient, localities may easily be reached that will afford the best possible opportunities for recovery.

Within this great mountainous area of nearly 300 miles north and south by 200 miles east and west, are nearly 150 snow capped mountain peaks ranging from 13,500 to nearly 14,500 feet in height—72 of them being unnamed and 25 being loftier than the famed Pike's Peak. Within this area are also many valleys of almost winterless temperatures. The same altitudes at different places afford climatic conditions differing entirely, owing to variations in the trend of the valleys in which they lie and to their exposure to winds and to the sun's rays. The ever constant and important conditions of sunshine, dry air and blue sky common to all habitable portions of the State form its basic health restoring and sustaining qualities equally advantageous to the sick and to the well.

#### *Mineral Springs.*

As the world's greatest storehouse of minerals of every description, this immense area of geological and chemical wonders would be strangely incomplete without mineral springs of every known variety, and such it possesses in large and varied measure.

Diseases that often defy scientific treatment readily yield to nature's remedies epitomized in waters flowing fresh from God's unseen and fathomless fountains, possessing healing properties beyond the skill of man to duplicate. Chemical analysis and scientific comparison show that within this great area of phenomenal riches and resources, the waters that are famed for their medicinal virtues found in any other portion of America or in Germany, Austria, France or Switzerland are all duplicated, and that springs here exist that must eventually be known to the ends of the earth for their medicinal properties, thus again adding to the renown of the Centennial State and making it a Mecca to which pilgrimages will be made by countless numbers for the benefit of waters that shall stand for the "healing of the nation."

*Some Generally Accepted Facts Regarding Mountain Climates Applicable to Colorado.*

After all the discussions that have been indulged in regarding the relative advantages of mountain climates as compared with altitudes approaching sea level, as health restorers in many diseased conditions, and as health promoters where no serious abnormal conditions exist, certain accepted facts stand out prominently that must at once appeal most forcibly to all physicians as conditions of decided advantage in favor of high altitudes.

Elevations of 5,000 feet and more above sea level may be regarded as mountain climates. Common to all such elevations, varying with local conditions, may be mentioned—

1. Pure air, with relative freedom from noxious gases and from irritating substances floating therein, as dust, etc.
2. Diminished atmospheric density.
3. Reduction in temperature.
4. Diminished humidity.
5. Powerful insolation as regards fresh heat and light.

It would hardly seem necessary at this time to emphasize the fact, so generally understood and accepted, as to the relative purity of the atmosphere in mountainous regions, usually sparsely inhabited, as compared with the atmosphere of lower altitudes pregnant with organic and inorganic forms of various deleterious substances that so abundantly thrive where the conditions are so favorable for their growth and existence in more humid atmospheres, in thickly settled localities, with inefficient drainage and

surroundings favorable to the generation of deleterious gases, from decomposing substances, animal and vegetable, and to malarial and miasmatic influences.

Atmospheric density diminishes as we rise above sea level in a ratio varying from 12 per cent. at 2,500 feet, to about 25 per cent. at 7,500 feet.

The diminution in temperature as we ascend above sea level amounts to about one degree for every 300 feet of elevation.

The diminished absolute humidity of the higher altitudes, especially noticeable in Colorado along the entire foothill region on the eastern slope of the Rocky Mountains, is doubtless increased by the presence of a quickly absorbing and drying soil, and the absence of frequent and prolonged rainfall. Also in the higher altitudes the sun's rays being more direct and powerful and of longer duration, forms a factor of great importance both to the invalid and also to those who are not to be included in this class.

Along this entire sun-kissed eastern Rocky Mountain slope of Colorado, extending for 400 miles north and south, the sun shines brightly about 52 hours out of every possible 100, while along the Atlantic coast it averages less than 50, while there the sun's rays are also lessened in force and directness and largely counteracted much of the time by clouds, fogs, mists and dense humidity, which in Colorado are for the most part unknown quantities and conditions.

During the winter months the contrast is still greater. In Colorado we have from December to March 50 per cent. of all possible sunshine, while along the Atlantic coast the average is but 37 per cent., thus showing a vast advantage in favor of the higher altitudes of Colorado.

Taking periods of 10 years in Denver as compared with the same in more eastern cities at about sea level, we have an average of 314 clear or partly clear days, while in Chicago the average is but 251 days, and in New York city 262 days. Such figures as these speak for themselves, and need no further comment.

Of incalculable advantage also is the early morning sunlight throughout this entire eastern portion of Colorado, as also very generally throughout the more mountainous portions, with its warmth and brilliancy as cheering as it also is beneficial in the early part of the day, either to the invalid in hastening recovery or to those in health in sustaining and prolonging life. It is to be noted that the purity of the

air depends largely upon the amount and intensity of the sunlight passing through it.

*Value of High Altitudes With Their Rarefied Air and Direct Sunlight in the Treatment of Abnormal Conditions.*

It would be difficult to name any disease or abnormal condition in the treatment of which a pure, aseptic, rarefied, clear, stimulating, sunny, dry atmosphere is not an inexorable requisite in accomplishing the best results. Medicinal remedies may or may not be demanded, but pure air and pure water—nature's sovereign remedies—must not be forgotten or denied. Wherever these can be found is where the sick or the well best thrive, and where the percentages of longevity will increase the most rapidly.

The researches and observations of climatologists of high standing in the profession and in the confidence of physicians the world over, who have for many years past made careful study of the relative advantages of high altitudes as compared with those approaching sea level almost without exception, as regarding pulmonary diseases or tendencies in this direction within the possible curative spaces, give the preference to the higher altitudes.

Dr. Charles Dennison, of Denver, and Dr. S. E. Solly, of Colorado Springs, who have made careful observations during 25 years or more past as their large opportunities have afforded, together with many physicians of the State and elsewhere, less widely known, may be mentioned in this connection—as also Drs. C. T. Williams, Herman Webber and H. H. Walsh, of London; Drs. Jaccoud and Jourdanet, of Paris; the late Dr. Carl Rudei, formerly of Denver and later of Davos Platz, Switzerland; Dr. Archibald Smith, of the Peruvian Andes, and others of note—all men of eminence and of large experience and observation in the treatment of pulmonary diseases—are a unit in ascribing the best possible attainable results to the higher mountainous altitudes.

*Electric Conditions of Colorado.*

While physicians of intelligence and wide experience in the practice of their profession in Colorado are convinced that in the realm of electric influence a far more potent and beneficial factor exists in the higher altitudes favoring sustenance of the vital powers and recovery in many abnormal conditions than exists in the altitudes nearer sea level, yet they also recognize the fact that our present knowledge regarding

this force existing subjectively in individual cases is not sufficiently advanced to enable us to measure, fully describe, or define it with accuracy, and the subject is here mentioned with the hope that the members of this Association may interest themselves in further investigation with the view to the possible removal of the cause, operation and effect of such important phenomena from the domain of present speculative theory.

A thorough and analytical discussion of the influence of the sun upon our earth and its living organisms would occupy a field too wide for the limits of the present paper.

The peculiar power of the solar rays in its creative and hygienic effects upon animal and vegetable life deserves a high place in scientific investigation. Throughout the entire solar system the sun diffuses heat, light and certain force yet imperfectly understood, and may perhaps be the dynamic generator of the electricity of the world. Heat, light, and that other power, which for convenience we may call electricity, beget something like a chemical agency, the most powerful and subtle in its creative and metamorphic results within the realm of human observation and science.

The sun may well be regarded, from a purely scientific standpoint, as the source of life, since all material forms of life, both animal and vegetable, could not exist without it. Hence as the creator and preserver of life, no wonder the ancients worshipped the sun—the most natural and rational of all primitive theogony.

True, there are certain classes of life, animal and vegetable, which seem to generate and thrive best in the environment of damp and darkness. They are the most useless and pestiferous sort, the lowest classes. Vegetable forms of fungoid nature, for example, and classes of insects of multitudinous and almost spontaneous breeding faculties, but short lived, come into being away from sunlight. And with such genera we may class the microbial and parasitic forms of life. But it is remarkable that the sun is the enemy and great destroyer of these lower forms of insectivora, fungi, sporadic and microscopic malfere.

While on the one hand the sun is the greatest germinating agency in nature, on the other hand it is the great universal antiseptic and germicidal agency in nature's economy.

It is familiar household knowledge that the best way to render wholesome such things as

clothing, bedding, carpets, etc., is to hang or spread them out in the sun.

How can a poisonous swamp be best remedied? By draining it and letting the sun consume the malarious and miasmatic elements. Nothing is so cheap and quickly efficacious an agent in this regard as the solvent, deodorizing, disinfecting and vermin destroying influence of clear sunlight and air—especially dry air.

The sun is the great scavenger of the earth. From the earliest travel across the plains and mountains between the Missouri river and the Pacific coast, no fact of common observation was more striking than the rapidity with which carcasses of animals dying along the routes were dried up and dissipated by the sun of the high and arid altitudes, with little or no putrefaction. Indeed, Indians and Mexicans throughout this entire region, from time immemorial, have cured their fresh meats by cutting it into strips and hanging it up unsalted in the sun, like clothes on a line.

The most primitive peoples of whom we have knowledge in history or tradition, were not only familiar with the healing virtues of sunlight, but for this reason, as I have already mentioned, made the sun their chief god. Osiris, the sun, was the god of the cultivated Egyptians, and under various names was the chief deity of the other leading Oriental races, as well as the god also of the Montezumas, their pyramid building prototypes of the American occident. And even the Hebrew poets of the Bible were so permeated with the ideas of the so-called "heathen"—derived from their former Egyptian masters—that they could not avoid incorporating these ideas into their sacred literature, as witness that beautiful passage of Oriental speech which figures their own God as the "Sun of Righteousness, which arises with *healing in His wings.*"

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## NECROSIS OF THE TIBIA AS A RESULT OF TYPHOID FEVER.\*

By JOHN W. SHAW, M. D., Washington, D. C.

The rarer surgical complications and sequelae of typhoid fever are touched upon so lightly in most of our text-books, and in some not at all, that it is hoped an account of the case of periostitis of the shin-bone, followed by necrosis, coming under the personal observation of the writer, may prove of interest to the Society.

Dr. W. W. Keen, on the "*Surgical Complications and sequels of Fevers,*" was able to collect only fifty cases of necrosis proper, and three cases of periostitis, following the continued fevers.

Sir James Paget mentions only two cases of periostitis of both shin-bones occurring in the same person.

Keen's later classification of some two hundred and thirty cases is as follows: Necrosis, 85 cases; periostitis, 110; caries, 13; osteitis, 12; osteomyelitis, 10; exostosis, 1; granuloma, 2; uncertain, 4.

The affection presents itself during convalescence, rarely during the course of the disease, and usually between the third and fourth month, sometimes as late as years.

As to the cause, there is no doubt about bacterial infection holding that honor. One author states that in 51 cases, pyogenic bacteria were found in 13 cases; the remaining 38 contained typhoid bacillus often in pure culture. I believe the exciting cause is due to slight trauma, such as might occur during delirium or careless handling of the bed-pan. Keen explains it by saying that patients resume their avocation at too early a period following their attack of typhoid, and according to him the necrosis which follows is the result of too early strain upon the parts, the nutrition of which is enfeebled by disease. The above, however, would not explain the few cases which have occurred before convalescence was established.

Ollier urges as the pathogenesis of the affection, the exceedingly rapid growth of the bone, which is exaggerated in young persons by prolonged rest.

Brissac also demonstrated the relation between rapid growth and typhoid ositis.

Others say it is due to thrombosis, and in some cases possibly embolism.

\* Read before the Medical and Surgical Society of the District of Columbia, October, 1902.

Mercier insists upon the benignity of these affections.

The tibia is mentioned as the bone most frequently attacked—next in order coming, bones of the head; then possibly the ribs and costal cartilages, femur, humerus, ulna, etc.

Concerning treatment, there seems to be a diversity of opinion also.

Paget says: "The disease tends toward self-limitation and spontaneous cure; operative treatment is not indicated. The constitutional symptoms characteristic of acute necrosis are wanting."

Muttart, of Philadelphia, reports several cases, one of which was a man aged 50 years, who had necrosis of several ribs. He was operated upon by the late Dr. S. D. Gross without checking the necrotic process, and a few months later Dr. Thomas also everted without success. The patient afterwards presented himself at the Howard Hospital for treatment, and after several additional operations finally recovered.

Another case by Muttart, in which the lower third of the femur was involved, it was necessary to remove dead bone after several evertings had been performed; so that it would seem, this disease may vary from an affection of the slightest superficial area, to the destruction of the entire bone.

To me the case I am about to report seems unusual on account of the number and severity of relapses of typhoid; and the fact that both shin-bones were affected at the same time, and the stubbornness with which the necrotic process resisted all treatment.

*Case.*—One year ago last July, Miss Clara H., age 23, contracted a severe case of typhoid fever, lasting over eight weeks. In September she had a relapse, continuing over another eight weeks, during which time the temperature ranged extremely high— $106^{\circ}$  to  $107^{\circ}$ —accompanied by almost constant delirium.

In December, about twelve weeks from the beginning of the second attack, she again came down with another relapse, which was more mild, and lasted only about five weeks. In February, while convalescing from the third attack, the bone lesions first presented themselves in the shape of three small red spots, one each on the upper and middle, and one on the lower third of the tibia of the left leg.

A week later, another spot made its appearance over the middle of the right tibia. Shortly after this the presence of pus was detected, and

Dr. W. P. Carr was called. He advised free incisions and a bichloride of mercury wash. The wounds healed rather rapidly, but left small sinuses at the points of appearance of the first spots. I then made very free incisions, and, as I thought, everted each abscess thoroughly. After this operation the process of repair was slow; but after two months all the wounds closed, leaving no sinuses. She was then sent to Atlantic City to recuperate, and being there two months and gaining twenty pounds, the trouble broke out afresh.

Dr. Senseman was consulted, and after evertting three times without benefit, he opened the medullary canal and removed a generous portion of the tibia. This was done only three weeks ago, and later reports indicate that in all probability amputation of the right leg will be necessary.

1453 Rhode Island Ave., N. W.

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### DIAGNOSTIC POINTS OF DIFFERENCE BETWEEN SPERMATORRHOEA AND SEMINAL POLLUTIONS.\*

By F. R. STURGIS, M. D., New York City, N. Y.

When your excellent President invited me to read a paper before your Association, it struck me that one calling attention to the diagnostic points of difference between spermatorrhœa and seminal pollutions would be of interest—first, because this is a class of diseases which has been comparatively little worked over; indeed, has been rather slighted by the medical profession; and, second, because I have noticed in reading over the literature of the subject, which appears in medical journals, that there seems to be a confusion in the minds of medical men as to the nature of these two diseases. With the majority of doctors the two diseases seem to be convertible terms, and practically the same. This, in my opinion, is decidedly wrong, and in consequence of this confusion the treatment of this class of diseases is uncertain and happy-go-lucky, being rather empirical than based upon sound, scientific knowledge.

In this paper I shall not attempt to present a natural history of these two diseases, except in

\*Read at the twenty-eighth annual meeting of the Mississippi Valley Medical Association, Kansas City, Mo.

so far as it may be necessary to elucidate the points which I wish to make, and these points I shall lay down as follows:

*First.* Spermatorrhœa is a disease *sui generis*.

*Second.* Spermatorrhœa has nothing in common with pollutions.

*Third.* Spermatorrhœa does not usually lead to impotence.

*Fourth.* Pollutions may or may not be associated with spermatorrhœa.

*Fifth.* Pollutions are liable to lead to impotence.

For the purposes of this paper I shall not, of course, under pollutions, include the nocturnal variety, or what is vulgarly termed "wet dreams," but shall confine myself to a consideration of the diurnal forms of this type of the disease, where the losses are constant and where the results are much more serious than they are in the nocturnal variety.

1. *Spermatorrhœa is a disease sui generis and has nothing in common with pollutions.* In this class of sexual diseases the symptoms are so distinct that when its natural history is studied it will be noted that the seminal loss which occurs is not constant. It occurs occasionally and under certain conditions, and those conditions are chiefly of the class which require some strong muscular or expulsive effort to produce the loss; thus severe coughing, sneezing, straining—as at stool, or during the expulsive efforts in urination—as well as the effort made in lifting heavy objects, where the abdominal muscles are tense while respiration is suspended, are the usual conditions under which the seminal loss occurs, and it is associated, but not constantly so, with a sense of smarting and burning in the deep urethra. The patient is then aware that fluid is running along the course of his urethra, and this sensation is associated with a distinct feeling of depression, so marked that, as patients have expressed it to me, they feel as though they had been "let down." This depression is not only mental but also physical, and may last anywhere from fifteen minutes to two or three hours before the patient entirely recovers his normal tone. At the end of this time the patient has entirely recovered from his attack, and feels practically as well as ever, having no sensation of mental depression or physical fatigue, nor any of the symptoms which would be grouped under the generic name of neurasthenia. This is one of the commonest

of the causes which produce spermatorrhœa; but it may also be caused at times by constipation, which induces the seminal loss, not, as has been supposed, because the hardened feces press upon the ejaculatory ducts or upon the vesiculae seminales, but because the fixation of the abdominal muscles, as well as the muscular effort necessary to expel the contents of the bowels, strip the seminal vesicles much as a sponge is squeezed of the water which it may contain. But, oddly enough, the opposite condition may obtain and seminal losses may ensue with an attack of diarrhœa, especially of that type known as "nervous diarrhœa," but only where an irritation of the deeper portion of the canal is present.

Now let us turn to pollutions and see what occurs in this type of disease. *Here the seminal loss occurs without any effort whatever.* It is purely a passive condition, increased, of course, if violent expulsive efforts are made; but in the more advanced type of the disease this is frequently absent, and the loss is a steady, continuous one, the seminal fluid leaking and dribbling from the patient without any effort upon his part; the sensation of the urethral smarting or burning may or may not be present; if it is present, it is continuous and not occasional, and the patient's entire urethra feels sore and tender; there is a continuous irritation throughout the canal. At stool, during seminal pollutions, there is no special increase in the loss; indeed, it is sometimes absent, but at the end of the act of defecation a gush of fluid may ensue, varying from several drops to a teaspoonful, unattended with any pleasurable sensation, and hardly recognizable by the patient, so far as subjective symptoms are concerned. Indeed, this may only be noticed by the patient at the end of his stool, when he finds that his underclothing is wet from the secretion which has escaped from his urethra.

Now let us mark the difference which occurs in the two diseases during micturition. In spermatorrhœa the seminal loss occurs toward the end of urination, when the last expulsive efforts are made to eject the few drops of urine that remain in the canal. In seminal pollutions, on the other hand, the expulsive power is found almost completely lost, and the patient is totally unable to expel the last few drops of urine, which leak away either accompanied with or followed by a seminal loss. Indeed, the difference between the tonic and atonic symptoms

in these two diseases is particularly well marked.

As regards the subjective symptoms in these two classes of disease, the patient afflicted with spermatorrhœa is not neurasthenic nor hypochondriac. He is, as a rule, cheerful, physically capable and mentally sound. It is true he is somewhat upset by the thought that he is losing his semen, but it does not depress him to the same degree as it does the unfortunate victim of seminal pollutions. He is interested in the daily affairs of life; he attends to his business matters with promptness and efficiency, and he is, taking it all the way round, still a man.

The unfortunate pollutionist\* is the opposite. He is depressed mentally and physically; he is unable to make out any prolonged or sustained effort, whether the same be corporal or mental; he is easily fatigued; he is constantly worrying about himself, regarding himself somewhat in the light of the Peri expelled from paradise. For him, truly, there seems to be no hope, certainly not in this world, and as for the future, he is either exceedingly doubtful or indifferent. In other words, he is a wreck, certainly not a man, for he is deprived of all that makes a man; he has no will power and no force. In this regard the distinction between these two classes of patients is well marked. In one other point there is an exceedingly great difference between these two diseases.

2. *Spermatorrhœa does not usually lead to impotence, while pollutions are liable to.* In regard to sexual potency and the capacity for coitus, the *spermatorrhœic* is capable of coitus. In the lighter forms of the disease his copulative powers are practically unimpaired; possibly the ejaculation may take place a little more rapidly than normally, and this is due to the inflammatory condition of his urethra and to a lack of tonic in the opening of the ejaculatory ducts. But taking everything into consideration, he is without doubt a man with virile sexual powers and enjoying the pleasures which coitus brings in probably as great a degree as formerly. In the more advanced types of the disease the patient's erections may, perhaps, not be so good. He may find that the *quadium coitus* is not as keen as it was before; he is not as eager for the fray, and he may notice, perhaps, that his ejaculation is a trifle too rapid and the duration and

amount of pleasure curtailed by the rapidity of the act; still he is capable of efficient coitus, and many a man suffering from this class of disease is a happy father. So far as the partner of his joys is interested, she probably notes very little, if any, difference between the past and the present, for few women, so far as this act is concerned, are very observant. It becomes with them a duty to be performed, and it is seldom that there is much pleasure attached to it, and, of course, the shorter the copulative act in the male the less the pleasure of the female, and the more perfunctory the act becomes on her part.

Now let us see what happens with the pollutionist. He, unlucky wretch, cannot get an erection, or if he does it is such a feeble, trifling affair as to hardly be dignified by the name of erection, and what makes his disease peculiarly aggravating is that while he has a flabby turgescence of the penis, in lieu of the normal erection, he has also more or less of the *libido sexualis*; *libido sine potestate*; he wants coitus, and cannot get it, for his *membrum virile* is of no use except for urinary purposes; and to cap the climax, the more the desire the greater the seminal loss. Thus the unfortunate is between the devil and the deep sea; he cannot perform his duties as a man or as a husband, yet he continually wishes to, and he feels that the more he wishes it the less capable he is of performing the duty. With this condition, very naturally, an intense melancholy ensues. The patient oftentimes can hardly behave himself decently. He is irritable, has no appetite, he cannot sleep—in fact, he is a wreck—a curse to himself, a trial to his wife, and a bore to his neighbors, who find it difficult oftentimes to put up with his vagaries.

Now, let us watch the *result as these two diseases progress*. The *spermatorrhœic* usually recovers, especially so if the form of his disease be that of defecation and not of urination. The urinary type of the disease is usually more obstinate and takes longer to recover from. The patient's condition does not end in impotence, or very rarely so, although, of course, it is quite possible that this disease may be associated with seminal pollutions; but then he is suffering from another disease, and not from his original one, when he goes through the various stages and presents the various symptoms which the pollutionist exhibits. Under these conditions he may become more or less impotent, but I am

\* I ask pardon for this word, as also for "spermatorrhœic."

perfectly satisfied, from a fairly extensive acquaintance with and observation of this type of patient, that this does not, as a rule, occur; with the pollutionist it unfortunately does; he becomes not only sexually but physically and mentally impotent. All around him is gloom, and he can see nothing before him but impotence writ large, and the verdict is: Thou art no longer man, but emuch. Is it a wonder, then, that he sometimes ends the tragedy or comedy of life, as you may choose to call it, by his own hand?

These are the main points of diagnostic differences which exist between the two diseases, and I believe you will agree with me that they are pretty clearly marked.

There are one or two points, perhaps, not directly connected with the subject, but still germane to it, upon which, before closing, I should like to make a few comments; and one is that a man may suffer from spermatorrhœa without being aware of it, but he never suffers from seminal pollutions without knowing it. Many a strong, healthy man, especially if continent, will pass spermatozoa in his urine, and since I have begun to study these forms of disease more carefully, I have been peculiarly struck with this fact. Occasionally patients may tell me that they had periods, where the head aches a little, and they have a feeling of depression for no earthly reason, or as they style it, the "blues"; they do not feel quite up to the mark, a condition for which they can offer no explanation, and they are not quite as ready with their work, or as bright in their wits when this occurs, as usual, and in getting them to send me a specimen of urine, when such a condition of affairs obtains, I have been surprised, more so in my earlier days than now, to find spermatozoa in the urine. Now the opposite obtains with the pollutionist. He is aware not only that he is not up to the mark, but that he is decidedly below par, and he stays there. He does not recover as the other man does, and he notices, moreover, that his virile powers are not good, that his erections are flabby, and that the slightest friction of his genitals against his clothing, or the slightest sexual thought will produce a flabby erection, with some leaking of what he believes is semen, and nine times out of ten it is a seminal loss.

The other point to which I wish to call your attention is that the spermatorrhœic is subject to nocturnal emissions, as healthy men are, and

if the disease be slight his emissions are like those of other men. He wakes up immediately after or during the emission, and on finding out what the matter is he gives it no other thought than a feeling of regret that it should be another instance of "Love's labor lost." But the pollutionist does not have nocturnal emissions, in the correct sense of the term. True, he finds the evidence of a seminal loss upon his night clothing, in the shape of stiffened linen and other tell-tale marks, but it has not woken him up, or, if perchance he does wake, he finds he is having or has had his emission without any erection whatever, unless possibly there may be a very flabby and feeble attempt at one: and in the morning he rises without any erection to greet him. With him the penis is as quiet and dead as is the traditional Cæsar; whereas the spermatorrhœic rises with all the evidence of virility upon him, and rejoices to think that he is yet a man.

I know that with the number of papers before you time will not allow a further discussion of this subject, which is especially interesting to us all, and many points I have not touched upon, but I trust in the discussion which follows I may be able to supply many of the points which I have omitted, and which, perhaps, would more properly come out in the discussion than they would in the text of the paper.

16 West 32d Street.

## THE PROPER USE OF VAGINAL PESSARIES.\*

By J. WESLEY BOVEE, M. D., Washington, D. C.,  
Honorary Fellow Medical Society of Virginia, etc.

The use of vaginal pessaries is not of recent period only. We find references to the use of them early in the eighteenth century, and I have no doubt of their much earlier use.

There can be little doubt in the mind of any observing physician that their value has been remarkably overestimated, and that their application has been frightfully prolific of great physical injury, often directly leading to the necessity of dangerous surgical operations, to say nothing of the thousands of times they have rendered the temporary sufferings of women

\* Read at a meeting of the Medical and Surgical Society of the District of Columbia, May 1, 1902.



chronic. Numerous deaths from them are recorded.

In the early history of gynecology we find they were advocated by the leading lights of that branch of medical science, and every man to establish a reputation in his special work felt compelled to see some defects in all existing varieties of these instruments and to devise one to do away with these defects. In these latter days the pessary has become to be known as a passed fancy, an exploded idea, if you please, and operations have succeeded them as a fad. Now, the surgeon to become famous must, perhaps, labor and give forth a new operation that overcomes the shortcomings of those in the field before it, and which seemed quite satisfactory. Now, generally speaking, the use of the pessary is looked upon as a relic, and the user as a back number.

I am sorry to say I am one of these ancient in this respect, as I still use a great many pessaries. I do this with a full understanding that their employment in inflammatory disease of the uterine appendages or of the vaginal walls or uterine lower ligaments in most cases interdict their employment, as do severe pelvic floor lacerations, the presence of pelvic adhesions, of most pelvic tumors, etc.

Before these conditions were so well understood was the time of the greatest application of pessaries. Now that they are so well known, we have clearer ideas of the field, limited, 'tis true, for their use.

It is also true certain rules are necessary for their employment, even in proper cases. Instances are recorded in which they have been left in the vagina for as many as fifty-five years, and when found were outside the vaginal canal embedded in the vaginal roof (see J. F. Mackey, *Trans. Carolina Medical Ass'n*, 1888, page 125). Again they have, from too long use, been found to have become markedly corroded, or macerated in the vaginal secretions until the odor from them was in the highest degree offensive.

They may often become displaced, press upon tender structures, excite local inflammation, and do many unpleasant things if not properly adjusted. The reason for these early sequences is a failure to adjust the pessary to the patient, and a tendency to adjust the patient to the instrument. So that from the above it may be understood the instruments should first be properly applied and then should be carefully watch-

ed. At least once monthly it should be inspected, and even if nicely adjusted once in every one or three months it should be removed, cleansed and replaced after a few days. For ordinary use the smooth hard rubber instrument is the best. In fact, it is rarely advisable to use any other material for pessaries.

The conditions for which pessaries are applicable are chiefly in relaxation of the roof of the vagina with or without endometritis, subinvolution, metritis, or uterine displacements. We often find uterine retro-displacements due to general weakness of the individual. There can be no question but that in these cases, when symptoms are present requiring treatment, the application of a well fitting retroversion pessary with general treatment will usually effect a cure. In such cases it acts, as is always the case, as an adjuvant. That it permits an increased amount of exercise, which has not only a general action, but improvement of the uterine supports, is apparent. When this has progressed to a sufficient degree the pessary is no longer needed. Should endometritis or metritis accompany the displacement, little can be expected from treatment that leaves out a good position of the uterus for drainage. Curettage with the application of a pessary is indicated. Of course, metritis is not always relieved in this manner, as some cases never recover without hysterectomy. But this treatment should be first tried. Ofttimes the ligaments of the uterus are relaxed from patients being kept too long in bed on their backs following parturition. The uterus is very heavy, strains the ligaments supporting it, and, its circulation being interfered with, involution is slow and may be interrupted. The pessary here does good by supporting the uterus in a proper position, and thus facilitating other remedies and methods of causing a return to normal conditions.

Various forms of uterine displacements are subjected to surgical procedures, and in these operations is found another use for the pessary. In the Alexander-Adams and other round ligament shortening operations, the ventro suspension of the uterus or the shortening of the uterosacral ligaments and the plan of changing the site of attachment to the uterus of these ligaments as well as the anterior vaginal wall, all done for retro-displacement of the uterus, the auxilliary action of the retroversion pessary is often imperative.

To these may be added cases of injuries to the

pelvic fascia from parturition, in which operation cannot be advisably done. In such the use of the pessary must be invoked. As to the anteversion pessary, I have little use. The glass ball and soft rubber pessaries are never employed by me.

I have jotted down these few notes from my experience, and I hope they will assist some undecided ones in the use of vaginal pessaries.

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### LAMINECTOMY FOR FRACTURE—DISLOCATION OF FOURTH AND FIFTH CERVICAL VERTEBRAE.\*

By JOSEPH RILUS EASTMAN, M. D., Indianapolis, Ind.

In the case reported laminectomy was followed by improvement of motor and sensory conditions, but was unsuccessful so far as saving the life of the patient was concerned. Death occurred upon the nineteenth day.

The diagnosis of fracture dislocation in the cervical region unless an X-ray machine be at hand is not easy. Knowledge of the nature and severity of the traumatism furnishes little aid. The writer noted the case of a man who fell from a great height upon the back of his neck. There developed almost immediately total motor and sensory paralysis below the shoulder. This case proved to be one of simple severe trauma, with hemorrhage, and recovery was complete and prompt. Upon the other hand, a stalwart factory hand was playfully pushed backward by a comrade. He fell, striking the back of his head lightly against the floor. Death was almost instantaneous, and at the autopsy the writer found dislocation and extensive fracture of several vertebrae. In the majority of cases of severe injury to the cervical spine with paralysis, it will not be possible to make a diagnosis without operation. The operation per se is not dangerous, and the patient is not subjected to very grave additional conditions. As Mears has said, by repeated operations our knowledge will be increased both as regards diagnosis and the result of treatment.

Keen, by studying the localization of the functions of the segments of the spinal cord, has produced a table showing the extent of the

motor and sensory paralysis after injury in each segment. Such a table will undoubtedly furnish help in locating lesions; yet as Sonnenburg has shown, paralyses after fracture of the cervical vertebrae are extremely irregular in the way they appear and in their course. Even in cases in which death occurs in a short time after the accident the paralysis does not always come on immediately. On the other hand, paralysis may come on promptly, and the case go on to a complete recovery. Sonnenburg says that the recorded cases of late and gradual paralysis are due to the formation of a gradual dislocation or by the increase of a blood extravasation. It is to be remembered that the cervical canal is relatively large, and in the beginning a slight dislocation or extravasation may not cause any symptoms of compression. From these facts it appears that operation is the only means of securing an accurate diagnosis. Therefore a doubt as to the nature of a lesion should weigh in favor of rather than against the operation.

Riggs, of Birmingham, Ala., observed that to sit quietly by in the soft shadows of providence with these cases and allow them to run their course before relief by operation is attempted, is not in conformity with the teachings of modern and progressive surgery. Most surgeons will subscribe to the opinion of Riggs rather than to the rule of Lauenstein, which is to the effect that several weeks should elapse after the injury to allow nature unaided to attempt repair. As a general rule the persistent absence of the reflexes, especially of the knee jerk, is an evidence that there has been severe cross injury of the cord, but the absence of the knee jerk cannot be taken as proof that the cord has been completely destroyed.

Schede, Hammond and Phelps, Keen and Forbes, and others report cases which show that the suspension of the knee jerk does not always mean complete destruction of the cord in the segment.

If laminectomy is justifiable in the treatment of fractures elsewhere in the spine, it is justifiable in the neck. If the danger attending laminectomy is increased as we ascend the spine, the danger of leaving cases of fracture to unaided efforts of nature is likewise increased as we ascend the spine in the same or greater proportion. Replacement of the body of a dislocated vertebra by extension, counter-extension and manipulation is in the very nature of things very difficult to perform, and it is doubtful if

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\*Original abstract of article read before the Mississippi Valley Medical Association, held at Kansas City, Mo., October 15-17, 1902.

this method has any value whatever. There are several authentic reports of spontaneous reduction, but the writer has never heard of a successful reduction by extension and external manipulation. It is certain that very few cases have been benefited in this way. By operative means it is possible to reduce dislocation, as was shown in the case reported by Church and Eisendrath. In this case there was a fracture dislocation of the tenth and eleventh dorsal vertebrae, and the paralysis which existed disappeared at once. There is no reason why the same result might not be secured under similar conditions in the neck. There is little doubt but that cases of fracture of the spine even in the neck will be operated upon more frequently in the future than in the past, in view of the utter hopelessness of so-called conservative treatment. It is little better than culpable neglect to omit operation in cases of fracture involving the spinous processes and laminae only. The procedure in such cases is just as warrantable as operation for depressed fracture of the skull. Injuries due to direct trauma are apt to be of this character. Sudden forced flexion of the spine is usually the cause of dislocation and fracture of the bodies of the vertebrae.

Laminectomy for fracture or dislocation should be made early. The earlier the better. The longer the pressure has existed the more extensive the degeneration of the core. Still hope need not be entirely abandoned in old cases, for laminectomy has relieved many such even after months had elapsed since the injury was received.

To sum up, laminectomy is per se not dangerous. It represents the surest method of diagnosis of fracture and dislocation, and the most rational and efficient means of relief.

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### Medical Herbs of Southwest Kansas.

Dr. W. S. Newlon, Oswego, Kan., in a paper read before the Mississippi Valley Medical Association, October 16, 1902, named 235 officinal and domestic indigenous and exotic medical herbs which grow in the soil of southwest Kansas. The list is alphabetically arranged as to technical or botanical names—their synonyms being added after the names.

## Analyses, Selections, Etc.

### Ureter-Catheterism: Its Purposes and Practicability.

At the meeting of the Mississippi Valley Medical Association, at Kansas City, Mo., Oct. 15, 1902, Dr. Bransford Lewis, of St. Louis, read a paper under the above title, and presented his perfected model of catheterising cystoscope for male and female, which permits of catheterization of both ureters at the same sitting because of the new double-barrel arrangement of the ureter tubes. After the reading of the paper, a demonstration of double ureter-catheterism was made by Dr. Lewis before a number of members of the Association, the time required for getting both catheters into the ureters, after the introduction of the cystoscope into the bladder, being three or four seconds for each ureter. Local (cocaine) anesthesia was used; and very little discomfort was complained of by the patient during the procedure.

The essayist claimed for ureter-catheterism great advantages in respect to both diagnosis and treatment, and under these two divisions presented a schedule of the purpose of the procedure.

A number of cases were reported in which the clinical aspects of the subject appeared. Case 1 referred to a patient who had been advised to undergo operation for removal of three stones that were supposed to be lodged in the left ureter, the diagnosis being based on an X-ray photograph. Ureter catheterism showed the ureter to be absolutely void of any foreign material, and drainage gave perfectly clear and healthy urine from that side. Case 2 was one of persistent cystitis and infection of the urinary tract that was rebellious to various treatments applied by the reader for several months, and only responded satisfactorily after regular periodic irrigations of the infected left kidney pelvis had been carried out. These removed all foci of infection and restored the tract to health. It was mentioned that two other cases of urinary infections with prolonged history had behaved similarly, and had proved equally as amenable to the boric acid irrigations of the kidney pelvis. Cases of unilateral and of bilateral renal tuberculosis, in both male and female subjects, were mentioned, the definite diagnosis being made in each case without serious disturbance to the patients, and without subsequent increase

of irritation, etc. On the contrary, there was improvement in each case, following the washings with antiseptics that were also given. The question as to whether the air used for distending the bladder had any beneficial effect, analogous to that obtained from opening the peritoneum in tuberculous peritonitis, had come to the reader's mind. Several cases were mentioned in which there had been so much bleeding from the urinary tract that successful cystoscopy, or ureter catheterism, with the older lens instruments, by which the manipulations would have to be made through clear fluid in the bladder, would manifestly have been impossible; the fluid would have become clouded with blood so quickly that no view of the bladder or of the ureter openings could have been obtained. But this did not deter the writer from accomplishing both objects, as the blood flowed along the walls of the bladder, collecting in a small pool at the fundus, out of the way of the manipulations, the patient being in the elevated pelvic posture on his back. Catheterism of both ureters had been accomplished in each case of this kind in which it had been undertaken, and a means of appropriate medication without operation had been supplied also. The bearing of this method on pyo-nephrosis and peri-renal abscess, with respect to both diagnosis and treatment, was shown by illustrative cases. A description of the instrument and the technique of its use was given. General anesthesia had been abandoned and had been satisfactorily replaced by cocaine anesthesia, best secured by means of the writer's urethral tablet depositor and cocaine tablets made by the Scarle and Hereth Co. The ureter-cystoscope was being made by the Surgical Appliance M'fg Co., of Rochester, N. Y. It was mentioned that a table for the purpose of expediting and facilitating the procedure, was being developed under the author's supervision by the Willbrandt Surgical M'fg Co., of St. Louis. This table was intended to be adapted to other genito-urinary operative and office work also.

### The Criminal Responsibility of the Epileptic.

At the recent meeting of the Mississippi Valley Medical Association, Dr. John Pnnton, of Kansas City, Mo., read a paper on this subject. After a brief summary of historical data defining the line of demarcation between empiricism and scientific knowledge in reference to the study of epilepsy, the essayist claimed that the

modern conception of epilepsy was based upon the science of cerebral localization, and regarded it as a symptom of brain disease, while its continued presence tended toward mental deterioration.

The mental responsibility of the epileptic depends largely upon the extent to which the brain and its functions are impaired. The fallacy of the prevailing legal test when applied to epilepsy was then referred to, and criminal irresponsibility was claimed to be not incompatible with a true knowledge of right from wrong. Hence the criminal responsibility of the epileptic should be based upon the individual's power to control his actions. In dealing with the question of criminal responsibility, the essayist thought that much of its complexity would be removed if the criminal code proposed by Mr. Justice Stephens, of London, could be universally adopted in our courts of law. This was not only fair but just, and with its ruling every medical man could agree. It is as follows: "No act is a crime if the person who does it at the time when it is done is prevented—either by defective mental power or by any disease affecting his mind—from controlling his own conduct *unless the absence of the power to control has been produced by his own default.*" (See Clouston, *Mental Diseases*, page 428.) Epilepsy may be congenital or acquired; hence the importance of its etiology and the relation it bears to crime, for no one doubts that alcohol and syphilis become at times not only potent factors in its causation, but promotes the development of the homicidal acts so common to the epileptic. In all cases where murder has been committed by an epileptic, the law should be amended to allow of its holding the criminal epileptic under medical surveillance the rest of his life.

In this connection, careful discrimination should be made between punishment, on the one hand, and medical treatment on the other. No insane criminal epileptic should be punished unless his epilepsy was brought about by his own default; and even then his pitiable condition appeals to medicine rather than law for its proper adjudication.

As a remedy for the present unsatisfactory method of securing expert medical testimony, the question of mental responsibility of the epileptic should be decided by an impartial medical commission appointed by the court, which again may be referred to local, county or State

medical organizations to name its members, and their report returned prior to the trial, and wholly independent of the lawyers engaged in the case. Suitable compensation should be allowed by a fixed statutory law for such service.

In conclusion, the following deductions were offered:

1. That epilepsy is a symptom of some brain disease.
2. That its continual presence tends toward mental deterioration.
3. That the mental responsibility of the epileptic depends upon the extent to which the mind or self-control has been impaired by the epilepsy.
4. That the legal test of insanity is not sufficient, as mental responsibility is not incompatible with a knowledge of right from wrong.
5. That epileptics are to some degree at least responsible for criminal acts, more especially when the epilepsy is produced by their own default.
6. That criminal acts of epileptics appeal to medicine rather than law for their proper adjudication.
7. That in cases of murder, where epilepsy is proven, the law should be amended to allow of life commitment to an insane hospital, rather than to a penitentiary.
8. That the mental responsibility of the epileptic should be referred to a medical commission appointed by the court, which again may be referred to the local county or State medical organizations to name its members.
9. That a just and equitable recompense be legally allowed for such medical service.

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## Book Notices.

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**Diseases of the Stomach.** By JOHN C. HEMMETER, M. D., Philos. D., Professor in the Medical Department of the University of Maryland, etc. *With Many Original Illustrations, a Number of Which are in Colors, and a Lithograph Frontispiece. Third Enlarged and Revised Edition.* Philadelphia: P. Blakiston's Son & Co. 1902. Large 8vo. Pp. 894. Cloth. \$6 net.

The popularity—the general adoption of this work as the practitioner's consulting book—is shown by the demand of a *third* edition in about two years after the second was published. Doc-

tors in doubt about troubles of the stomach—whether as special pathology, diagnosis and treatment, or wishing to secure information as to questions of anatomy, physiology, chemical and microscopical examination of the stomach contents, or matters relating to dietetics, gastric surgery, etc., have learned to depend upon this great, invaluable work—content to feel that if no information can be derived from its pages, the facts desired have not been discovered or developed. The revisions of this edition consist chiefly in the rewriting of the section on gastric lipare, and the bringing together of such new material as can be compiled from recent medical journals, publications, etc. This book, so fully up to date, and so carefully written by an expert, who is able to review the experience of others as well as his own, is without a rival—so far as we are aware.

**Practical Diagnosis.** *Fifth Edition, Revised and Enlarged.* By HOBART AMORY HARE, M. D., B. Sc., Professor of Therapeutics in Jefferson Medical College of Philadelphia, etc. *Illustrated with 236 Engravings and 25 Plates.* Lea Brothers & Co., Philadelphia and New York. 1902. 8vo. Pp. 698. Cloth, \$5 net; half Morocco, \$6.50 net.

The fourth edition was published 1899. Since then many helps to diagnosis have been evolved. This book treats of the use of symptoms and physical signs in the diagnosis of disease, and the application of clinical tests, which experience has proved to be useful in arriving at a conclusion. When certain symptoms or signs point to a certain class of diseases, the items that relate to differential diagnosis are very generally brought out, and thus the practitioner is aided very greatly in arriving at certain knowledge. We confess that we have long been an admirer of this work, as it has oftentimes helped us greatly both as a practitioner and as a teacher of chemical medicine. Each edition has been an improvement on its predecessor. The introduction of so many engravings and illustrations assist materially in the study of the subject of diagnosis. If there be an omission, we might suggest that we have always recognized the value of a record sheet, fully prepared, of the patient's history, present conditions, etc., the study of which charts, when carefully filled out, serves as a most valuable help in the diagnosis of a disease. The present edition is neatly published, and attractively bound.

**Text Book on Histology and Microscopic Anatomy of the Human Body, Including Microscopic Technique.** By Dr. LADISLAUS SZYMONOWICZ, A. O. Professor of Histology and Embryology in the University of Lemberg. *Translated and Edited by JOHN BRUCE MACCALLUM, M. D., Johns Hopkins University, Baltimore. Illustrated with 277 Engravings, including 57 Plates in Colors and Monochrome.* Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. Svo. Pp. 435.

This is, for Americans, a new book, including the best results of recent investigations. Dr. MacCallum has made many additions in the text—including a brief description of the medulla and mid-brain by Dr. Florence R. Sabin. The American editor emphasizes the fact that "in many organs it is possible to recognize structural units, which are repeated in a definite way, and bound together by a characteristic frame work." He traces "as far as possible the development of the organs and the histogenesis of the tissues"—in the hope of drawing the attention of instructors and students "to the importance of viewing histology from this standpoint." The translation is easy reading, and as a proposed text-book for students, as well as practitioners, it is authoritative, original in many facts, and so helpful to the student reader in understanding the structure of parts and organs that it at once will assume the rank of the standard work for American students. The book is beautifully issued by the publishers—in typography and in binding. The illustrations are accurate, nicely colored, and unusually instructive in themselves.

**Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing and Med'cal Latin.** By WILLIAM SCHLEIF, Ph. G., M. D., Instructor in Pharmacy in the University of Pennsylvania, etc. *Second Edition. Revised and Enlarged.* One of *Lea's Series of Pocket Text-Books.* Edited by BERU H. GALLAUDET, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York, etc. Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. Large 12mo. Pp. 389.

To quote from the preface is to say our say of this "condensed yet comprehensive text-book and work of reference on Materia Medica, Therapeutics and a range of cognate subjects." Beside "the paragraphs covering the physical properties, physiological action, therapeutics and toxicology of each medicinal agent, chapters will be found on prescription writing, medical

Latin, medical pharmacy and practical anaesthesia. Tables of doses, of poisons and antidotes, and of incompatibilities, together with a therapeutic index of diseases and remedies, and a general index conclude the volume." "It contains in a concise, definite and assimilable form the essential knowledge required in the most complete college courses on Materia Medica and Therapeutics." Every claim made in this preface is verified by an examination of the book, as is proven by the early demand for this second edition.

**Skin and Venereal Diseases; Nervous and Mental Diseases.** Edited by W. L. BAUM, M. D., Professor of Skin and Venereal Diseases, Chicago Post-Graduate Medical School; HUGH T. PATRICK, M. D., Professor of Neurology in Chicago Polyclinic, Clinical Professor of Nervous Diseases in Northwestern University Medical College, with the Collaboration of CHARLES L. MIX, A. B., M. D., Professor of General Medicine in Post-Graduate Medical School of Chicago, etc. *Vol. X. (September, 1902), of the Practical Medical Series of Year Books Issued Monthly. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Rhinology and Laryngology, Chicago Post-Graduate Medical School, etc. Chicago: The Year Book, Publishers. 1902. Cloth. 12mo. Pp. 245. \$1.25. Price of the Series of Ten Volumes, Issued Monthly, \$7.50.*

This is an up-to-date book on the subjects of which it treats—so far as the advances of the past year or two are concerned. This Year Book Series of ten volumes a year presupposes that the subscriber has some standard text-book of recent publication on the subjects. So that this year book is simply to keep the reader thoroughly abreast with the times. The editors have shown good skill in eliminating the chaff from the wheat; hence what is published in this volume may be considered as reliable information on which practice may be based.

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## Editorial.

### What is the Practice of Medicine?

There is something radically wrong in the understanding of this expression. A year or so ago some osteopaths of this city were arrested for violation of the law which prevents one from the practice of medicine for fee or reward with-

out first subjecting himself to examination before the Medical Examining Board of Virginia. The judge of the Hustings Court of Richmond city released the parties from trial, as, according to his construction, osteopaths, faith cures, etc., are not practicing medicine in the sense of the law. A county or circuit judge in another part of the State rendered a like opinion.

The State Medical Examining Board of North Carolina some time ago indicted a certain notorious faith curer and osteopath in that State for not having license to practice medicine in that State. The North Carolina State Supreme Court, in October, 1902, rendered an opinion that a license to practice medicine cannot be required of practitioners of osteopathy. Judge Clark, in writing the opinion of the North Carolina Supreme Court, intimates that the State Legislature should recognize osteopathy, and enact a law regulating the issuance of license on an examination adapted to that method of treating diseases. Our information as to this item is received from the newspapers—not as yet from any official source.

It is plain, though singular, that doctors do not understand the nature of their own business from a legal standpoint. It would seem that the practitioner is better able to define his own duties than the jurist, but the judge says not. A party may argue his own case before the bench of a lower court, and the patient may prescribe for himself, even to his own good or detriment, without legal restraint. But when a fellow undertakes to prescribe for another for fee or reward, or hangs out his sign to indicate that he is in the business—some are liable to the law and some are not. Now, wherein is the difference? Under the law, the osteopath may prescribe his methods of treatment of spinal sclerosis, for instance, and practice the same, but he saves himself the trial of examination before a board of examiners, whereas the other doctor, whether of the regular or homeopathic school, has to undergo the ordeal. We know of such a case in our own community, and he is no more successful in treatment than the regular doctor or the doctor of the homeopathic school. The law undertakes to say that the osteopath, the faith healer, etc., are not amenable to the law simply because they do not prescribe or use drugs nor the knife in their practice. It seems to be forgotten that much of orthopedic surgery, much of the practice of medicine, etc., consists in the use of other things than medicines

or the scalpel, etc. Is it proven that osteopaths, etc., use no drugs under any circumstances? Is it proven that the physician uses drugs, or that the surgeon uses the knife in all cases?

We affirm that the osteopath is trifling—tampering with human health and life in many cases, for fee or reward, by resort to his own avowed methods of practice. And there is no moral right, nor should there be any legal right for his so doing. He is instilling into the minds of his trusting patients notions of quackery that are dangerous to the life and health of mankind: and is hoodwinking the lawyer or jurist by his specious statements of fact—plausible on mention, but misleading in results.

Now the question comes up, what is to be done about the matter? It seems idle to waste time in arguing the question before courts. The only way to reach the result desired—to test each person's ability to practice, is to demand legislation—specific and positive—on the subject. We cannot believe that the great profession of North Carolina will let the matter drop with the decision of the Supreme Court, any more than the Virginia profession is willing to let the matter drop with the decisions of the judges of Richmond city and Halifax county.

The Supreme Court of North Carolina suggests that "the State Legislature should recognize osteopathy, and enact a law regulating the issuance of license on an examination *adapted to that method of treating diseases.*" To set off a separate board for the examination and licensing of those who propose to limit themselves to the practice of osteopathy, faith healing, etc., won't do. For it is evident that the ignorant in medicine, yet pretentious in claim—the professional charlatan—will be those who will seek that board, thus securing a legalized right to be charlatans.

It seems self-evident that any one aspiring to the rank of practitioner of the healing art—whatever school of practice he may propose to adopt—should be familiar with certain rudimentary and essential principles. There is but one science of anatomy, of physiology, of chemistry—organic and inorganic—of bacteriology, of hygiene, of the principles of diagnosis, etc. Hence the one State Board of Medical Examiners should be the examiners of these subjects. No one pretending to deal with the human ailments and diseases should be unacquainted with any of these several factors of the scientific doctor. Indeed, he should need more, if he under-

takes to deal professionally with diseases—he should at least have the common sense to know when to refer a patient to the surgeon or physician or the specialist in either of these departments in order that time may be saved and an opportunity given to the patient to live. How can the osteopath, the faith curer, etc., do this unless he knows something of diseases and the kind of treatment they require? It follows of necessity, that the osteopath, *et id genus omne*, should be as familiar with the science of medicine of the present day as the regular doctor, or the homeopath, or any other special school of practice; and their examinations should be as thorough and by the same board of examiners as that which examines all other doctors of the State. To this board may be added an osteopath to examine on the peculiar tenets of the profession of osteopathy, etc., so far as their methods of treatment are concerned.

This is a scientific age, and there should be no drop back from the foothold the practice of the healing art has secured. Humbuggery, charlatanism, pretention, and imposition upon the public ignorance, in any and every form, is what the profession has been fighting for many years, and we had thought the battle won. But if war must once more be waged, let every doctor of the regular and homeopathic schools again buckle on his armor, and enter, in every State of the Union, into the ranks under competent leaders to win the legislative fight for honor, for truth, for science, for the ignorant and dependent citizen. There is work for every one to do.

The Medical Society of Virginia has organized for the fight, and will not let the matter rest until people and legislators alike understand the issue, and secure the victory.

### Southern Surgical and Gynecological Association.

The preliminary programme of the fifteenth annual session, to be held November 11-13, 1902, in Cincinnati, Ohio, is unusually attractive. Dr. Thaddeus A. Reamy, Cincinnati, is chairman of the Committee of Arrangements. All railroads will give the one-and-a-third round trip fare on the certificate plan. The officers for the session are Dr. W. E. B. Davis, Birmingham, *President*; Drs. J. Wesley Bovee, Washington, D. C., and John W. Long, Salisbury, N. C., *Vice-Presidents*; Dr. W. D. Haggard, Nashville, Tenn., *Secretary*; Dr. Floyd W. McRae, Atlanta, Ga., *Treasurer*. The

*Council* is composed of Drs. George J. Engelmann, Boston, Mass; Ernest S. Lewis, New Orleans, La.; George Ben. Johnston, Richmond; L. McLane Tiffany, Baltimore, Md.; and Lewis S. McMurtry, Louisville, Ky.

### Dr. George W. LeCato, Wachapreague, Va.

We regret to learn of a recent stroke of paralysis of this distinguished citizen, able statesman and popular physician. He has been an active Fellow of the Medical Society of Virginia since 1887. Was for many years a member of the Medical Examining Board of Virginia, and has been a member of the Virginia Senate from 1893 to the present time. While not a voluminous writer, his contributions to medical literature have invariably attracted wide attention. Among his most useful papers to the profession was one contributed to Baltimore Academy of Medicine in 1882 on the *Treatment of Diphtheria*, and another paper reporting a *Case of Traumatic Tetanus, With Remarks*, published in the Medical News the same year. We are glad to learn of his improvement, and hope to hear of his speedy restoration to health.

### Oregon State Medical Society.

The officers elected, September 11, 1902, are as follows: *President*, Dr. Henry Waldo Coe, Portland; *Vice-Presidents*—Drs. F. W. Van Dyke, Grants Pass; J. A. Geisendorfer, The Dallas, and J. P. Tamiesie, Hillsboro; *Secretary*, Dr. A. D. Mackenzie, Portland; *Treasurer*, Dr. MacV. Cardwell, Portland. The *Councilors* are: Drs. W. J. May, Baker City; J. Fulton, Astoria; Wm. Amos, Portland; G. F. Wilson, Portland; C. S. White, Gervais; S. T. Linklater, Hillsboro; W. T. Williamson, Salem; Wm. House, Pendleton; Ellis, Portland; R. C. Coffey, Portland.

### Mississippi Valley Medical Association.

During the 28th annual meeting, held at Kansas City, October 15-17, 1902, the following officers were elected for the ensuing year: *President*, Dr. Edwin Walker, Evansville, Ind.; *Vice-Presidents*, Drs. Hugh T. Patrick, Chicago, Ill., and W. Britt Burns, Memphis, Tenn.; *Secretary*, Dr. Henry Enos Tuley, Louisville, Ky.; *Treasurer*, Dr. Thomas Hunt Stucky, Louisville. The twenty-ninth annual session will be held at Memphis, Tenn., October 7-9, 1903.



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## Original Communications.

### DRAINAGE AFTER ABDOMINAL SECTION.\*

By STUART MCGUIRE, M. D., Richmond, Va.,

Professor of Principles of Surgery and Clinical Surgery, University College of Medicine; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital, etc.

Many writers state that drainage after abdominal section is an admission of the present imperfect state of surgery, and an acknowledgment of failure to fulfill the indication for which the operation was performed. All, however, admit that in certain cases drainage is necessary, or, in other words, that some cases will recover with drainage that would die without it. If drainage saves life, its employment requires no defense, and the apologetic tone in which it is referred to is misleading and unjust.

The *fin de siècle* rubber gloved gynecologist, operating on chronic cases and removing pathologic specimens, which, if not of respectable origin, are at least of respectable antiquity, may be able to report a series of a hundred successful sections without drainage, but the general surgeon, dealing with acute peritoneal infections, from a gangrenous gall-bladder, a perforated bowel, or a ruptured appendix, must provide for drainage, or his patients will die. It is not a theory, but a condition which confronts him, and its solution should not be termed a necessary evil, but a life-saving measure.

It is undoubtedly true that with increased experience and greater perfection of operative technique all surgeons find fewer and fewer cases requiring drainage. Still they follow the old rule, when in doubt drain; the only difference is that they do not doubt as often.

It is a fallacy to hold that the experience of one generation is a legacy to the succeeding one, and it will prove disastrous—at least in this instance—for the comparatively inexperienced

surgeon to adopt the conclusions of the masters in the profession; to equal their confidence without equaling their skill and judgment; to cease to doubt, and hence cease to drain.

The early success in abdominal surgery was largely achieved by drainage. The adoption of aseptic and antiseptic measures has much curtailed its field of usefulness. There are still cases, however, where it is impossible to sterilize the peritoneal cavity, and here it assumes its original role of importance.

The questions of when to drain and how to drain the abdominal cavity are presented more to provoke discussion than with any hope of final solution. They belong in the same category as the problem of when to operate in appendicitis, and like it, must be settled in each individual case more by surgical intuition than by any rule of rote.

Before considering them it is necessary briefly to state a few physiological facts.

1. The peritoneum can absorb large quantities of fluid, sometimes a weight equivalent to that of the animal in twenty-four hours.

2. Irritation or inflammation of the peritoneum lessens its absorptive powers.

3. The peritoneum can neutralize large numbers of pathogenic germs without the development of peritonitis.

4. The more rapid the absorption from the peritoneum the greater the toleration to bacteria.

5. Stagnation of fluid in the peritoneal cavity favors the development of peritonitis.

6. Leucocytes carry foreign particles from the peritoneal cavity to the lymph and blood vessels.

7. There is a current in the peritoneum which carries fluid and foreign particles toward the diaphragm.

Thus it will be seen that the peritoneal cavity, up to a certain point, drains itself. After that point is passed it ceases to drain at all. For the surgeon to drain some cases does harm, as it is

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

needless; for the surgeon to drain other cases does good, as it is necessary.

Despite the labor devoted to modern surgical technique absolute asepsis is an unattained ideal, and an abdomen opened is an abdomen infected. All require drainage, and the question is simply to determine the dividing line between the cases that may safely be left to nature and those which require artificial aid. The decision is to be reached more by a consideration of the condition of the general peritoneum than the quantitative or qualitative character of the poison with which it is contaminated, for a large absorptive power can effectively deal with an infection which would prove rapidly fatal if the power to eliminate it were absent.

The objections to the employment of a drain are that it is a foreign body; prevents primary union; endangers secondary infection; sometimes causes fecal fistula; frequently gives pain, and always prolongs convalescence. Despite these undeniable facts, the indications for the use of a drain are sometimes imperative, for the one great object of the surgeon is to save life, and all else must be sacrificed to its attainment.

No surgeon would drain when hemostasis has been complete and the operation has been aseptic; few surgeons would drain for small bleeding or the contamination of a healthy peritoneum with the contents of a ruptured cyst or pus tube; most surgeons would drain for uncontrollable capillary oozing or the existence of acute local or general peritonitis.

Broadly stated, drainage should be used in the following cases:

1. When bleeding is uncontrollable, as after the enucleation of an intra-ligamentous cyst.
2. When profuse serous transudation is probable, as after the removal of a large adherent ovarian tumor.
3. When localized collections of pus are found, as in a case of appendicial abscess.
4. When acute general peritonitis exists, as in a case of perforating ulcer of typhoid.
5. When protective adhesions are desired, as in drainage of the gall-bladder.
6. When secondary infection is feared, as in some cases of intestinal lesions.

In fact, whenever in doubt as to the possibility of the collection of fluids in the abdominal cavity, or the development of sepsis from infection either before, during or after an operation.

Drainage of the abdominal cavity may be ef-

fectured in three ways—by natural drainage, by indirect drainage and by direct drainage.

*Natural drainage* is dependent on the absorptive power of the peritoneum and the phagocytic action of the leucocytes, and should be maintained by offering as little surgical insult to the tissues as possible. Rough manipulation during the operation should be avoided, every step should be executed rapidly, and the aseptic technique should be simple and uncomplicated, or, in other words, "preserve the absorptive power of the peritoneum," as advised by Senn; "Get in quick and out quick," as directed by Morris, and "avoid fuss, feathers and foolishness," as told by Price.

*Indirect drainage* is merely an artificial increase of natural drainage, and it may be effected either by saline purgation, which was first introduced by Tait; or by postural drainage, which was first suggested by Clark.

Saline purgatives act by causing a rapid and profuse exosmosis of serum from the intestinal vessels and the consequent absorption of fluid and septic material from the abdominal cavity. They should be given in concentrated form and in large and repeated doses, and may often be made more effective by the use of enemata.

Postural drainage consists in the elevation of the foot of the bed some eighteen inches, thus by gravity carrying any free fluid in the abdomen to the under side of the diaphragm, where its absorption has been proven both theoretically and practically to be much more rapid than from other portions of the peritoneum.

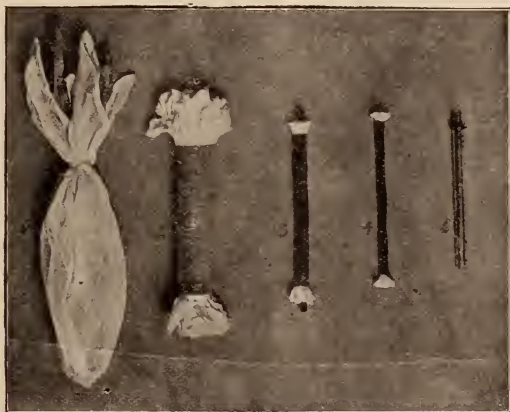
*Direct drainage* is the abstraction of fluid from the cavity by tubes or gauze or wicks, which are introduced either through the primary wound or through secondary incisions. Drainage by means of a tube was first introduced by Koberle. The tube consists of a straight glass cylinder from four to six inches in length, and from one-third to one-half inch in diameter. It is open at both ends, and has its lower third perforated with small openings, and its upper end surrounded by a small rim or collar. It is introduced through the abdominal incision, the lower end going to the bottom of Douglas cul-de-sac and the upper end emerging at the inferior angle of the wound. In a strict sense it is not a drain, as it cannot empty itself, but the fluid has to be removed either with a syringe or by the insertion of a strip of gauze in its lumen. At one time Koberle's drain was used in a large

number of cases, and in the day when hemostasis and asepsis were imperfect it undoubtedly saved many lives. At present it is employed only when pus, colloid, or semi-solid material has to be removed.

Drainage by means of gauze strips was first introduced by Bordenheuer, and this method—with the modifications to be mentioned—has largely supplanted the use of the tube. Gauze not only effects drainage by capillary action, thus removing fluid from the abdominal cavity and lessening the danger of sepsis, but may also be employed to arrest hemorrhage by pressure in the form of a tampon; to isolate an infected region from the general peritoneal cavity by acting as a wall or barrier, and to promote the for-

valuable where there is oozing from large raw surfaces. The advantages possessed over ordinary drainage strips are that there is no danger of a piece of gauze being left in the cavity, and the fact that its removal is facilitated by traction on the string, which inverts the pouch and frees it from adhesions.

Penrose's drain consists of a number of strips of gauze passed through a decapitated condom, the ends of the strip projecting several inches beyond the rubber protective, and the absorptive surface being increased, if necessary, by cutting fenestrae in it. The object of this novel use of the condom is to prevent the gauze adhering to the abdominal wound or other portion of its track not requiring drainage. In many cases



1, Mikulicz; 2, Penrose; 3, Author's; 4, Fowler's, 5, Koeb rle.

removal of adhesions in cases where they are essential to safety.

Mikulicz, Penrose and Fowler have each suggested special forms of gauze drains, and the writer wishes to present for the first time a fourth modification, which—while it contains no new principle—is at least a new combination of old ideas.

Mikulicz's drain consists of a square of gauze with a string fastened to its centre. If it is taken by the four corners it forms a pouch or bag with the string coming through its mouth. This bag is introduced into the abdominal cavity and then packed with strips of gauze. It effects both drainage and hemostasis, and is especially

valuable where there is oozing from large raw surfaces. The drain acts effectively, and its removal is easy and painless.

Fowler's drain consists of a number of parallel strands of "cordine" in a casing of Lister's protective silk. Cordine has a much greater capillary power than gauze, consequently the diameter of the drain is small. A Fowler drain the size of a lead pencil will rid the cavity of a large quantity of fluid, and at the same time permit of the almost complete coaptation of the wound.

The author's drain consists of a soft gum tube surrounded by numerous strands of cordine, both inclosed in a thin rubber protective. It is nothing but a combination of the Penrose sheath

and the Fowler wick, to which has been added a tubular drain. The rubber protective does not extend as far as the cordine, and the cordine does not extend as far as the gum tube. This leaves the end of the tube free to carry off fluid and the ends of the cordine exposed to absorb it. It is believed that the drain possesses the advantages of both the Kœberle's glass tube and Bordenheuer's gauze strips, and is free from many objections to each.

It is small in size, hence does not interfere with the closure of the wound. It is soft and flexible, hence does not endanger pressure necrosis and the formation of a fecal fistula. It is protected by impervious material, hence does not become adherent, and is readily removed. The cordine gives maximum capillary drainage for its bulk, and can be removed in part or in whole without taking out the entire drain. The rubber tube acts as a sentinel to show if sudden hemorrhage occurs; it permits the escape of serum if it collects too rapidly for the cordine to carry it off, and it prevents accumulation of fluid, which sometimes takes place after a capillary drain becomes choked with coagulated lymph. If the tube fails to act spontaneously it may be aspirated with a syringe.

The limit to the length of this paper does not permit of a description of how to place and how to care for these various abdominal drains, but in conclusion a few words must be written in regard to their number and location. Kelly, in discussing the subject, said: "We drain too often, but when we do, we don't drain half enough." In a bad case reliance must not be placed in a supra-pubic drain. In an uphill fight there must not be an uphill drain. Capillarity must be reinforced by gravity. In acute general peritonitis the only hope of recovery lies in multiple drains through incisions at the most dependent part of the abdominal cavity, through the flanks in a man, and through the flanks and vagina in a woman.

**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## RHEUMATIC NEURITIS, OR TABES DORSALES—CASE FOR DIAGNOSIS.\*

By JOHN J. TAYLOR, M. D., Streator, Ill.,  
Coroner La Salle County, Illinois, etc.

The case I present to you came under my observation in April, 1899, with the following symptoms: Rheumatic pains with crepitus and kinks in nearly every joint and muscle. Great pain in the lower extremities day and night. No swelling of joints excepting two or three finger joints. Tongue flabby, thickened on the right of mesial line—one-half of it—loaded through the centre with white, slightly yellowish coating. Breath foul. Urine high colored, sometimes leaving a brick-dust deposit in the chamber; quantity apparently normal. Bowels alternating from natural to costiveness and diarrhœa. Abdomen always slightly tender and markedly so in palpating over the stomach, liver and kidneys. Skin normal, excepting the occurrence of sweating about the face and neck and calves, and particularly between the ankle and half way up the calves. Appetite good. Does not sleep well in consequence of the pain in the legs, from the ankles to the knees. Pulse 80 to 95. Sometimes a temperature of 99°. Sometimes jaw action slow and almost trismic. Acid bitter eructations; spasm of the glottis almost always excited by them.

Three weeks later, but little change had taken place, excepting both legs became anasarcous from ankle to knee, with marked œdema. Pressure would indent and leave finger print over half an inch deep. The fingers were also œdematous; so was the right side and back and upper part of the scalp—the occipitoparietal region. He complained of difficulty of walking from a heaviness of the legs, and also shortness of breath.

Soreness of the calves was so great that he could not sit cross-legged. The swollen condition of the legs was always gone in the morning.

In May, 1899, he suffered for ten days from a feeling of intense cold in the fingers to the second joint—as if held on ice—and at all times the chair arms felt cold to the hands and arms through the coat sleeves. Paper was especially unpleasant to touch, so that newspaper reading without gloves was painful; knives and spoons and dishes were painful to handle unless warmed. This was during the month of May.

\*Read before the Mississippi Valley Medical Association, in session at Kansas City, Mo., October 15-17, 1902.

The case now went to Prof. L., who examined him carefully for nerve lesions. Patient made to shut his eyes with both feet together; balancing on one foot with eyes shut; asked to walk across the room with eyes shut and touch the door knob; walking backwards, turning quickly around—all of which tests the patient performed without a fault. There was *complete loss of knee jerk*. Hot bottle test showed marked changes in sensation, principally at the inner and lower third of the legs. Pin prick was quickly and accurately located. Urine 1036. Bowels about as before mentioned. Appetite not good. Musculospiral nerve, ulnar and radial tender to the touch. Does not rest well; general appearance anæmic—sallow. Sweats at seat of anasæra in the legs. Headache and neckache, and always relieved by hanging the head over the chair back. Headache limited to occipital base. Effort to go down stairs greater than to go up; at any rate, more awkward; legs feel full and stiff in the popliteal space. Pulse 96.

*Diagnosis*—*Rheumatic neuritis*.

*Prognosis*, favorable and to recover in one year.

*Treatment*—Advised to take mud baths at Mudlavia, and later to go to California or Colorado; also to use the Faradic current. While in Mud Springs Dr. Brooks analyzed his urine—sp. gr. 1036—and he mounted the largest crystals of uric acid he ever saw.

*June*—On a ranch 12 miles out of Denver; altitude, 5,000 feet.

*Symptoms* came on as if the big toes were protruding through holes in his socks, and a gradual extension of the sensation akin to numbness to the calves and later to the vastus internus muscles; later they became sore with very slight power to contract them while in a sitting posture. Could not lie stretched at full length—was very difficult to turn in bed. Slept on his back. Muscles generally continue sore. Oedema and anasæra worse.

Latter part of November, 1899, he saw Prof. B., who also gave him a most thorough examination of the body, urine and blood.

*Diagnosis*—*Neurasthenia*.

*Prognosis*—"Would be well in six months."

Advised to go to California. December found him in Redlands; elevation, 1,300 feet.

Professor advised static electricity.

He now began to complain of a band across

the abdomen, and a slight loss of power to shut off micturition completely; a few drops of urine dribbling. Penis always cold at such times. Could not walk up two or three steps without the aid of person or cane, and then only by bringing one foot up to the other.

February, 1900.—Pulse 110 to 115. No exaltation of temperature. Appetite fair. Sleeps better. Anasæra grows less. Pain in the flexures of the arms and across the wrists constant; constriction of the pectoral muscles as if grasped by the hands, left side. Abdominal muscles numb, and also the left side of the penis. Desire to copulate normal and sensation natural, excepting on one occasion the left side of the penis felt numb.

January, 1901.—Dr. P. took the case. In four weeks he was able to walk several blocks. All pain gone and other unpleasant symptoms abating. One condition existing for months, a feeling as if the muscles had shortened and requiring stretching on rising to the feet before an erect position could be had, was very much better, and the anasæra was less.

*Diagnosis*—He did not pretend to know enough about the human system to give a diagnosis!

April, May, and June, and part of July were spent in Riverside, Cal.; altitude, 839 feet.

July, he took a steamboat at Port Los Angeles to San Francisco. Four weeks were spent in Oakland, one month in Colorado, and another in Nebraska. There he was cut down with dysentery, and nearly died. Came on to Illinois, and after election returned to Riverside, December, 1901. Following the dysenteric attack, the belly band and chest constriction were worse than at any time. The feet were tender.

December, 1901, he had pain in the right heel, and very annoying for six weeks. Muscular spasm of calf muscles began in June, 1901, at morning hour of awakening, never following a day nap. Sometimes very painful; and they followed stretching of the legs, of which there was a strong tendency on awakening. Fibril twitchings accompanied, but without pain. Great tenderness followed the muscular spasms.

July, 1902.—For a year and a half he had to have help to put on his coat from rheumatism in the left shoulders. July, 1902, two weeks' respite from spasms. July and August and September spasms of the calf muscles and

twitching of extensor tendons—at the instep very severe. Tongue clean, pulse 80 to 96, digestion faulty, bowels constipated. Knee jerk August 26, 1902. Normal in both legs—returned by degrees in about four weeks. Can contract easily the vastus internus muscles. No soreness of any muscles or nerves.

August 19, 1902.—Prof. L. advised hot baths, mud baths, Faradic current, alteratives, tonics, nutritives, anti-rheumatic remedies, hard rubbing. Spent three weeks at Mudlavia, with morning hot bath 95° Fh. 45 to 60 minutes, followed in the afternoon with massage for an hour; derived very little benefit. Went to Colorado at Prof. L.'s suggestion. Kept up his treatment eight months.

Prof. B. saw him late in 1900. He treated him six weeks, and as patient grew worse quit. He advised static current, tonics, massage.

Dr. P., in Redlands, gave him first relief. Change of scenery, climate, rest and sun baths at 105° to 112° for an hour every morning, wrought improvement. Patient never suffered from headaches excepting as stated, at back of brain and the neck, and which were invariably relieved by hanging the head over the chair back. Pupils and vision normal. Hearing excellent. No vertigo till August, 1902, when he had several slight attacks, always following an acid stomach. No sugar or albumen in the urine at any period. While in Riverside he took daily or every other day hot baths for six or seven weeks, completely removing all soreness of the muscles. The patient never had syphilis. Never intoxicated, but used spirits sometimes. Smoked heavily at one time. Never used opium or any other drug for pleasure. He had pulmonary hemorrhages 8½ years, from 1867 to 1876. In 1875 he expectorated a limy concretion, ring shape, ½ inch across, 1-8x1-10 broad and thick; after which gradual improvement took place. He had seen service in the Union Army during the civil war, and suffered nineteen consecutive years from diarrhoea; discharged at 123 pounds; enlistment weight, 159 pounds—fell to 117 pounds. During hemorrhage period, weight 130 to 136. He practiced medicine from 1867 to the time of late illness. For several years his weight was 184 to 189 pounds.

Ten or fifteen physicians diagnosed his case as tabes dorsalis. The patient stands before you. What think ye?

## CURETTEMENT OF THE UTERUS.\*

By GEO. BEN. JOHNSTON, M. D., Richmond, Va.,  
Professor of Gynecology and Abdominal Surgery, Medical College  
of Virginia; Ex-President and Honorary Fellow  
Medical Society of Virginia, etc.

I have but one purpose in presenting this brief paper, and that is to utter a warning against the misuse of the uterine curette. I shall make two contentions—first, that the practice is far too frequently resorted to; second, that it is in many instances both useless and harmful and in some dangerous.

To support my proposition, I quote the records of the gynecological department of one of the leading hospitals in a neighboring State, taken from the hospital report for the year 1901.

There were admitted into the gynecological wards 293 women. Of these 165 were subjected to the ordeal of curettement. It is inconceivable that fifty per cent. and over of all women presenting for gynecological treatment require curettement, and if I could furnish no other argument in support of my proposition, this record would supply it. But I could show from my own records many cases in which the operation was unsuitable and unjustifiable and produced serious troubles, for which the patients sought my aid.

In properly chosen cases and when skilfully performed, enrettement is a most valuable procedure, and no other manipulation can take its place when rightly indicated, but the indications for it should be as pointed, as definite and as well understood as for any other surgical undertaking. Its application otherwise for the relief of vague and ill-defined symptoms without a clear diagnosis indicating its performance is unjustifiable and wrong.

The conditions to which it is applicable are very limited and may be enumerated as follows:

- (1) For purposes of diagnosis.
- (2) To cleanse the uterus after incomplete abortion.
- (3) To remove cancerous tissue in otherwise inoperable cases.
- (4) For the ablation of polypi and small sub-mucous fibroids.
- (5) In endometritis.

The operation bears a false reputation. It is regarded as an insignificant and safe operation.

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

This is unfortunate, for such an estimate leads to its abuse.

It is not an easy matter to thoroughly curette the uterus; on the contrary, great skill is required to achieve proper results. Any one may remove some diseased tissue from the cavity, but without thoroughness and completeness in the operation it becomes of no avail, and for this a trained hand is essential.

Except in so far as it does not usually immediately endanger life, it is not a safe procedure, but its performance is attended by many dangers, mechanical and inflammatory. Of mechanical dangers, laceration of the cervix in the course of necessary dilatation is not uncommon, and perforation of the uterus by the dilator or the curette or by the probe in packing is a serious menace. When one considers the natural uncleanliness of the field of operation and the notoriously difficult task of rendering it even approximately aseptic, it is at once evident that infection and subsequent inflammations are a threatening danger in this operation. Metritis and cellulitis are the milder inflammations met with, but it is not infrequently that we encounter the more serious forms of salpingitis and peritonitis. Undertaken in the presence of pelvic inflammation, it may light up an old inflammation or cause the further extension of one already in progress. I have seen every one of these misfortunes follow the untimely and unskilful application of the curette, and have repeatedly had occasion to remove pus tubes, which were directly traceable to faulty or unnecessary curettage.

If I were called upon to formulate a set of rules governing the operation of curettement, I would announce them as follows:

- (1) Have a distinct and sufficient reason for the procedure.
- (2) Observe a most scrupulously perfect technique as to asepticism.
- (3) Dilate the cervix slowly and thoroughly, under complete anaesthesia.
- (4) Apply the curette with great gentleness, but completely and thoroughly removing all diseased tissue.
- (5) Conduct the subsequent dressings and after-treatment with the same rigid care that appertains to other surgical operations.

When applied for the purposes indicated, the results are satisfactory—even brilliant. Reported to, however, as is often unfortunately the case, without a specific object in view, upon a

vague and inadequate diagnosis and unskilfully practiced, its results are disappointing and even disastrous. The operation fails or is mischievous when the reason for it is not well defined in the absence of a perfect technique and when the curettement is not thorough.

## PUERPERAL APPENDICITIS.\*

By EDWARD RICKETTS, M. D., Cincinnati, Ohio.

In this age time is too valuable to waste on many words, and so it is to be with this paper. Last April I read a paper before the Tennessee Medical Society at Memphis on "Diagnosis and Treatment of Some Pelvic Lesions." I will quote that portion of the paper in which I spoke in a general way on the subject of this paper:

"Possibly there is no class of cases that gives more concern to the general practitioner than those following child-birth, in which the symptoms have progressed favorably to the third, fourth or tenth day, when fever manifests itself and is in keeping with a rapid pulse. There may be attacks of pain and the physician be led to think it is located within the uterus or right ovary. You make an examination of the uterus to find it not fixed; you are puzzled and you wonder what is, or where the point of infection is starting from. Lay bare the abdomen, and with the palmar aspect of the left hand on the lower edge of the abdomen—a bimanual examination—and you find tenderness; more especially above the right ovary, midway between the right iliac crest and the umbilicus. It may rest well on to Poupart's ligament. With the right hand freed and cleansed you soon find a puerperal appendicitis.

"In a number of instances similar to the one described here I have diagnosed appendicitis and followed it up with a successful operation for the cure of the same.

"The one-finger deep pressure over the appendix is sure to give rise to that peculiar sickening pain, so characteristic of appendicitis, without rupture. I have seen this condition complicated with an infected gall bladder, the lower rim of the vermiform appendix being attached to the gall bladder following delivery.

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

The diagnosis of puerperal fever had been made out. In another I found an abscess of the right ovary attached to a suppurating vermiform appendix. In a four months' gestation, terminating in delivery, was found a suppurating appendix, with a partially obstructed bowel." The term *puerperal appendicitis* is purely my own, if you will pardon such a reference.

During pregnancy or following delivery puerperal septicemia was made to cover the ground until a pyosalpinx was diagnosed by Mr. Tait and shown to be one of the causes of a puerperal septicemia.

I claim that puerperal appendicitis is just as distinct a lesion as a gonorrhoeal salpingitis, with or without pus in one or both tubes, and that a differential diagnosis can be made in both instances. I am inclined to think that the puerperal state predisposes as an exciting cause to appendicitis.

With this once established I am sure that the appendix is about equally affected in both sexes. My attention to this condition *per se*, as a possible complication to normal pregnancy and following delivery, was first called by Dr. Henry McGreu, residing in one of our Cincinnati suburbs.

Mrs. B., German, aged twenty-five years, the mother of three children, was pregnant when I saw her with Dr. McGreu. She was taken suddenly ill with pain of the bowels, not well localized; first attack, pulse 100, temperature 104°; vomiting; bowels had responded to cathartics, but not in a satisfactory manner. Dr. McGreu had already made the diagnosis of appendicitis, in which I could not concur. The vaginal examination revealed a localized tenderness of the right side of the uterus; the vagina was hot to the touch, and the secretion was profuse. I advised delay, very much to the dismay of the attending physician. Two days afterward I saw her again in consultation with Dr. McGreu, and found the pain of the right side of the abdomen now circumscribed and tender to the touch, especially on the line running from the umbilicus to the right iliac crest, with marked symptoms of intestinal obstruction. I then agreed with the doctor that he was right in his diagnosis, and on opening the abdomen found a gangrenous appendix with partial obstruction of the bowel, due to flexion accompanied with adhesions. The appendix was removed in the ordinary way, all adhesions were freed, the bowel was returned to its former site and the abdomen was closed with

slight gauze drain. Delivery took place the second day following. The convalescence of this patient was most satisfactory. The ovaries and tubes were normal.

Mrs. M., aged twenty-three; patient of Dr. A. E. Gillett, of Cincinnati, Ohio. Ten days previously she had been delivered of twins still born. Labor was tedious and completed with the aid of instruments. She had complained of pain of the right side for three or four months prior to delivery, and I was able to make out a good-sized mass. Pulse, 130; temperature, 105°. There was no pus in the urine. Vaginal examination revealed tenderness of the uterus, more especially of the right side. My diagnosis was appendicitis. The abdomen opened on the umbilical crest midway. Pus and urine escaped. Not deeming it advisable to do more, on account of the bad condition of the patient, we made use of the open wound treatment. Patient died; no post-mortem was permitted. I cannot explain the condition in any other way than that the right ureter was dilated, the wall of which had become damaged by the suppurating appendix.

In January, 1902, I saw Mrs. G., aged twenty-three years, with Dr. Rardin, of ———, Ky. The youngest of her three children was three weeks old. Said she had had pain at times in her right side during the last three months of her last pregnancy, but never before. Since the delivery the pain increased. Dr. Rardin attributed the trouble to the right ovary, as a vaginal examination revealed much tenderness. Temperature ranged from normal to 101°; pulse from 100 to 110. My previous experience enabled me to make the diagnosis of puerperal appendicitis promptly and to the satisfaction of her physician. On opening the abdomen we found a clear-cut case of appendicitis; appendix was filled with pus, but not ruptured. The appendix was removed and the recovery was satisfactory.

Mrs. L., aged twenty-four years, the wife of a physician, married four years. In 1896 she subjected herself to an abdominal section for a diseased right ovary, and for a ventro fixation; gave history of two miscarriages; became pregnant in August, 1901. Said that for two or three months before delivery she had uneasy sensations in her right side; at times pain evinced itself. Since her delivery in April, 1902, she has noticed some discomfort of the right side. On August 4, 1902, she was taken



suddenly ill; limbs were flexed; a mass was found over the region of the vermiform appendix; shock was pronounced. She vomited for a day and night, and for this reason the operation was postponed until the 9th of August. Abdomen was opened for the purpose of draining an appendiceal abscess. We were afraid that the obstruction might possibly be due to the ventro fixation, but such proved not to be the case. Within two hours after the operation the patient regained consciousness and could straighten out her limbs with much less discomfort. Recovery.

#### CONCLUSIONS.

1. That puerperal appendicitis is as distinct as salpingitis, with or without pus.
2. It can be diagnosed and differentiated from a puerperal septicemia due to other causes.
3. That many cases of peritonitis arise from the infected appendix, and not from the results of pregnancy and child-birth.
4. The reason that puerperal appendicitis has been overlooked explains why it is claimed that appendicitis is more frequent among males than females.
5. With puerperal appendicitis recognized, the disease will be found as often among women as among men.

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**Abbott's Saline Laxative.**—An old deacon was told he would have to take brandy or he would go into fits. He replied he would try a few fits.

I feel a good deal that way in regard to epsom salts, whose taste is vile, although many people do not mind it; but those who do, will find that in Abbott's Saline Laxative the unpleasant taste is almost entirely taken away, without impairing in the least the efficacy of this matchless saline. Taken in a full glass of cold water before breakfast, it acts once, within two hours, and no more—just enough and no more, while other salines keep you worrying all day long. But any one who is indisposed to pay the fraction of a cent for these advantages had better stick to the crude salts.

## GNOCOCCAL AUTO-REINFECTIONS FROM THE SEMINAL VESICLES.\*

By TERRY M. TOWNSEND, M. D., of New York,

Adjunct Genito-Urinary Surgeon to St. Bartholomew's Hospital and Dispensary.

The frequency with which the delicate urethral mucosa is plied with astringents and alleged gonococci when really its adnexa are at fault, is evidenced by the despairing complaint of the practitioner and the woeful cry of the unfortunate patient. In fact, it is usually when the "friend's prescription" or the "corner drug-gist" does not abate the discharge that the physician is called upon to investigate the cause of its continuance.

With the aim of making clearer the location of residual gonococci, Dr. Valentine<sup>1</sup> presented his views and gave the writer the stimulus for the preparation of this paper.

Next to gonorrhœal prostatitis, the most frequent complication of gonorrhœa is involvement of the seminal vesicles. The literature of the past decade furnishes sparse statistics of the frequency of the complication, although all writers admit gonococci to be the chief causative agent. In 100 gonorrhœal cases selected at random in Dr. Valentine's practice, seminal vesiculitis was present in 44. Fuller<sup>2</sup> found gonorrhœa responsible for 14 out of 22 cases of vesiculitis studied. Lloyd<sup>3-4</sup> cited by Taylor, believes it one of the most frequent gonorrhœal complications, and that its symptoms are either misinterpreted or misunderstood.

The methods of infection of these organs are similar to those of prostatic infection, which I have previously detailed. Ordinarily the infection occurs through the lymphatic or venous anastomoses between the anterior urethra and prostatic body, or by continuation of the disease process through the posterior urethra and ejaculatory duct.

In order to obtain a correct understanding of the phenomena of auto-reinfections from residual gonococci in the vesicles, it will be necessary to consider a resume of the pathology of gonorrhœal seminal vesiculitis.

The pathological changes occur (a) in the vesicular contents and (b) in the walls of the vesicles. When the contents alone are involved the expressed secretion is usually thin, but oc-

\* Presented to the Medical Society of Virginia, at its 33rd Annual Session, at Newport News, Va., September 23-25, 1902.

asionally thick, contains pus corpuscles, red blood globules, and often deformed, non-motile spermatozoa, and an abundance of mucus. It is rare, however, that the disease process ceases with the solitary involvement of the vesicular contents.

When the walls of the vesicles are attacked the usual histopathological changes take place as in other mucous membranes.

The mucosa is at first infected, causing swelling, hypersecretion and final degeneration or desquamation of the epithelia. This in turn invites the infection micro-organism of the deeper structures of the vesicle. Concomitant with the invasion, hyperplasia begins. The sequelae of changes from the embryonic cells in the infiltrate to connective tissue corpuscles and ultimate fibrosis, need but to be mentioned here.

Studies of the minute anatomy of the vesicle by Fuller (op. cit.), Guelliot<sup>6</sup> and others show the organs to abound in tubular glands and cul de sacs. The predilection of gonococci for such tissues is too well known to merit discussion.

Not rarely the vesicular walls are found to contain small cysts, ranging in size from that of a fine bird-shot to a coffee bean. As many as seven have been found in a single vesicle. In consistency these cysts vary from a metallic hardness to a tough, leathery feel. I believe with Reyfisch<sup>7</sup> that they are caused by retention of the secretions of a gland from obstruction to its efferent duct. The same writer voices the views of Morgagni and L'Allemand, who do not believe that an obstruction in the ejaculatory duct is necessary to this condition, but that even a dilatation of the duct may co-exist.

When the vesiculitis is intense and prolonged, peri-vesicular inflammation occurs, with the result that the organ is banded down and enveloped with an infiltrate. This newly formed tissue masks the contour of the vesicle to the examining finger, interferes with the normal expulsion of semen, retards treatment and causes permanent impairment of the vesicle.

This condition has been observed mostly among those whose vital resistance was markedly lowered at the inception or during the course of the gonorrhoea and others who have prolonged and aggravated the disease by coitus.

The symptoms of the acute and chronic forms have been so ably described by master pens that their discussion here would be superfluous.

Once the infection occurs, it is difficult to say when it ends. Rerudescences are likely to oc-

cur with reinfection of the urethra until gonococci definitely disappear. The correct diagnosis of these rerudescences is essential to intelligent therapeutics, and not rarely proves of great medico-legal import.

For lucidity, these auto-reinfections may be classed as (a) those occurring before the cessation of urethral symptoms, and (b) those occurring after an interval of apparent health.

The clinical course of the cases forming the first group is neither complex nor perplexing. The acute invasion of the vesicles is marked by sudden diminution of the discharge, decrease of gonococci in the urethral secretion, rapid clearing of the urine and subsidence of the constitutional symptoms of local inflammation. Resolution usually takes place in four or five days under appropriate treatment. When the vesicles are evacuated through the ejaculatory duct, the urethral discharge grows copious, gonococci abundant and the urine purulent. It is during this stage that the engorgement and swelling of the urethral mucosa surrounding the distal end of the ejaculatory duct retards and may even temporarily prevent the complete emptying of the vesicle. This pathological occurrence makes possible the future discharge of gonococci-laden sperm, which infects the urethra.

The cause of the auto-reinfections seen after a considerable period of apparent health can be explained by the pathology of gonorrhoeal vesiculitis.

The fibrosis and thickening of the vesicular walls results in a decrease of their contractile power. This allows inspissation of the pathological sperm in the depressions seen on the interior of the wall on section. These masses of semen, when dislodged and passed through the ejaculatory duct, appear in the last portion of the urine as plugs, varying in size from a pin-head to a buck-shot, which drops to the bottom of the container. Not infrequently gonococci can be demonstrated in these plugs. When these bacteria are present they find in the urethra a most likely culture medium for their proliferation.

The dislodgement of these plugs may be due to excesses in *Baccho et Venere*, especially the latter, to lowered vital resistance, and to prolonged mental or physical exertions. Not infrequently therapeutic efforts—massage of the vesicles may also cause reinfection of the urethral mucosa.

The differential diagnosis of auto-reinfections

during the course of treatment of acute gonorrhœa is not difficult if the preceding vesicular infection is borne in mind. Any sudden increase in the discharge or unusual severity of other symptoms has a cause which can usually be reached by exclusion. Under any circumstances, where suspicion of prostatic or vesicular reinfections exist, intelligently performed strippings can be productive of no harm and oftentimes prove the correctness of the reasoning by immediate improvement in the patient's condition.

With the auto-reinfections of the second type, the differential diagnosis is less simple.

The conditions with which these auto-reinfections can be confounded are acute gonorrhœal infections and prostatic auto-reinfections. In a previous publication I recounted the pathognomonic symptoms of the latter condition and its differential diagnosis, therefore the present differentiation will be confined to acute gonorrhœa.

DIFFERENTIATION BETWEEN ACUTE GONORRHOEA AND VESICULAR AUTO-REINFECTION.  
IN ACUTE GONORRHOEA.

May or may not have had a precedent gonorrhœa.

Usual period of three to ten days' incubation.  
First portion of urine is almost invariably turbid.  
Gradual appearance of posterior urethritis.  
Only pain is ardor urinæ.

No abnormalities of urination.

If seminal emissions occur, blood is rarely present, and then is bright red of urethral origin.  
Urinary filaments show no tendency to "lumpy" formation.

If the vesicles are palpable per rectum, they are normal.

It is not claimed that this clinical picture is constant, nor that enough of the symptoms are always discernible to unequivocally establish a diagnosis. However, the microscope offers an invaluable aid in corroborating the clinical findings and merits detailed consideration.

Complete belief is here affirmed in Heitzman's<sup>8</sup> theory of the differentiation of epithelia, and in the incipency of a urethral auto-reinfection from gonorrhœal spermato-cystitis the following features will be found:

(a) Pus corpuscles, depending in number on the purulence and intensity of the attack.

(b) Red blood globules, depending in number upon the area and intensity of the urethral involvement.

(c) Spermatozoa in different stages of degeneration, indicative of the disease.

(d) Epithelia from the seminal vesicles.

(e) Epithelia from the ejaculatory duct.

(f) Epithelia from the prostate gland and its ducts, as a prostatitis is usually concomitant.

(g) Epithelia from the urethra, depending in numbers upon the degree of inflammation and occasionally, when intense urethritis is present, epithelia from the deeper layer abound.

(h) Fat globules free and in the epithelia and pus corpuscles. They indicate a degenerative metamorphosis and denote chronicity.

(i) Mucous threads in abundance.

The diagnosis is reached as follows: Epithelia from the seminal vesicles, ejaculatory duct and degenerated spermatozoa, all containing evidence of chronicity, indicate chronic spermato-cystitis. Urethral epithelium, which does not contain fat globules and the presence of red blood globules, denotes acute urethritis, ergo, the urethritis is the result of an infection from the latent gonorrhœal spermato-cystitis.

The prognosis, as regards future auto-reinfection

IN VESICULAR AUTO-REINFECTIONS.

History of previous gonorrhœa with posterior invasion.

Most frequently an incubation period of 36 hours.

All the urine contains more or less pus.

Abrupt onset of posterior urethritis.

Vague pains prevesical at first and ranging from the umbilicus along the Sartorii.

Urinations are halting, require several seconds to establish the stream, many interruptions.

Often hæmospermia is seen, usually dark chocolate in color.

Plugs almost invariably present in the last urine portion.

Enlarged, hardened, thickened or nodulated, and hyper-sensitive.

tions from acute seminal vesiculitis, is fairly good. Among the cases studied, proper stripping has never failed to relieve the condition, and in the cases which could be traced no recurrences have occurred in three years.

In the auto-reinfections from chronic gonorrhœal spermato-cystitis, the prognosis is less favorable; those cases presenting cysts in the vesicular walls are least promising. They continue to reinfect the urethra in spite of treatment as long as gonococci persist. In this latter class the prognosis cannot be too guarded.

The treatment should be directed towards the following ends:

1. Relief of the urethritis.

2. Obliteration of the infecting focus.

3. Synergetic efforts with nature towards the repair of the diseased vesicle.

The urethritis can be quelled by irrigations. The large majority of cases respond rapidly to intravesical irrigations of potassium permanganate in strengths of 1 to 6,000 to 1 to 4,000, the discharge usually diminishing in from 24 to 48 hours from a copious flow to a mere excess of urethral secretion. However, this is only palliative and unless persistently continued with systematic strippings of the diseased vesicle, the real pathological condition is only masked.

As a means of ridding the vesicle of gonococci and of assisting the natural process of repair, stripping stands pre-eminent. The periodic mechanical removal of the diseased contents and the replacement by more healthy secretion finally results in the secretion of healthy sperm.

A method of massaging the prostate and stripping the vesicles, which experience has proven most serviceable, and which is elsewhere described (Valentine<sup>9</sup>), consists in placing the patient on his back, with his head, but not his shoulders, supported, his legs flexed on his thighs and his thighs on his abdomen. The thighs are then abducted and the heel of the right foot placed in the hollow of the left. His hands are folded lightly on his chest. This gives the greatest degree of relaxation to the abdominal wall and perineum, thus permitting of more thorough binasal palpation.

The examining finger should be well protected by an impermeable covering. Numerous experiments have proven that a varnish formulated by Levai<sup>10</sup> is the most serviceable. Its formula is: Copal, 2.0; Venetian turpentine, 4.0; sulphuric ether, 100.0; collodion simplicis, 100.0; acetone, 8.0. It is removable by alcohol.

The finger generously lubricated is then inserted into the rectum with the forearm parallel to the table and the thumb extending along the perineum and to the side of the scrotum. Increased pressure against the perineum in the interval between inspiration and expiration, combined with prepubic pressure with the left hand, enables the examiner to gain a slight distance in reach and to more thoroughly explore the adenaxa.

In very obstinate cases, where the organ lies high up in the pelvis, preliminary filling of the bladder with a solution of boric acid will be advantageous.

As soon as gonococci can no longer be demonstrated coitus is permissible. It often seems to improve the contractile power of the vesicle and

promotes an involution of the organized infiltrate. Fuller (op. cit.) states that it will likely be beneficial when examination after the act shows the vesicle to be firm and to contain little or no secretion. Per contra, coitus will probably be harmful when the vesicles are found to be distended, tender and containing considerable secretion.

Massage and stripping should be gently but firmly performed. Violence may result in capillary hemorrhages into the cavity of the vesicle, thus prolonging and aggravating the inflammation. Epididymitis is not infrequently a sequence of over-enthusiastic strippings.

Chronic vesiculitis bears frequent treatment better than the acute condition, though it is questionable if treatment oftener than twice weekly is prudent.

Febrile elevations are positive contra-indications to strippings. Massage in this stage only intensifies the inflammation and postpones ultimate recovery. In such conditions recto-genital irrigations of deci-normal saline solution at 120 F. by means of the Guiteras, Kemp, Chetwood or White and Martin tubes, followed by a suppository of codeine and iodoform, are serviceable.

#### CONCLUSIONS.

1. Spermato-cystitis is a frequently overlooked complication of gonorrhœa and a prolific cause of recurrent gonorrhœa.
2. A differential diagnosis from acute gonorrhœa can be made and is essential to correct therapeutics.
3. Clear urine may often be seen while gonococci abound in the seminal vesicles.
4. Especially careful examination and observation of these organs should be made before assurance of cure and before consent to marriage is given.

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## ETIOLOGY AND TREATMENT OF ACNE VULGARIS.\*

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This paper has been written to review in the simplest manner our knowledge of the etiology and treatment of this apparently simple, yet distressing affection of the skin. I think I use the word "distressing" advisedly, for this disease robs many an individual of that coveted possession—physical beauty.

The most important etiological factors in the production of acne vulgaris are: Age, gastrointestinal disturbances, and disturbances of the generative organs.

It is common to describe the changes incidental to puberty in both sexes as a frequent cause of this condition, but a physiological crisis is rarely a disease factor, unless the full and normal development of the period be prevented by accident, disease or malnutrition, or by excessive demands upon the vital organs. There is no doubt that the increased growth of hair in both sexes at puberty occasions an unusual activity of the sebaceous glands. While thousands pass the age of puberty without being affected with acne, the disease, none the less, is prone to appear first at this time of life, and, if not properly treated, to spontaneously disappear when full maturity of the body is reached.

That gastro-intestinal disturbances play an important part in the production of acne, is demonstrated by the frequent existence of an acne in individuals affected with indigestion, constipation and dyspepsia, or those who indulge excessively in cheese, pastry, sweets or highly seasoned foods.

There is no doubt that a close physiological

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connection exists between the genital organs, their functions, and the skin, not only in man, but also in the lower animals. It is common to note the aggravation of an acne just before or during the menstrual flow. Masturbation and continence have each been blamed as excitants of this condition. While the former of these, itself, does not cause acne, its well known effects on the nervous, moral and physical condition of growing youths would sufficiently account for any part it may have in producing this affection. Neither is there proof that continence is a cause of acne. Therefore it is safer for us to attribute the presence of acne vulgaris to bad sexual hygiene rather than to masturbation or continence.

*Treatment.*—It is an acknowledged fact that acne is a remedial disease when properly managed. It is true that scars of ancient ravages are sometimes almost indelible, but even these may be smoothed down by continued treatment, so that yearly they become less conspicuous and disfiguring.

The constitutional treatment depends for success upon the discovery of the cause of the disease. In a large per cent. of cases the question of diet is a most important one. A marked improvement generally follows the reduction of the amount of food ingested, particularly meats; while a diet restricted to milk, bread, fish, fruits and the lighter vegetables, will usually benefit the most obstinate cases.

An essential part of the treatment is the daily sponging (except during the menstrual epoch) of the entire surface of the body—except the face (which requires special treatment)—with water as cool as can be tolerated, followed by brisk rubbing with a coarse towel until the skin is glowing.

Of the agents used for their specific action on the skin, the most commonly used is arsenic. It is a drug which is known to exert an influence upon the epithelia of the skin; and upon these, so far as its therapeutic effect is concerned, only when they are the seat of subacute and chronic exudations. By comparison of the experience of experts, it has been shown that the common practice of giving arsenic for this condition is both harmful and irrational, not only because of its effect in producing cutaneous congestion, but also on account of the reliance placed in it to the exclusion of other and better methods of treatment.

Calcium sulphide, also long esteemed, is now

classed with the ludicrous specimens of therapeutic empiricisms.

I shall not attempt to review the various plans of local treatment which have been advocated for this condition, but rather to outline a single plan, which, when followed closely, is productive of the happiest results.

In determining the method of treatment, it is well to consider the three conditions which are usually present in the skin of such patients—hyperkeratosis, flaccidity of the muscles and hypersecretion.

As the face is the commonest seat of the disease, for the purpose of description, it may be considered as the part affected. First, the surface is rendered aseptic. A massering ball is then rotated freely over the surface, deep pressure being made over the affected region with the result of bringing into view groups of previously inconspicuous comedones, which are, in turn, removed with an extractor. A ring curette is next drawn over the lesions, expressing their contents and stimulating others to activity. The subsequent bleeding is encouraged by sponging with hot water. The patient is then directed to bathe the face thoroughly for ten minutes, just before retiring, with spirits of green soap and water as hot as can be borne; after which the face is wiped dry and some astringent lotion, which is allowed to evaporate on the surface, is applied. A lotion which I have found highly beneficial is composed of the following:

R	Zinci Sulphat.....	.5
	Potass. Sulphuret .....	aa5j
	Aque Rosæ, q. s.....	ʒiv

Mixce.

### GANT'S FEMORAL OSTEOTOMY.\*

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If there is any one affection more closely allied to orthopedic surgery than another, it is probably *hip disease*. The chief object of the surgeon in treating this very formidable disease is first to cure his patient and have him get well with the minimum amount of deformity. For-

tunately for suffering humanity, the field of modern orthopedic surgery is much broader to-day than it was formerly, for in time past its scope was confined to the correction of deformity, and that chiefly by mechanical means, whereas to-day its chief field is the treatment of the disease—chiefly disease of the joints—and the use of such mechanical means as will prevent or at least minimize the resulting deformity.

In the treatment of hip disease, except under the most favorable circumstances, it is common to have the patient to recover with more or less distortion of the hip; the most common form of distortion is either flexion or adduction of the thigh on the trunk, which is the result of the muscular spasm about the *hip joint*, especially severe during the active stage of the disease, holding the limb in the distorted position while ankylosis is taking place. It is for the correction of just this condition of affairs that the operation of femoral osteotomy was devised. Of all of the methods of doing an osteotomy for this purpose, the one devised by Gant is by far the best, and it has a much broader field of application, being suitable for all cases requiring such interference, and like the Bassini operation, for the radical cure of inguinal hernia, it has practically superseded all other operations devised for the purpose of straightening crooked hips due to bony ankylosis.

While it should be the aim of the surgeon to prevent a deformity about the hip while treating his case, it is a great comfort to him to know he has at hand so perfect a method of correcting it after the disease is cured, for of all the operations for correcting deformity, there is none that offers more perfect and satisfactory results than that of Gant's femoral osteotomy.

Considering the wonderfully good results, it is surprising that physicians are not more familiar with this operation, for I am sure did they appreciate its value more keenly, they would advise it more often, and thereby cause to be relieved many an unfortunate cripple. The chief object of this short paper is to arouse an interest in this operation among the members of this Society. If I succeed in my purpose, I shall be repaid for my labors.

Gant's operation is a subtrochanteric osteotomy; hence it is just as applicable in a case in which Adam's operation cannot be done as in any other. Adam's operation consists in dividing the neck of the femur with a saw through an

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open incision. This operation is inapplicable in cases where the femoral neck is absent or has been partially absorbed as a result of an extensive osteitis. When the osteitis has not destroyed the neck, the seat of the operation is in dangerous proximity to the seat of the old disease, for there is danger of lighting up the old disease by disturbing an encysted mass of cheesy tubercular material that may be dormant, and would never do harm if left undisturbed. The objection I raise to this operation is not an unfounded one, for I have had one sad experience along these lines in the following case: A boy nine years old who developed hip disease when two years old; he never had an abscess nor had he any acute symptoms for four years. His hip was fixed by apparently bony ankylosis at an angle of  $110^{\circ}$ —i. e.,  $70^{\circ}$  of flexion deformity and  $10^{\circ}$  of adduction with trochanter major one inch above Nelaton's line. Gant's femoral osteotomy was attempted.

After the osteotome was withdrawn, the manual force used to complete the intended fracture failed in its intentions, but succeeded in breaking up the bony adhesions with the ilium, enabling the limb to be easily brought into good position. The patient's limb was put up in a plaster of Paris spica. Two months after the operation an abscess was discovered over the hip joint, much to my disappointment. The abscess was finally incised after repeated aspirations. The wound suppurated profusely for six months or more, and at last closed in about a year; patient finally made a good recovery.

Another objection to Adam's operation is that it being above the insertion of the psoas and iliacus muscles, it is impossible to correct a high degree of flexion deformity by it without overcoming the resistance of these muscles by means of a myotomy, and to do this a very extensive operation would be needed. Gant's operation is a subcutaneous osteotomy done just below the trochanter minor, and is applicable in any case, as it is a safe distance from the seat of the disease and is beyond the resistance offered by the psoas and iliacus muscles. It is applicable whether the limb is flexed, abducted or adducted.

The operation is done as follows: The field of operation having been rendered aseptic, a sand bag is placed between the thighs and pressed firmly against the perineum by an assistant, who at the same time holds the patient on the side; the osteotome is introduced in the long axis of the femur about a finger's breadth below the

trochanter minor and by manual force is forced down to the bone. No scalpel is used. The osteotome should be sharp enough to cut its own way through the soft structures with light pressure. As soon as the bone is reached, one gentle tap of the mallet will cut through the periosteum; the instrument is then turned in the transverse axis of the bone under the periosteum, which makes the operation subperiosteal as well as subcutaneous. A few blows with a mallet will force the osteotome into the medullary cavity; the instrument is then partly withdrawn and tilted so that a few more blows from the mallet will divide the upper fragment of bone; and after the same has been done for the lower fragment, the fracture can be easily completed by manual force. Great care should be had not to use sufficient force to break up the adhesion of the head of the femur to the ilium, or to splinter the shaft of the femur at the seat of operation. The only local dressing used is a piece of gauze and a small strip of adhesive plaster to hold it in place. The limb is put up in a plaster of Paris spica extending from the nipples to the toes, after bringing the limb into the best possible position obtainable.

When the limb is flexed to a right angle on the thigh, and often when not so much distorted, the muscles inserted about the anterior superior spinous process and the fascia lata will have to be divided before the limb can be brought into its proper position; this can be done subcutaneously, and adds nothing to the gravity of the operation. As a matter of fact, I make it a routine practice to divide subcutaneously all the tendons and fascia that offer much resistance in straightening any joint, for it saves the patient much pain. A very taut tendon confined under plaster of Paris dressing is often very painful.

My experience has convinced me that the plaster of Paris spica is the most efficient and comfortable splint that can be used for a fractured femur, whether it is an intentional or unintentional fracture, when it is properly applied, and if it is not comfortable it is because it is not properly applied. With a singly applied plaster spica there is absolutely no such thing as the broken bones slipping out of place; the patient can roll over in bed and can be lifted to a reclining chair and carried out of doors, thus relieving the monotony of a long bed confinement.

This operation is just as applicable to adults as to children.

I will refer briefly to one of a series of adult

cases I operated on, mentioned in a paper read before the American Orthopedic Association in 1896.

Miss B., aged 40, was referred to me November 10, 1895, for examination, patient having ulterior designs other than to ascertain whether she could be relieved of her physical deformity. She had been deformed since childhood. Upon examination, I found that she had 45° of adduction, causing one leg to cross the other at the middle third of the femur. This amount of deformity made her a most pitiable looking object when walking.

After examining her thoroughly and explaining to her fully what should be done to strengthen her limb, she confided to me the fact that she had an opportunity to be married, but had been advised by her doctor to consult me as to whether she should take such a step in her present condition. I advised her not to think of matrimony with her limbs in this distorted position, but if she would let me do a Gant's femoral osteotomy, I would put her in a condition for matrimony or anything else. It is needless to say that with this promise she consented to the operation, and I am happy to say that the success of the operation was only exceeded by the conjugal bliss that followed in about four months.

So far as I have been able to ascertain this is the oldest person that has ever had this operation done.

Another case that I wish to report here was that of a girl 10 years old, kindly referred to me by Dr. Hugh M. Taylor, Richmond, Va. She had had hip disease when about five years old. When I examined her in November, 1899, she had her hip flexed and firmly ankylosed at an angle of 120°, and 20° of adduction, which caused the thigh to press against the side of the vulva. There were no symptoms of any acute inflammation being present, nor were there any cicatrices indicating that there had ever been any discharging abscesses. There was four inches of apparent shortening, while close measurement showed the limbs to be of equal length. A Gant's femoral osteotomy was done, and limb put up in a plaster of Paris spica, which was removed at end of five weeks; patient was kept in bed six weeks in all, then allowed up on crutches, which were used for several months. Result in this case was all that could be desired, as recovery occurred with limb in a straight position, with one-half of an inch shortening, result of the

bead in the femur at seat of the operation. This patient was very hard to wean from her crutches, which was the result of her having used them several years before this operation. As a rule, the crutches should be discarded in three or four weeks.

This case illustrates so well the good results of this operation that I will not prolong this paper with case histories, but I do hope that I have succeeded in arousing an interest in this operation, for in that case good fruit will be borne.

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### FATAL SECONDARY HEMORRHAGE FROM UMBILICUS EIGHT DAYS AFTER BIRTH.

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Retreat for the Sick, Richmond, etc.

I desire to place on record the following case, as in my experience, in hospital and private practice, I have never had one like it, although I have officiated or assisted in upwards of a thousand obstetric engagements.

October 23, 1902, I delivered Mrs. P. of a healthy boy, after natural labor; the case progressed satisfactorily, the cord coming off.

October 29th.—There was no oozing even from the cord—after it was first tied, and the surface underneath was smooth and healthy.

October 31st.—At 6 A. M. I was hurriedly summoned, with the information that the infant was "bleeding to death." On my arrival I found the baby just alive. The hemorrhage was controlled promptly with a compress of sterile gauze saturated with a solution of supra-renal extract. That salt solution per rectum, brandy, etc., were tried with no effect, the little one dying in a few minutes. The nurse informed me that she dressed the baby at 9 P. M. October 30th, after an action, and examined the umbilicus, and there was no hemorrhage.

The hemorrhage was not observed till I was summoned, the father discovering blood on the bed on arising to go to work.

The baby literally bled to death from secondary hemorrhage of the umbilicus, due to detachment of a clot of blood over the seat of the artery. Such an occurrence so late after the baby's birth is unique in my experience.



## THE PRESENT DAY MORTALITY OF PNEUMONIA.\*

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In the ancient history of disease, no subject has received more careful description and study than has pneumonia. The physicians of antiquity, of Grecian, Roman and Arabian nationality, set forth their knowledge of the pneumonia of that day in descriptions filled with many interesting conceits and queer observations. In the writing attributed to Hippocrates and Aretæus, among the symptoms mentioned, we find these: "The tip of the nose is turned up"; "the white of the eye has a greasy lustre"; and others as curious, while "the diagnosis is made by the coating of the tongue."

For many decades greatest confusion reigned with reference to pneumonia—in fact, pleurisy and pneumonia really were not differentiated until 1819, when Laennec pointed out these distinct and separate diseases; to him is due the classification of the stages of pneumonia which at the present time is accepted as correct. However, through all the writings of history, this fact is constantly set forth, though statistics are not given, that pneumonia is a deadly disease.

In casting about for a subject for discussion on this occasion, I have settled on the Present Day Mortality of Pneumonia and its Prophylaxis as a proper one. So great as a factor in the death rate has pneumonia become, and so rapid and terrible its brief course, that I have deemed its consideration not an unprofitable pursuit. At the outset, I wish to comment upon two facts which have a direct bearing on this question of pneumonia mortality—first, the advances of science have, during the last decade, raised the average life in the United States 4.1 years; in the decade ending at 1890 the average life length was 31.1 years, while in the decade ending 1900 the average life length was 35.2 years—a marked and gratifying increase; second, the "great white plague," or tuberculosis, which, up to recent date, has exacted, of all diseases, the greatest toll on human life, even to one-seventh of the world's mortality, is considered now to be on a decline; this may be explained by the world-wide fight which has been made recently against its progress. For the universal interest in civil, social, and scientific

circles, as manifested in international conferences of scientific men, in popular education of the masses, and in State, municipal and private grants of large sums of money for the study, prophylaxis and treatment of this erstwhile captain of death, has begun to have a most gratifying effect upon the mortuary table.

Now pneumonia, as a swift destroyer, has appeared, according to latest statistics, proving itself to be man's most formidable enemy, yielding to no other in the number of its deaths, and certainly effecting this end with swiftest brevity. Indeed, may not this ancient disease, treated through the ages, with only this grave statistical result, justly claim the sober consideration now accorded it by the profession?

According to the Vital Statistical Report of the registered area of the United States, in the Twelfth Census Bulletin of August 20, 1901, pneumonia holds leading place in the death column, having been the cause of death in 1900 in 55,296 instances—i. e., 191.9 persons in 100,000 population. This fact is borne out by various particular localities, which I will cite to establish well this point. In the report of the Department of Health of Chicago, we find that between 1851 and 1890, there were 25,719 deaths from consumption, and 16,577 deaths from pneumonia—i. e., more than 35 per cent. excess of consumption deaths. Now, between 1891 and 1901 there were 22,957 deaths from consumption and 25,228 from pneumonia, making an excess during this last decade of 9 per cent. of the latter. From the same report we find in the decade 1861-1871 deaths from pneumonia formed 3 per cent. of all the total deaths from all causes; in the two succeeding decades they were respectively 5 per cent. and 6.7 per cent. of the total deaths; and the last decade, 1891-1901, the proportion rose to more than 10 per cent. (10.2) of the total deaths from all causes.

In Massachusetts, also, we find a great increase in death rate from pneumonia, it having risen from 7 to 8 per cent. in the late '70s to 9 and 10 per cent. in the last decade. Also in Rhode Island and Connecticut we find a similar increase of pneumonia death rate, and, doubtless, as says the editor of the *Journal of the American Medical Association*, were the figures available, we would probably find a corresponding increase throughout the Northern Atlantic and Lake States. In Virginia, we find, for the year ending May 31, 1900, there were 25,252 deaths from all causes; of this number, 2,429

\*Read before the Richmond Academy of Medicine and Surgery, November 11, 1902.

died from pneumonia—i. e., about 10 per cent. In Richmond, Va., we find there were 2,523 death from all causes during the year ending May 31, 1900, and of that number 239 were deaths from pneumonia, or 9.4 per cent.

In order to explain this state of the mortality table, let us briefly set forth some of the influences which seem to tend to aid the occurrence of pneumonia. One of the chiefest factors, operating as a recent causal agent, may be the great fourth pandemic of influenza. It began, as Osler says, October, 1889, "in some of the distant provinces of Russia, and by the following November Berlin was attacked. By the middle of December it was in London, and by the end of the month it had invaded New York, and was rapidly distributed over the entire continent." Accordingly, in the following year, pneumonia death rate in Chicago doubled its former rate, and throughout the entire country there was a marked increase in its death rate. Another factor in this increase of pneumonia death may be the lessened death rate of the newborn and infants from intestinal disease. Many infants kept alive in delicate health may readily succumb before childhood is over to pneumonia. At the other end of life the years have been increased, and a greater number of aged lungs, in the sudden change of weather, and in exposure, to atmospheric and microbial dangers, may become ready victims of pneumonia. The common use of alcohol to excess, the rheumatic and gouty diathesis of modern day life, the concentration and overcrowding of city living, the dusty and filth laden air of the city street way, all may tend to increase the rate of death from pneumonia.

In any discussion of the present day mortality of pneumonia, to omit to mention its communicability and discuss its prophylaxis, would be to omit a most essential part. According to the latest authorities, pneumonia is classified as an infectious disease, due to the germ pneumococcus of Fränkel, in at least 95 per cent. of cases, the remaining 5 per cent. being accredited to other germs—namely, streptococci, Pfeiffer bacilli, pneumococcus of Friedlander. This germ is non-motile; occurs in pairs, oval or lancet-shaped, surrounded by a substance like mucin. It grows in alkaline culture media, with or without oxygen, at 35° C. to 38° C. It is self-limited of life in any media in four to five days, possessing, however, in the dry state, great latent virulence for a long time, especially when fostered in desiccated sputum.

Now, to establish the communicability of this germ, let us cite a few instances of notable epidemics. Tyson cites the case of a ship's crew of 815, of which 410 were attacked by pneumonia in rapid succession, and before the epidemic had subsided 720 had the disease, the fearful number of 298 having perished. Dr. Cunningham, of Alabama, reported at the last meeting of the American Medical Association at Saratoga a series of epidemics that had occurred during the last fifteen years among the prisoners under his charge. In 1886, Darlington treated 105 cases among laborers living in adjoining huts. In 1888, in Middleborough, England, there occurred 367 cases of pneumonia in a population of 40,000. The history of epidemics in foreign prisons, garrisons and armies, and in native asylums, institutions and boarding schools is too extensive; suffice it to say that pneumonia is an infectious and communicable disease, modified and influenced by such predisposing factors as age, sex, race, former attacks, unsanitary living, exposure to cold, occupation, rheumatic diathesis, anaesthetization by chloroform and ether and surgical operations.

Passing through the history of the treatment of pneumonia by blood letting, by tartar emetic, by blistering, by veratrum viride, by calomel in large doses, by elimination of the toxins, by use of oxygen and care of the heart with diffusible stimulants and antipyretics, we take up that neglected phase of the question—prophylaxis.

Dr. N. S. Davis, Jr., in a recent article, makes this pertinent inquiry in discussing this subject: "But is the medical profession altogether free from blame for its (pneumonia) prevalence?" and later he says "prophylactic measures have not been enforced as they should have been." The public education and profession tutorage of the masses, followed in the masterly fight of these latter years against the increase of tuberculosis, may be well repeated in the fight that should be made against the further increase of pneumonia death rate. As in consumption, it must be, not so much in the remedial measures as in the prophylactic agencies, that we shall find the greatest results.

In the sick room the physician must intelligently teach its dangers and its preventive measures to the attendants. In the training school for nurses he must expound the truth of its deadly communicability and its successful prevention. He must advocate such laws of public sanitation, in regard to location, number, ventilation, disinfection of dwellings, as will best

prevent the spread of this germinal disease. It should be the especial care of the profession to guard the aged and protect the infants from becoming victims of the prevailing evil conditions that so quickly cause them to succumb to pneumonia. With professional forethought in the treatment of influenza to avoid any complication of the lung; wise precautions in the administration of general anæsthetics; the performance of surgical operations, and the most careful sanitary and aseptic measures in the treatment of pneumonia cases, much will have been done toward lessening the mortality.

In this day of medical enlightenment, and the retrograde of fatality and frequency of all other infectious diseases, a masterful inactivity in the prophylaxis of pneumonia will but take from our day and time the glory of its wonderful progress, as well as prove a deadly monster in the life of the human family. While if these seemingly overacting measures of prevention be adopted, much will be done to annihilate the germinal cause, check the fatal progress, and protect the stronghold of all future good health against the devastating inroad of pneumonia.

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416 West Grace Street.

### AN ORIGINAL METHOD OF SETTING AND TREATING A FRACTURED KNEE-CAP.\*

By R. BRUCE JAMES, M. D., Danville, Va.,

One of the Medical and Surgical Staff to the Home for the Sick, Danville, etc.

In a brief way, I wish to call attention to a method of setting and treating a fractured knee-cap devised in an emergency, which, for simplicity, safety and effectiveness, far surpasses any other method to which my notice has been called.

The apparatus consists of a flexible rubber

\*Read before the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

ring, three pieces of adhesive plaster and a bandage.

I hold in my hand a ring formed by a spiral spring, covered with rubber. We are all familiar with it as a rubber ring pessary. It can be procured at almost any drug store, of different sizes, so as to fit any knee-cap.

Its application is simple. The patient is put to bed; the knee is placed in extreme extension, then the fragments—be they two or more—are brought together. When the greatest degree of approximation possible is obtained, the ring is slipped over the projecting patella. The ring will easily keep the fragments in position so long as it is held in place, which is accomplished by attaching two strips of bandage or rubber adhesive plaster to the sides of the ring and carrying these around the joint and fastening in rear. A sufficient degree of tension should be exerted on these strips so as to insure the position of the ring. Two other strips of plaster should be fastened to the thigh and leg—passing diagonally over the ring. A light "figure of 8 bandage" over all completes the operation. The limb is placed at an elevation by means of a board that extends from the hip joint to the foot board of the bed. Moderate cold is applied by means of ice bags. This position is maintained four to six days—till all spasmodic contraction of the quadriceps ceases, and the parts are free from swelling and pain. Then with a light rear splint, added for safety, the patient can go out on crutches, or sit in a chair with his leg extended. The "figure of 8 bandage" can be removed at any time, without molesting the fracture, and thus you can, at a moment's notice, ascertain the condition of affairs. The ring soon makes for itself a snug bed around the injured bone which it holds close in its embraces, and the surgeon realizes that there is little cause for uneasiness as to the proper coaptation being maintained. By thorough cleaning of the skin and ring with soap, water and alcohol, before using, there is no danger of excoriation.

I want to report two cases:

*Case I* was a dancing master, whom, some years ago, I was called to treat. I found fractured patella. While casting about for the best thing to do, I caught sight of a ring pessary in my satchel. I brought the two fragments together, and slipped the ring on. It fitted snugly and held the parts together perfectly. I fastened it as above indicated. In one month the patient was walking with only a slight limp.

In two months he was giving dancing lessons again. I saw him six months later, when he had perfect use of the limb.

*Case II.*—During the past winter I was called in consultation to see a case of fractured knee cap eighteen days after the accident. The fracture had been set on the day of the accident by a competent surgeon, who employed the usual method as recommended by Wyeth and others. I found the two fragments had slipped over an inch apart. These fragments were brought together as nearly as possible, but they lacked about a quarter of an inch of complete approximation, when the ring was put in position and secured as already described. This degree of approximation was well maintained until recovery, which was somewhat delayed, owing to the fact that ligamentous union had begun before the fragments were brought together. The patient wore the ring for two or three months as a precaution, but ultimately made a complete recovery, and to-day he has a normally useful limb.

On looking up the literature on this subject, I find allusions made to the fact that an iron ring had been used for the purpose of coaptation, but no one appears to recommend its use. There are obvious defects in and objections to, the iron ring which do not obtain in the use of the soft, flexible instrument.

The advantages of the method I have described are:

1. It holds the fragments of fractured bone together perfectly.
2. It is simple and easy of application.
3. It permits easy inspection, without molesting the fracture.
4. The lightness of dressing permits application of heat or cold whenever needed, or as long as desired.
5. The short time it is necessary for the patient to remain in bed.
6. Last, but by no means least, it is perfectly safe and effectual.

803 Main Street.

## Correspondence.

**Report of Cases:—I. Delivery of Foetus about Four Months Old at about Eighth Month of Gestation.—No Placenta.—II. Triplets Aggregating 25 Pounds—Three Placentae with only Membranous Attachment—Post Partum Convulsions—Veratrum Viride—Recovery.**

*Editor Virginia Medical Semi-Monthly:*

Below you will find a report of two rather unique cases, which recently occurred in my practice:

*Case I.*—Mrs. B., aged 20, menstruated last on January 12, 1902. Her husband consulted me at about the 7th or 8th month of pregnancy for a dropsical condition of her lower extremities; urine contained albumen. These symptoms were relieved by saline purgatives, lithia and milk diet.

On October 11th I was called to see her in labor; said she had felt no movements since the fifth month, and very slight then. Examination revealed, as I thought, a shoulder presentation. I asked for consultation, and while waiting prepared the woman for version; but on a second examination I found that my diagnosis had either been erroneous or that there had been a spontaneous version, the breech presenting. I likewise found that the child was so small that I could deliver it alone, which I did without an anæsthetic before the arrival of my consultant, the foetus presenting every appearance in size and development of a five months' dead fetus. It was no more decomposed than if it had been dead only a few days. The other physician agreed with me that it had been dead nearly four months. The woman had a copious hemorrhage, which was controlled with difficulty by introduction of the hand into the uterus and extraction of a membranous looking mesh-work inclosing a mass of clots. It resembled neither placenta nor membranes.

*Case II.*—On October 21st I was called to see a primipara in convulsions. She had had five before I arrived, and had given birth to a child, weighing about seven pounds, under the supervision of a midwife. I hastily anæsthetized the patient and extracted two more dead children, each well developed and weighing about six pounds each. She had another cou-

### Good Crop Brings Prosperity.

A Georgia farmer made \$100 from an acre of watermelons, and the nearest doctor made \$200 from the same acre.

vulsion before she had gotten entirely from under the effects of the chloroform. I gave morphia, chloral and ten minims of tincture veratrum viride, another hard convulsion following in an hour. I repeated the veratrum, and there was another very slight convulsion in two hours. Repeated the dose of veratrum again, and continued to give it till her pulse was reduced from 130 to 60, and there were no more convulsions. It took forty minims to control the convulsions, and she was given two more doses of ten minims each, when there was a rise in the pulse. She took in all sixty minims hypodermatically, and made an uninterrupted recovery. There were three distinct placenta, with only a membranous attachment. This woman must have been carrying about 25 pounds. The trip-lets, together with the placenta and amniotic fluid, must have weighed that much.

H. L. BAPTIST, M. D.

*Ivy Depot, Va., October, 1902.*

**Treatment of Winter Cough.**—Walter M. Fleming, A. M., M. D., New York city, in the September number of *The Medical Era*, says: "With all the experience of more than a quarter of a century in the treatment of winter cough and its complications of laryngeal, bronchial and pulmonary, irritability, also dyspnea, asthmatic spasms, and finally whooping cough—usually the most persistent and tenacious of all of these membranous maladies—I find no one remedy more strongly indicated or which yields more prompt and satisfactory results than antikamnia and heroin tablets, composed of antikamnia 5 grains and heroin hydrochloride 1-12 grain. The purpose of this combination is manifest at once, for it provides primarily a respiratory stimulant; secondly, a soothing sedative to the irritable mucous membrane; and thirdly, an antipyretic and analgesic. Result: A prompt and efficient expectorant, which at once relaxes the harsh and rasping cough, and releases the tenacious, sticky and gelatinous mucons, while its soothing influence is at once manifested, greatly to the comfort and contentment of the patient."

## Book Notices.

**The Public and the Doctor.** By A REGULAR PHYSICIAN. Published by Dr. B. E. Hadra, Dallas, Tex. Cloth. 12mo. Pp. 119. Price, 50 cents.

This little book is intended to enlighten the masses as to medical matters in general, to help subdue quackery, and to assist the rational physician in his many troubles with the ignorant and uninformed. The idea is to have doctors distribute it among their clients. If this book could be brought to the attention of mothers and fathers, to heads of families, to old maids, etc., it would do good service. But people generally cannot be persuaded to read such books. We wish they could. They will listen to the doctor talking, but people will not read about the true physician. It would be excellent missionary work if some worthy doctor would use the texts of this book for short family talks. Doctors themselves read attentively, for it presents the right side of their every-day observation and experience. While each of the seven chapters has a full heading as to the various subjects discussed therein, we believe it would be an improvement if a definite page were set aside for the table of contents, and if an index were appended.

**Physician's Pocket Account Book.** By J. J. TAYLOR, M. D. Published by The Medical Council, Philadelphia, Pa. \$1 complete.

This account book consists of a manila bound book of 208 pages ( $4\frac{1}{2} \times 7\frac{1}{2}$  inches) ruled, and a leather case, with flap and two pockets. It is undoubtedly an excellent system of original entry of work done by the doctor. Such an account book is the only form of life insurance that many doctors carry for their families. This book stands every legal test, enabling the doctor to prove his accounts in court against a debtor who disputes it; it enables him, the doctor, to collect his account from a decedent's estate; and it enables the widow or executor to collect from debtors after the doctor's death. An alphabetical index provides for quick reference to all accounts. While about 144 full pages are devoted to accounts with families, etc., as many accounts consist of only one or two services, 16 pages are ruled for short accounts—5 on a page. A complete account of cash received and paid out can be kept side by side on the 24 pages specially provided for that

purpose. When one book is used up it can be taken out of the case and another book begun. These books are 40 cents each, or three for \$1. The design of this "Physician's Account Book" appears to be perfect, but it is too large for the pocket, and we see no necessity of carrying it around in the coat pocket.

**International Clinics.** By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia, Pa.. Vol. III. Twelfth Series. 1902. Philadelphia, Pa.: J. B. Lippincott Co. 1902.

This is a quarterly of illustrated clinical lectures and especially prepared articles on medicine, surgery, therapeutics, obstetrics, dermatology and other specialties. While all of the lectures or clinics afford valuable instruction, we may point the reader to the two specially prepared articles in this volume which are made of unusual interest by stating much in small space. One of these articles is a "Critical study of the theory of inflammation," by Dr. Hans Selmaus, of the University of Munich; the other is by Dr. Peter Borisssof, of the St. Petersburg Military Medical Academy, on the "function of the digestive glands, based on the researches of Pavlov and his pupils." In this Part II he takes up the pancreas, the passage of the food from the stomach into the duodenum, the flow of the bile into the duodenum, and the intestinal juice. Each of the articles is thoroughly scientific and yet practical—thus keeping the *International Clinics* of great use to the doctor. Each volume is well indexed.

**Manual of Gynecology.** By HENRY T. BYFORD, M. D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago, etc. *Third Revised Edition, containing 363 Illustrations—many of which are original.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Small 8vo. Pp. 600. Price, \$3 net.

As a student's text book, and as a practitioner's diagnosis, guide, and help for the treatment of most of the operations he is apt to be called on to perform in the line of gynecology, this manual will serve an excellent purpose. The marginal notes on each page give a synopsis of the contents of the lines opposite, so that the student in haste to refresh his memory for lecture, quiz or examination can quickly review the book and test his own knowledge of the subject

under consideration. The author is an easy writer, so that his descriptions are readily understood; he is an able gynecologist, so that his advice is authoritative; and having become an experienced teacher, his methods are systematic. The profusion of illustrations—many of which are original—greatly help the reader to a perfect understanding of the text. For doctor or student this is a good book.

**Text Book of Anatomy by American Authors.** Edited by FREDERIC HENRY GERRISH, M. D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. *Second Edition. Revised and enlarged. Illustrated with 1,003 Engravings in Black and Colors.* Lea Brothers & Co., Philadelphia and New York. 1902. Imperial 8vo. Pp. 944. Cloth, \$6.50 net; leather, \$7.50 net; flexible waterproof binding, for use on the dissecting table, \$7.50 net.

Beside the editor, the following are also authors of parts of this book: Arthur Dean Egan, M. D., Professor of Anatomy in Rust Medical College, Chicago; William Keiller, F. R. C. S. (Edin.), Professor of Anatomy in Medical Department of University of Texas, Galveston; James Playfair McMerrieh, A. M., Ph. D., Professor of Anatomy in University of Michigan, Ann Arbor; George David Stewart, M. D., Professor of Anatomy in the University and Bellevue Hospital Medical College, New York city; George Woolsey, A. B., M. D., Professor of Anatomy and Clinical Surgery in Cornell University Medical College, New York city. These authors have succeeded in presenting a work so useful that a large first edition was exhausted in two years, allowing them opportunity thus early to improve this standard work. The description of parts or organs is all good and intelligible, but the profusion of excellent illustrations and X-ray photographs make the book as perfect a one as we could conceive a work on anatomy to be. The names of the parts are printed, as far as possible, directly upon the engravings. Instead of the schematic device previously employed for showing the relation of the arteries, a series of horizontal sections at different levels has been prepared, with the names of parts labelled upon them. These same trans-sections are equally useful in regard to the relation of nerves, muscles, etc. We adopt the words of a reviewer in saying that "*Gerrish's Anatomy* is the easiest book to teach from, as well as the easiest from which to

learn." It is "pre-eminently the anatomy for the surgeon or physician."

**Text Book of Pathology and Pathological Anatomy.** By HANS SCHMAUS, Extraordinary Professor and First Assistant in Pathological Institute, Munich. *Translated from Sixth German Edition* by A. E. THAYER, M. D., Instructor in Pathology in Cornell University Medical College, New York. *Edited with Additions* by JAMES EWING, M. D., Professor of Pathology in Cornell University Medical College, New York. *Illustrated with 351 Engravings, including 35 Colored Inset Plates.* Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 602.

This "text book is entitled to the popularity it enjoys on the continent." It is the only book we know that gives interest to the dry subject for study—pathology. The practitioner can read it with interest, and the college student is made to realize on almost every page the practical bearings of the subject. We believe great good has been done the science of pathology among English speaking people by the excellent translation by Dr. Thayer and the useful editorial additions by Dr. Ewing. So far as we can see, all the important principles and facts that should be brought before pathological students are embodied in this book. The volume contains a "condensed statement of present knowledge (of pathology and pathological anatomy), amplified with a rich array of aptly chosen instances and references," and with properly illustrative drawings, etc. This work, as soon as examined, must become the text book in colleges, etc., for the student can understand it as he reads.

**Handbook of Materia Medica, Pharmacy and Therapeutics.** By SAMUEL O. L. POTTER, A. M., M. D., F. R. C. P., Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco; Major and Surgeon of Volunteers U. S. Army, etc. *Ninth Edition. Revised and Enlarged.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Large 8vo. Pp. 951. Price, \$5 net.

Each edition of this work—first issued in 1886—has been an improvement on its predecessor, until now the book makes itself indispensable to the practitioner because of the vast amount of information within its covers, systematically arranged so as to be easily accessible. It is a book without "padding"—the inside

covers, even, being utilized for useful tables frequently needed by doctor, pharmacist and student. This *handbook* includes "the physiological action of drugs, the special therapeutics of disease, official and practical pharmacy, and minute directions for prescription writing." As compared with the former edition, this ninth edition contains 60 or more new articles, while many of the old articles are entirely rewritten for this last edition. Very marked additions of value are noted in Part III, on "Special Therapeutics," in which diseases are alphabetically arranged, and appropriate remedies and their doses are given. Much constantly useful information is also given in the *Appendix*, occupying about 30 pages, giving a full "list of contractions and Latin phrases used in writing prescriptions, with the corresponding English equivalents," "hypodermic formulæ," constituents of many "patent medicines," "tables of differential diagnosis," of forms of Bright's disease, cancer, and numerous other conditions also alphabetically arranged, "table of specific gravities," composition of chlorodyne, etc., etc.

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## Editorial.

### The Virginia Legislature

Is in session. There is no time to lose for the doctors to inform their representatives in the House of Delegates and Senate as to the purposes and merits of the bills to be introduced. We trust the committees of the Medical Society of Virginia are all earnestly at work.

### Erratum in Report of Surgeon General U. S. Army.

In the *Report* for the fiscal year ending June 30, 1902, on page 43, the death rate from all causes is incorrectly given as 19.94 per thousand. It should read 13.94 per thousand. The figures are correctly given in Table I, page 148.

### Messrs. Sharp & Dohme.

These manufacturing chemists have just established a St. Louis house at 119 South Fourth street. The names of the five cities in which they have chief offices are: Baltimore—their original home—New Orleans, Chicago, New

York and St. Louis. Their laboratories are mostly in Baltimore; and their general offices are in New York city. But inquiry addressed to either of the five chief offices will find its proper destination. There is nowhere to be found a more reliable firm than Sharp & Dohme.

### The Medical News Visiting List for 1903

Is ready for distribution by the publishers, Messrs. Lea Brothers & Co., Philadelphia and New York. It is issued in four styles: *Weekly*, dated for 30 patients; *Monthly*, undated for 120 patients a month; *Perpetual, Undated*, for 30 patients weekly a year; and *Perpetual, Undated*, for 60 patients weekly a year. This last style consists of 256 pages of blanks; but the other three styles contain 32 pages of useful data, including an alphabetical table of diseases, with approved remedies, table of doses, section on urinary examination, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, a full page plate showing at a glance the incisions for ligations of the various arteries—an invaluable guide in emergencies. It is printed on fine tough paper, suitable for pen or pencil, and durably bound in seal grain leather, wallet shaped, with pocket, pencil and rubber. Either style, \$1.25; with thumb letter index, 25 cents extra. Its carefully adapted blanks enable the doctor to note clinical details of every-day work; also charges and receipts, and to unburden the memory of that which can be better carried on paper.

### The Washington Post-Graduate Medical School

Is a new medical school for post graduates, to be begun in January, 1903, at Washington, D. C., with Dr. George M. Sternberg, Surgeon General U. S. Army, President of the Board of Directors; Dr. J. Ford Thompson, Vice-President; Dr. George M. Kober, Secretary and Treasurer. Drs. Walter Wyman, Surgeon General U. S. Marine Hospital Service, P. M. Rixey, Surgeon General U. S. Navy, R. M. O'Reily, Surgeon General U. S. Army, A. B. Richardson, Supt. Government Hospital for Insane, Samuel S. Adams, Edward A. Balloch, Swan M. Burnett, H. L. E. Johnson, Joseph Taber Johnson, E. A. DeSchweinitz, Sterling Ruffin, Wm. C. Woodward, etc., are among those interested in the design. Their far more than national reputation assures success. Oppor-

tunities are unlimited for clinics and post-graduate instruction in medicine, and we have often wondered why such an institution had not before been established in Washington, D. C.

### Epidemic Cerebro-Spinal Meningitis and Diphtheria

Are among the diseases which seem to threaten the Middle Atlantic States this winter. Diphtheria is bad enough; but thanks to recent therapeutic discoveries, this disease is being shorn of its fatal terrors. Parke, Davis & Co., H. K. Mulford & Co., and others are supplying the profession with diphtheria antitoxin that seems to hold that disease measurably under control. But with reference to epidemic cerebro-spinal meningitis, which seems to be measurably spreading eastward and westward from the Alleghany range of territory, we are as yet not so well qualified to treat. Its antitoxin serum treatment thus far has not met the hopes of practitioners in general. We call attention to the prevalence of these two diseases especially because with the means of rapid travel now existing the case infected hundred of miles away may be the contagium bearer to homes nearer to us in less than a week. Keep prepared to recognize these diseases on sight, and begin treatment at once.

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### Obituary Record.

#### Dr. Charles M. Strickler

Died at his home at Hinton, Rockingham county, Va., October 28, 1902, from typhoid fever. He was born near Strasburg, Va., some thirty-five years ago, graduated in medicine 1892, and after passing the Medical Examining Board of Virginia, located at once at Hinton, Va., where he became widely known as a leading practitioner of his section. His widow and an only child survive him.

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#### Useless.

Doctor—I want to percus your liver.  
Patient—Divil a bit o' good'll that do, doctor; faith, an' I've bin eussin' that same ould liver for farthy years.



# THE Virginia Medical Semi-Monthly.

(FORMERLY VIRGINIA MEDICAL MONTHLY.)

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\$2.00 a Year.  
10 Cents a Copy.

## Original Communications.

### SOME PHASES OF ALBUMINURIA.\*

By WILLIAM S. GORDON, M. D., Richmond, Va.,  
Professor of Practice of Medicine, University College of Medicine.

Neither the subject of this paper nor the conclusions arrived at are new but the following cases may throw additional light upon certain mooted points in connection with the appearance of albumin in the urine.

*Case I.*—A healthy looking young man of good physique and excellent habits was examined for life insurance, and informed that his urine contained a trace of albumin. My examination confirmed the discovery and revealed a few small hyaline casts. The patient's mother suffers from gout, and he himself has had slight manifestations of uricæmia. He had been exercising vigorously at boat rowing. A quiet life and regulation of his diet resulted in a prompt disappearance of the morbid urinary conditions.

*Case II.*—A young man, apparently in good health, applied to me for life insurance examination. The urine contained a trace of albumin. He was a free meat eater. Restriction of the diet to vegetables, fruits, and easily digested articles caused a disappearance of the albumin, an increase of flesh and strength, and a marked improvement in physical and mental vigor.

*Case III.*—A young man was refused insurance on the grounds above mentioned, and placed himself under my care. He was troubled with intestinal indigestion. Regulation of his diet, meats being interdicted, was followed by marked improvement in his health and a normal condition of the urine. In this case there was, in addition to a small amount of albumin, an abundance of octahedral calcium oxalate crystals. His father, who indulges rather freely in

flesh food, has albumin and casts in his urine at present.

*Case IV.*—A young man of nervous temperament and with a tendency to hypochondriasis, was found to have intermittent albuminuria. After repeated examinations of the urine, I discovered uric acid and small hyaline casts. His general appearance was indicative of perfect health. He had been quite an athlete. The measures adopted in Case II, and the assurance that he did not have chronic or acute nephritis, resulted in the establishment of normal urine.

*Case VI.*—A young man—a physician—consulted me for slight albuminuria, which, he stated, was intermittent and ordinarily present only after assuming the upright position. I failed to find albumin or casts on several examinations. His life required a good deal of physical exertion. The usual treatment produced the usual results.

*Case VII.*—A young professional man came under my treatment for albuminuria. Casts were present at intervals. Strict dieting produced little difference in his condition. A faint mitral murmur of insufficiency was finally detected. Rest was followed by almost complete return of the urine to the normal.

*Case VIII.*—A young primipara, who has been under my observation for some weeks, and has had considerable renal disturbance, was delivered a few days ago of a dead born child at the beginning of the ninth month. The induction of labor had been contemplated, but was postponed on account of the subsidence of mild uræmic symptoms. At the time of labor the urine contained one-half volume of albumin and a number of casts, mostly hyaline, but partly granular and epithelial. The urea amounted to fifteen grains in the ounce, and had been increasing along with the albumin. Nature intervened and settled the question of responsibility.

Several of these cases illustrate what has been variously termed physiologic, cyclic, intermittent, periodic, and functional albuminuria. Al-

\* Read before the Richmond Academy of Medicine and Surgery, November 25, 1902.

bumin is, at times, accidentally discovered in the urine, and doubtless has frequently been present and disappeared without producing symptoms that could be recognized either by patient or physician. The condition has come and gone like a thief in the night; but the questions arise, has any loss been entailed or any damage done, and what were the circumstances favorable to the thief's visit? There are careful clinicians and pathologists holding the views that transient and slight albuminuria is physiological, but the more I study these cases the more am I convinced that albumin in the urine, whether it be in small amount or of short duration, is pathological.

Let us take a reasonable, scientific view of the question. If a meal over-rich in proteids be ingested and albumin be found leaking out of the renal blood vessels in the glomerulus, it would seem that two pathological processes are taking place—first, imperfect digestion and assimilation, with its necessary attendant, faulty metabolism; and, second, an impairment of the epithelium in the capillary tuft or the enclosing capsule. Physiology teaches and proves that complete or partial anemia of the tuft is followed by albuminuria; and it appears reasonable to believe that albumin does not occur in urine unless the secreting and excreting renal structures are morbidly affected. If this be true, physiological albuminuria is a misnomer, whether it be the result of functional disturbance or of organic changes. Function is physiological; impairment of function is pathological in the correct acceptance and definition of the term.

In studying the cases cited it will be observed that too much exercise, too much proteid food, nervous disorder, cardiac disease, and bodily position, were responsible, either singly or combined, for the albuminuria. In one instance the patient's safety valve action of the right heart relieved him of cardiac or pulmonary congestion, but caused a passive renal congestion. In another instance mitral insufficiency, so faint as almost to defy detection, resulted likewise. Another patient was irritating his kidney epithelium with crystals of uric acid and calcium oxalate. In every instance, the physiological processes of the body were more or less crippled, and the consequence was a morbid or pathological condition, no matter how slight, how transient, or how harmless for the time it lasted.

If, accordingly, transient albuminuria is not to be regarded as a normal occurrence, then it

should be regarded as an indication of disordered health, and should receive the careful treatment of the physician; for there are good grounds for believing that the frequent recurrence or the long continuance of such conditions will eventually lead to permanent and possibly organic disease. In every case of albuminuria diligent search ought to be made for its various causes, and the examiner for life insurance, in particular, should not recommend an applicant who has ever a trace of albumin in his urine on the ground that it can be considered a physiological condition.

In a letter received recently from the medical director of a life insurance company, the writer expresses his belief that a certain number of cases of slight albuminuria are due to unconfessed or unrecognized syphilis. That this disease may produce amyloid degeneration of the kidney is well known, and some authorities claim that specific infection is responsible for certain cases of cyclic, intermittent or slight permanent albuminuria. On the other hand, we have just seen that many other causes can be assigned. My own belief is that a large proportion of the cases under discussion are due to uricacidemia or to some kind of gastro-intestinal disorder.

The last case reported is interesting from the fact that, contrary to what is usually observed in such patients, the urea and albumin both increased in amount. The problem to solve related not so much to the danger of eclampsia, for uræmic symptoms, as stated, had disappeared, but to the probability of persisting renal disease after the uterus was emptied. We are all convinced that albumin and large casts may be present for some length of time in the urine and disappear, leaving a healthy kidney; and that absence of albumin and even of casts is occasionally noted during the course of chronic interstitial nephritis. I can recall a marked illustration of the latter truth, the patient having uræmic insanity, yet the urine being at intervals free from albumin and casts. We are thus led to believe that albumin and casts may not be of serious significance, but that diminution of urea is always to be regarded as a dangerous condition, although the system may tolerate considerable amounts of this excretion product.

It may not be amiss, in this connection, to express my belief that the experiment of injecting urea into animals in order to prove its comparative innocuousness is unscientific and untrustworthy. Let urea be injected into a human

subject whose kidneys are diseased and unable to excrete it, and I venture to assert that a prompt exhibition of its injurious effects will follow.

Another truth, it seems to me, is taught by this case of pregnancy. It is that albumin is, in a great measure, taken from the blood in the glomerulus of the kidney, and that urea is excreted from the neck of the tubule around which the second set of vessels are entwined. Such is the teaching of physiology, proven by experiment and corroborated by pathology and clinical observation. Albumin and hyaline casts are not desirable and ought to receive immediate attention, but decrease in the amount of urea is the most important sign in the pathology and treatment of renal disease.

#### DISCUSSION.

*Dr. Greer Baughman* was impressed with the question of the importance of the diminution of urea in albuminuria. He had seen not a few cases in which this diminution was the diagnostic point depended upon. Referring to the presence of albuminuria and casts in the pregnant, he called particular attention to the fact that, although the patient might escape serious consequences in the first and second pregnancies, as the number increased evidences of disease of the kidneys surely would be found. Even if the urine returned to the normal condition, the kidneys would not be absolutely healthy.

*Dr. Ramon D. Garcin* was particularly struck with the possibility of even traces of albumin bearing on life insurance. He agreed with *Dr. Gordon*, though he did not always reject the applicant unless the causative condition warranted him for doing so. Recently he had read an article in which it was stated that not one of the applicants who had had albuminuria had lived out his expectancy. *Dr. Gordon's* case of pregnancy was unique. He agreed with the statement of *Dr. Baughman* regarding the production of renal disease by succeeding pregnancies, and mentioned a case in point.

*Dr. A. G. Brown, Jr.*, stated that in making a differential diagnosis of albuminuria, four points were to be considered—first, physiologic or cyclic albuminuria, the existence of which was very much to be doubted; two, extra-renal causes, which might be found in a number of cases—viz., chyle, seminal discharges, blood and pus from the urinary tract, etc.; three, albuminuria with no very great renal involvement—e. g., anemia, purpura, scurvy, lead poisoning,

etc.; fourth, Bright's disease in various forms, and other marked kidney changes.

*Dr. Gordon*, in concluding the discussion, said that albuminuria in itself might pass away and do no harm, but that it always meant something pathological. The subject of life insurance was extremely important; and to examiners it was often embarrassing to determine when to reject and when to recommend. The cases had to be studied a long time. A slight albuminuria enabled one to suspect that there was something back of it, and therefore it behooved us to examine the urine carefully to check the disease in its incipency. *Dr. Baughman's* point as to albuminuria in pregnancy was a most valuable one. In his own case, with the excretion of fifteen grains of urea daily, he did not fear eclampsia; but what would be the condition of the kidneys hereafter? Albumin was still being excreted two days after delivery. He was retained in a case in which there had been previously threatened eclampsia. Urinary examination made before the third labor revealed granular casts and a trace of albuminuria; but the case was watched closely, and delivered normally, the casts and albumin having in the mean time disappeared. He agreed with *Dr. Baughman*, and warned his patients not to become pregnant until repeated examinations showed normal urine. Even then one could not always tell whether or not the kidneys were sound.

### SEVERE HEART DEPRESSION AFTER USE OF (SMALL) IMMUNIZING DOSES OF DIPHTHERIA ANTITOXIN.

By LEWIS HOLLADAY, M. D., Orange, Va.

In the treatment of diphtheria, antitoxin has, beyond all doubt, been the means of saving a vast number of lives, and possesses an undoubted prophylactic value. But the following experience lends emphasis to the occasional note of warning sounded in regard to its dangers.

Having a case of diphtheria to which a number of persons had been more or less exposed, I gave each person so exposed an immunizing dose—500 units—of antitoxin.

In the case of *J. G. W.*, age 26 years, a few seconds after receiving the injection in his arm, he felt a tingling sensation extend down the flexor surfaces of both thighs, followed, in a few

minutes, by profuse watery discharge from nose and a feeling of faintness, with labored respiration. All of these symptoms growing rapidly worse, he came into the next room, whither I had gone, and informed me that something was wrong with him. His face and eyes were swollen, congested, gait staggering and breathing labored, and he complained that he could not see. I gave him a gill of whiskey, which was at hand; this he drank with apparent effort, the congestion of the face soon gave place to a deathly pallor, and later to cyanosis—this was especially marked about the finger nails—and he fell back upon a sofa pulseless and apparently lifeless. I quickly crumbled gr. 1-50 of nitro-glycerin in his mouth and gave him subcutaneously nitrate strychnia gr. 1-20 and digitalis gr. 1-60. In a few minutes he revived sufficiently to speak, and complained of a constricting band around his chest. A faint pulsation could be detected in the temporal artery; but none whatever at the wrist. Extremities were perfectly cold and covered with a profuse, clammy sweat. I had large mustard poultices applied to the wrists, ankles and over the chest, and gave an additional 1-100 gr. nitro-glycerin by mouth, and strychnia gr. 1-40 with digitalis gr. 1-60 subcutaneously—in the mean time having had his entire body surrounded with hot bottles. In a little while the depression, at first so marked and profound, became somewhat less, and his condition slowly improved.

From the time he was taken, it was nearly, or quite, half an hour before any pulsation could be felt in the radial artery, and for a much longer time he complained of the fearful sensations of having a constricting band forged around his chest—this impeding his respiration. His mind seems to have been perfectly clear, except for the minute or two when the flickering candle seemed entirely gone.

I had just injected into my own person one-half the contents of the same bottle from which he was injected—each of us receiving 500 units.

As I felt no ill effects whatever, the trouble could hardly have been with the antitoxin, but was evidently due, I think, to some idiosyncrasy of his own. It is possible, and even probable, that had he had diphtheria, the toxins of the disease would have neutralized the serum and prevented any such alarming result.

I believe antitoxin to be our sheet anchor in the treatment of diphtheria, but I report this case to emphasize the fact that this remedy is

not as absolutely harmless as some writers would have us believe, and to advise care and caution, especially when using it purely as a prophylactic agent.

*Orange, Va., December 2, 1902.*

## CRETINISM, WITH REPORT OF CASE AND TREATMENT.\*

By S. T. A. KENT, M. D., Ingram, Va.,

Ex-Pension Examiner for Halifax County; Member County Board of Health, etc.

Cretinism is a chronic disease of nutrition due to absence, loss of, or impairment of function of the thyroid gland.

The symptoms depend to a great degree upon the length of time the patient has been affected and the age at which the disease has developed, but mainly upon the absence or varying degree of involvement of the functions of the thyroid gland.

Cretinism differs from most other diseases in that it is to be recognized by signs rather than symptoms. The most prominent alterations concern the surface of the body, and are thus readily visible, so that the recognition of a case should be easily possible by a physician who is at all familiar with the disease.

Where it commences at, or soon after birth, the disease is rarely diagnosed before the child is six months old. After the sixth month the signs become prominent. The child does not grow as rapidly as it should, either physically or mentally. Its tongue gradually becomes too large and protrudes between the teeth. The skin loses its soft texture and normal color, becomes thick, dry, swelled and scaly; the skin rarely pits on pressure and lacks the glistening, waxy appearance of edema due to renal disease. The hair is apt to be scant and coarse; the eyebrows and eyelashes are often thin, or perhaps entirely lacking. The face has a look of old age, with sometimes a toad-like aspect. The eyelids are puffy, leaving a narrow slit through which the eyes can be seen. The nose is depressed between the eyes, while the *ala nasi* are thick. The ears are thick, causing them to stand out from the head. The lower lip is

\* Read before the Thirty third Annual Session of the Medical Society of Virginia, held at Newport News, Va., September 23-25, 1902.

everted and swelled. The teeth come through very irregularly and are afterward apt to be ragged and decayed. The second set of teeth are slow in coming, and like the first, are apt to be diseased and of abnormal shape and size. The abdomen is large and pendulous, with often an umbilical hernia. The limbs are short and stunted—the skin lying in thick folds on the arms, legs and face. Hands and feet are short and pudgy and undeveloped; fingers and toes stiff and stand apart as a result of the morbid condition of the skin. The complexion is usually pale. Fontanelles are apt to remain patent beyond the normal term. Muscles of the body are weak; and, in consequence, the child cannot support its head, which is inclined to roll around like that of a new born babe. Goitre may be present, but usually palpation fails to reveal the presence of the thyroid gland. The mental condition of the patient is as poorly developed as the physical; the patient is usually apathetic, lacks interest in persons, places or objects—often not recognizing its parents. If the child attempts to walk its movements are slow, and there is a lack of co-ordination owing to general paresis of the muscular system. The face is immobile, and there is dullness of expression and action. The child exhibits no desires except for food, and manifests its hunger and thirst by inarticulate cries. It is usually constipated. These children may have convulsions, but they are not pathognomonic.

#### DIFFERENTIAL DIAGNOSIS.

In *ricketts*, we have no thickening of the skin; there is beading of the ribs with enlarged epiphyses of the long bones.

In *idiocy* not due to thyroid deficiency, we usually see no retardation of physical growth. The head of an idiot is apt to be smaller than that of a cretin, with low, receding forehead.

#### ETIOLOGY.

All forms of cretinism are due to absence or atrophy of the thyroid gland, or to some disturbance of its function. As to why the absence or atrophy of the thyroid should produce this condition we are unable to say, as the function of the gland is not at all understood. Time forbids that I should go more fully into the etiology or into the pathology of the disease.

#### PROGNOSIS.

Since the introduction of the thyroid treatment the outlook for cretins, especially the sporadic cases, is bright.

I wish to report the following case:

K. G., male; born July 8, 1900. Family history nil, except one first cousin on paternal side and a very distant relative on maternal side were affected somewhat like this child—both dead years ago. These cases may have been cretins, although the diagnosis cannot be certain.

Except for nervousness, K. G. seemed to be a normal child until the fifth or sixth month of age, when its parents, on account of its nervous, restless condition, were led to seek medical advice. I found the child very nervous, obstinately constipated, with tightly adherent prepuce. I operated upon it for the phimosis, breaking up all the adhesions, expecting thereby to relieve the nervous trouble. The child, at that time eight months old, would notice and take a watch held before it, and grasp at a flower. Keeping the child under observation, I could readily see that it was losing rather than gaining in mental power. Its neck became so limber that it could not support its head at all; its tongue began to thicken until its mouth was full, and it protruded between its lips; its under lip was thick and pendulous, and by the time it was ten months old it had sunk down into a condition of complete mental darkness.

About this time it began to have nervous, crying spells, lasting usually four or five days, and recurring about every thirty days. During these spells it was almost impossible to get it to sleep, and it would have very peculiar nervous seizures, a condition of emprostotonos, from which it could be easily aroused, only to relapse into that condition again in a few minutes. This restlessness and crying could be readily controlled by small enemata of bromide of soda and chloral hydrate.

In April, 1901, I put this child upon the thyroid treatment, commencing with one-seventh grain of the extract twice a day. From the first bottle of extract which I used I obtained no results, and as it had a slightly offensive odor, I discontinued it, and put it upon the extract ordered directly from Armour & Co., of Chicago. I gave the same dose as at first, and at once there was marked improvement of all the symptoms.

Its teeth began to come through, though they were very irregular. Its tongue returned to its normal size and thickness; its mind made wonderful improvement, and its bowels became regular. There has been no appreciable rise of temperature above the normal from the use of

the extract, and with the exception of some trouble it had incident to teething, and one severe spell of la grippe during Christmas, 1901, its favorable progress has been continuous.

The extract has been gradually increased, until now it is taking one grain three times a day. Once last summer, when it was taking half grain doses, the extract had to be discontinued, owing to the rapid loss of flesh, but it was soon commenced again in third grain doses, and there has been no other bad effect.

There is one very peculiar condition in this case not common to cretins—i. e., its nervousness.

In conclusion, I would like to warn you gentlemen to be very careful as to the freshness and reliability of the extract you use, for upon it may depend the success of your treatment of this very distressing disease.

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### CASE OF XERODERMA PIGMENTOSUM.\*

By LEWIS WHEAT, M. D., Richmond, Va.,

Professor of Skin and Venereal Diseases, University College of Medicine, Richmond, etc.

The extreme rarity of cases of xeroderma pigmentosum makes it a matter of importance and interest to present the case before us.

This little white boy, James Kelly, aged seven years, first came under the observation of Dr. John Dunn, of Richmond, Va., for stricture of the œsophagus, caused by swallowing concentrated lye, when only four years old. Dr. Dunn recognized the eruption upon the body of his patient, made the correct diagnosis, and then referred the case to me for treatment, etc.

You will notice that the patient is greatly undersized for his age—weighing only thirty-five pounds—and presents the appearance of being greatly emaciated.

The disease first made its appearance as a rosy blush, which extended over those parts exposed to light. The dorsal surface of the hands from the wrist down over the fingers, the face and neck down to the collar line, and the legs from the knees down, are the surfaces covered by this peculiar eruptive disease, which is said

\*Reported at the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, September 23-25, 1902.

to be congenital—nearly all cases begin to develop by or before the second or third year of life. The palms of the hands and soles of the feet are exempt from this eruption, as also the skin just under the chin, the ala of the nose, and the folds just under the eyebrows.

This eruption increases for about three weeks, and then commences to scale in dirty, dark brown patches. The skin under this scaling patch presents a shrivelled appearance, from which one of its synonyms—namely, “old man’s skin”—is derived. These attacks of the eruption come on with fever; and each desquamation leaves the skin more deeply pigmented. At first, these erythemátous patches look like sunburnt areas, which, after a time, become brown or black, freckle-like spots. In time these pigmented spots give place to white atrophic ones, and, as Jackson describes it, the skin becomes too small for the underlying parts; so that it appears drawn, and in some places bound down.

The pathology of this disease is undoubtedly carcinomatous—microscopical examination having shown this. I intend to use the X-ray as a possible means of satisfactory treatment. So far, under any other treatment, the disease has been regarded as incurable.

The disease is extremely rare—only about a hundred cases—if quite so many—having been reported up to date in medical literature. Kaposi discovered and named the disease in 1870, and wrote more at length upon it later on.

The prognosis is unfavorable—with a tendency to develop carcinomatous or epitheliomatous ulcers.

The rarity of this disease, its eventually fatal prognosis in nearly all cases, and the peculiarities of the eruption are the causes of my inviting your examination of this case. You will notice that skin usually covered by clothing has not been discolored.

619 East Franklin St.

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**PRIMARY INTRINSIC SARCOMA OF THE LARYNX.\***

By WILLIAM F. MERCER, M. D., Richmond, Va.,  
 Instructor in Otology, Laryngology and Rhinology in the University College of Medicine, Richmond, Va.,

In presenting this paper, I do so more for the purpose of placing on record an interesting case of *Primary Intrinsic Sarcoma of the Larynx*, than to add anything original to the already voluminous literature of the subject of malignant growths of the larynx. I trust it may not be uninteresting also on account of the exceedingly rare occurrence of this form of laryngeal growth.

It is extremely difficult upon clinical grounds to account for the comparative rarity of this form of laryngeal neoplasm. The great confusion that has taken place in the nomenclature and classification of malignant growths in the larynx in the past may in some degree help to explain this; as may also faulty histological records. It is probable, however, that in the future a more accurate and careful nomenclature, based upon the actual cell-structure seen, will furnish more valuable and less ambiguous statistics upon so important a point.

Some idea of the frequency of laryngeal invasion by sarcoma as compared with that of other regions of the body may be had from the report of Gurlt,<sup>1</sup> who made an analysis of all the cases of sarcoma which had been recorded in two of the largest hospitals in Vienna. He found 848 cases of the disease, and in but one instance was the larynx the sight of the growth. In the same institutions there were recorded 9,554 cases of carcinoma, 62 of which had invaded the larynx. More recent and accurate statistics, however, show the proportion of laryngeal sarcomata to carcinomata to be much greater than this; Mackenzie placing it at 1 to 13, and Bosworth giving the proportion as 1 to 25. Jonathan Wright,<sup>2</sup> quoting from Bergeat, has compiled the most complete and exhaustive review of the reports of cases of sarcoma of the larynx yet published. This was correct up to 1896, and is as follows:

Laryngeal sarcoma, primary.....	85
Laryngeal sarcoma, secondary, by continuity	10
Laryngeal sarcoma, secondary, by metastasis	2
Doubtful .....	17
<hr/>	
Total .....	114

To this has been added one case by Chappell and one by Thompson. In a recent letter from Dr. Wright, he tells me that Castleberry, of Chicago, has since reported one case.

As sarcoma is a malignant growth developed upon the type of connective or meso-blastic cell-tissue, numerous modifications of the simple round and spindle cell forms occur; in the larynx, however, the only varieties recorded are: one, Round cell sarcomata; two, spindle cell sarcomata; three, chondro sarcomata; fourth, myxosarcomata; the spindle cell form being generally considered the most malignant and showing a greater tendency to recurrence, whilst the other varieties grow more slowly.

Heredity does not seem to play so active a part in the causation of this disease as it does in carcinoma. In many cases the development of the growth seems to have been preceded by some slight local inflammatory trouble, and in persons who use their voice a great deal. Again, the disease develops without any apparent cause, and in patients enjoying perfect health. From the careful statistics of Bergeat<sup>3</sup> it is seen that the disease occurs much more frequently in men than in women, occurring 10 per cent. more frequently. It has been observed at all ages, the youngest patient being 7 years old, and the oldest, 51; but occurring twice as frequently from 50 to 60 as in other decades. A curious fact has been noted by him also, in that it occurs more frequently in people who come often in contact with horses. An etiological factor which has engaged the attention of laryngologists of late is that of the mechanical irritation of simple benign laryngeal growths by instruments and caustics in the endeavor to remove them. It is practically impossible by laryngoscopic examination in the primary stage of the great majority of laryngeal neoplasms to differentiate between a benign and a malignant growth: many sarcomata appearing much like simple pappillomata. The removal, endo-laryngeally, of small pieces of the tumor for microscopical examination certainly appears to stimulate its growth, and it is the opinion of a large number of eminent authorities that this irritation will often cause a transformation of a benign to a malignant neoplasm. That this transformation in growths in the upper air passages does take place there can hardly be any doubt, for we cannot disregard the great number of reports of such cases made by most competent observers. At the State Society meeting held at

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

Charlottesville two years ago the author reported such a case, in which this transition apparently took place in a growth in the upper air passages, a naso-pharyngeal fibroma transforming into a sarcoma, probably from the effect of repeated cauterizations; the microscopical examinations being made at intervals of two years by most competent men each time. So strongly do some authorities condemn the practice of removing small pieces of the growth for microscopical examination that they say it should never be done; J. N. Mackenzie<sup>4</sup> stating that "the removal of a fragment for examination generally so stimulated the (malignant) growth that it marked the beginning of the end"; this is especially true in carcinomata and almost equally so in sarcomata of the spindle cell variety. Mackenzie says further on this point: "As to the removal of a piece for microscopical investigation, it must be said that the patients were at once exposed to the danger of auto-infection or metastasis. There was also the danger of stimulation of rapid increase of the neoplastic area. The method was unsatisfactory, inconclusive, misleading and often impossible."<sup>5</sup> Sarcoma of the larynx may have its origin in any part of the organ, but the most frequent sight is on the vocal cords; next on the ventricular bands, and next on the epiglottis. In 48 cases collected by Bosworth, the growth originated 16 times on the vocal cords, 9 times on the ventricular bands, and 5 times on the epiglottis. On the vocal cords and epiglottis the spindle cell variety was almost the exclusive form found.

The symptoms which sarcoma of the larynx give rise to present no peculiarities, but are referable mainly to the impairment of its functions; either showing as a slight hoarseness or complete aphonia at first, and as the growth increases interference with respiration. Cough is sometimes present, due to the thick ropy secretion, and, as the growth enlarges, from attrition ulcerations or erosions occur, from which slight hemorrhages may take place and the sputum be tinged with blood. Pain is very rarely present. Sarcomata show a tendency to grow slowly, but cases have been reported in which the growth was exceedingly rapid, as in the case we shall present, the tumor nearly filling the calibre of the larynx in a little over two months. According to most authorities, sarcomata rarely infect the lymphatics, thus showing less tendency to generalization than carcinomata, and, as a rule, this occurs only in the latter stages after extensive ulcerations have taken place.

Sarcomatous growths in the larynx generally appear of an irregular rounded outline, sometimes of pinkish, "but generally of grayish semi-opaque color." Sometimes sarcomata are pedunculated. By laryngoscopic examination it is quite impossible to distinguish between a sarcoma and a carcinoma, and frequently as difficult to differentiate them from a benign growth, but as the disease progresses and the growth increases, and the surrounding tissues become infiltrated, there is, as Bosworth says, "always something in the aspect of a malignant growth in the larynx which, while difficult to describe, presents an appearance of malignancy which, to the practiced eye, is not easily mistaken." Ulceration rarely occurs in sarcomata of the larynx, this being the rule in the latter stages of carcinomata. Absence of enlargement of the cervical lymphatics is also a diagnostic point in favor of sarcoma. The positive diagnosis can only be made by the aid of the microscope.

The prognosis is necessarily very grave; the anticipation of life is, however, somewhat longer in sarcoma than in carcinoma, except in the case of very young patients. Without operation, the disease is always fatal.

The treatment is purely surgical, the choice of the surgical procedure depending entirely on the location and size of the growth, on the amount of infiltration of the surrounding tissue, and also on the general condition of the patient. If seen in the early stages and the growth is small and well defined or pedunculated, and not located in the median line, removal, endo-laryngeally, may be justifiable and possibly successful. In the majority of cases there is so much involvement of the surrounding tissues that more radical measures are demanded—either tracheotomy, thyrotomy, or laryngo-tracheotomy, or partial or total extirpation of the larynx. Complete extirpation or laryngectomy,<sup>5</sup> being attended with such an exceedingly high rate of mortality, about 90 per cent. involving great risk of death from pneumonia, future respiration through an artificial aperture, temporary nourishment through a stomach tube, and generally utter inability to speak except by the aid of an artificial larynx, is not performed so frequently now as formerly. In the hands of British<sup>6</sup> surgeons of late, resection of one-half of the larynx or partial laryngectomy has been done with a far less mortality rate (being only about 45 per cent.), and possesses these great advantages; deglutition is not impaired, an artificial larynx is not required, nor even after a few



days a tracheotomy tube, and a very fair and serviceable voice is generally restored.

*Case I.*—James Brooks, colored; age, 57 years; weight, 140; height, 5 feet 5 inches; referred to me by Dr. J. W. Henson. Family history, so far as ascertainable, good. Father died at age of 85, and mother at advanced age, from some heart trouble. Patient's previous history good. Twenty-five years ago had some form of continued fever; since then has only lost ten days from work. Has never had syphilis. He has been only a moderate drinker, and does not use tobacco. He is an exceedingly muscular man, and has for the past twenty-five years done very hard work as packer of goods in a railroad supply house. He has a small reducible inguinal hernia on left side.

I first saw the patient March 13, 1902, when he complained of hoarseness, which had continued for two months, and was gradually getting worse. He stated that on January 2d he was engaged in bailing water out of cellar and was continually hallowing to the passers-by, his feet, arms and chest were wet the whole day; the next morning, when he awoke, he was quite hoarse, and there was some slight soreness about his throat. This he considered to be a simple cold, and treated as such, but as the hoarseness continued he consulted his family physician, who treated him for a short while and then referred him to me. On laryngoscopic examination I found the epiglottis, the arytenoid cartilages and ventricular bands normal, but the right vocal cord somewhat congested and reddened, and springing from its edge and under surface, about one-third of its length from the ant. commissure, a smooth, pinkish-red tumor about the size of a large green pea, there was not much swelling or redness of the cord or surrounding mucous membrane. The left vocal cord was perfectly normal, and on phonation the cords came promptly together, the top of the small tumor just showing between them.

The larynx below the cords was normal, and the rings of the trachea could be plainly seen, as the patient has quite a large larynx and trachea. The voice was very rough and hoarse. The tumor had the appearance of a simple papilloma. To eliminate the question of syphilitic origin, he was put on increasing doses of potassium iodide. I did not see the patient again for three weeks, when he presented himself at the clinic of the Richmond Eye and Eye Infirmary. He had continued the treatment only

two weeks. Examination showed that the tumor had increased much in size, involving more than one-third the length of the cord, from just back of the ant. commissure, growing downward below the glottis, and was three times as large as when first seen—not quite so pink, but more a grayish red color, smooth and ovoid in shape, with its long axis antero-posteriorly, and covered with a thick, ropy mucous secretion. His voice was of a rough, coarse whisper, and there was some slight difficulty in breathing, especially when lying down. He was again put on rapidly increasing doses of pot. iodide, and take up to 60 drops of sat. solution three times a day. Being a case of such unusual interest, he was seen by many of the specialists in Richmond. The general opinion was that the tumor was a fibroma, and should be removed at once. The patient declined to have any operation performed, but the growth gradually increasing and his dyspnea becoming more distressing in the course of two weeks, he at last consented. His respiration was then much embarrassed from the slightest exertion, and particularly at night he would be awakened by a suffocating feeling, and there was some difficulty and pains on swallowing; there was also some cough, due to the thick tenacious secretion.

The growth now nearly filled the lumen of the larynx below the cords—some general congestion and redness of the whole interior of the larynx, and some swelling and boggy of the right ventricle. There was no enlargement of the cervical lymphatics.

April 26, 1902, at the Virginia Hospital, assisted by Drs. J. W. Henson and Clifton Miller, the anesthetic, chloroform, being administered by Dr. W. W. Dunn, and several other throat specialists being present, a laryngo-tracheotomy was done and the growth removed—with the patient in nearly the Trendelenburg position, the head hanging well over the edge of the table and held by an assistant. An incision was made in the middle line of the neck from just below the hyoid bone down to the supra-sternal notch, the larynx and trachea down to the fourth ring was exposed, the isthmus of the thyroid, which was very large and vascular, was pushed down, the hemorrhage, which was small, was completely stopped, and the trachea was opened through the first and second rings, and the cannula introduced. There was little or no embarrassment to the patient's respiration on opening the trachea; but there was considerable hemor-

rhage from the mucous membrane lining the trachea. None of this was drawn into the lungs, however, and, in fact, gave no trouble, readily flowing away through his mouth, showing one great advantage of this position for operations of this nature. The tracheal canula was then stitched in position, and gauze packed around and above the curve of the canula, and the trachea shut off entirely from the larynx. The incision was then extended up in the middle line, cutting through the laryngo-tracheal membrane, the cricoid cartilage, the thyro-cricoid membrane, and about one-fourth the way into the thyroid cartilage, when the growth came into view. It was seen to be attached to the edge and under surface of the right vocal cord by a short, thin, broad pedicle. It was grasped with slender forceps and a cold wire snare slipped over it and cut off close up to edge and under surface of the cord. There was no hemorrhage, and as there did not appear to be any swelling or infiltration of the cord or the tissue beneath it, nothing else was removed. The edge and under surface of the cord was then cauterized with pure carbolic acid, followed by absolute alcohol. The gauze packing was then removed from the trachea and the larynx stitched up, one suture being passed through the cricoid cartilage and three others through the deep fascia only. The tracheal canula was removed on the third day, and the opening closed with one suture. There was no difficulty in swallowing, and the patient made an uninterrupted recovery, and left the hospital in two weeks, when he could speak in a hoarse whisper.

The tumor was ovoidal in shape, smooth, of a grayish red color, and measuring in its long axis 6.5 c. m., and in its short 4.5 c. m., in circumference. It was about the size and shape of a small hickory nut, flattened. In a week after leaving the hospital examination of the larynx showed the line of incision in the larynx and trachea healed perfectly smooth, but the right cord and ventricle and ventricular band considerably congested and swollen and boggy-looking. I was much discouraged at this, and watched the larynx very carefully. This redness and boggy appearance continued to increase, and at the sight of the tumor there sprang up a growth, but of a much lighter color, being yellowish red. This continued to grow slowly. The voice was quite hoarse. No glandular enlargements in the neck, and the patient's general condition good. On June 10th, the growth then being about as large as the end of my little finger and

about one-fourth inch high from the side of the larynx, I thoroughly cocaineized the larynx, and by means of a long curved cold wire snare cut it off close down to the cord. This I succeeded in doing at the first attempt, and was very fortunate in cutting it off so close down to the side of the larynx. Then, with chromic acid fussed on the end of a long applicator, I cauterized the base of the tumor thoroughly. All the boggy-ness and swelling of the ventricle and the cord began to subside very rapidly, and in three weeks' time the larynx appeared normal, and the patient's voice was fully restored. He has gained some in flesh since then, and is apparently perfectly well.

The report of Dr. A. G. Hoen, to whom the tumor was submitted for microscopical examination, is as follows:

PASTEUR DEPARTMENT  
OF THE UNIVERSITY COLLEGE OF MEDICINE.  
Dr. A. G. HOEN, Director.  
Richmond, Va., May 15, 1902.

Dr. Wm. F. Mercer, Richmond, Va.:

Dear Doctor,—The tumor sent me for microscopic examination proves to be an "encapsulated large spindle-celled sarcoma." Before sectioning, its appearance was ovoidal, measuring in its long diameter 5½ c. m., in its short, 3½ c. m. (circumference).

*Capsule.*—This was quite dense, its microscopical appearance being that of dense fibrous tissue, which at a few points was infiltrated with small round cells (probably of an inflammatory nature).

*Tumor.*—The structure of the tumor proper was almost entirely composed of large spindle cells, running in strands, interlacing each other in every direction.

*Vascularity.*—Its vascular supply was rather scant, and there were numerous spots, large and small, where a form of hyaline degeneration was manifest.

*Nuclei.*—Many of the nuclei were undergoing karyokinetic changes, a number of the figures being of an asymmetrical type, which, according to Hanseman, Klebs and Galeotti, are almost diagnostic of malignancy.

A. G. HOEN.

313 West Grace St.

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Anxious old lady (to bow-legged boy)—Here little boy! Stand back from that bonfire—your legs are warping dreadfully!

## THREE CASES OF APPENDICITIS.

By T. M. BAIRD, M. D., Sweet Springs, W. Va.

I report these cases of appendicitis to prove conclusively that a patient attacked with this disease, even though he may live in the country several miles from the railroad, and several hundred miles from an operator, may yet be saved by an operation.

*Case I.*—J. H. McD., age 58. On May 22, 1901, I was called to see this man, who said he was suffering from an aggravated attack of colic. It seems that for fifteen years he had been subject to attacks of "colic," so diagnosed by his family physician. His general health had not been good for years, and he suffered much from constipation. I diagnosed his case recurrent appendicitis, and from symptoms presented feared a fatal termination if an operation was not performed at once. He agreed to an operation, and I wired Dr. Stuart McGuire, of Richmond, Va., to come at once with a nurse. On account of high water Dr. McGuire did not arrive until 7 P. M. the following day, thirty-two hours after I first saw the patient. A few minutes after arriving, Dr. McGuire operated. We found a battle scarred appendix incased in an abscess cavity filled with about two ounces of foul smelling pus. The patient stood the operation beautifully, his temperature dropping from 103° Fahr. just before the operation to 99.2-5° Fahr. four hours after. At 1 A. M., May 24th, the patient commenced to vomit and hicough almost constantly, and kept it up, with but short intervals of rest secured by hypodermics of morphine, until his bowels were moved five days after the operation was performed.

It was out of the question to think of giving a cathartic, for his stomach rejected everything, so I commenced giving enemata twelve hours after the operation, afterwards high injections every four hours, with negative results until May 28th. At 6 A. M., I secured a free evacuation of the contents of the bowels, with an entire cessation of the hicough and vomiting. The patient made a slow recovery after this, being able to leave his bed nine weeks after the operation. He now looks and feels better than for years, and can eat anything without a fear of the "colic."

*Case II.*—Mrs. B., age 27, was suddenly taken ill with pain in the right iliac fossa on the evening of July 3, 1902. Previous health good,

I diagnosed the case acute appendicitis, and sent for Dr. A. C. Jones, of Covington, Va., to confirm my diagnosis. He arrived that night, and agreed with me that if the patient's condition was not materially improved by noon the following day an operation was necessary. Her bowels were kept open with liquid sodium phosphate, and morphine was given hypodermically to relieve pain, while an ice bag was kept continually over the affected part. As the patient seemed to grow worse instead of improve, I wired for Dr. Stuart McGuire, who arrived the day following with nurse. At 2 P. M. he operated. Dr. J. W. Wallace, of Covington, Va., administered chloroform. The case proved to be a catarrhal one without complications. Just previous to the operation her temperature was 102.3-5° Fahr., six hours after it was 99° Fahr. She made an uneventful recovery, and one month from the date of the operation, with assistance, walked down stairs to a meal.

*Case III.*—C. G., age 22. On May 25, 1902, I was called to see this patient, whom I found to be suffering from a violent attack of acute appendicitis. I prescribed opium to relieve pain, and ice cold applications locally. The next day the patient was much worse. I continued the opium, cold applications, and prescribed liquid sodium phosphate to keep the bowels freely open. On June 3d, I discharged him. On July 2d the patient, while exerting himself became suddenly ill with nausea and pain in the right iliac fossa. I prescribed for him as in the previous attack. On account of press of business I could not see the patient again until July 6th. In the mean time the patient had been ably treated by Dr. B. L. Carter, of Blue Spring Run, Va., with the assistance of Dr. J. H. Ferguson. When I saw him on July 6th he was almost moribund. The peritonitis was general, pulse 190, temperature 104°, respiration 36. His bowels had not been moved for three days, so I prescribed liq. sodium phosphate 5j every hour until a free evacuation took place; opium and ice locally, and whiskey and strychnine every two hours. After the bowels were freely opened the patient commenced to improve, and slowly recovered from this attack. Fearing a recurrence, I sent him to Richmond, and Dr. Stuart McGuire operated on him at the Virginia Hospital before his class on October 4th. In four weeks he returned home, and is now well and strong.

## A PLEA FOR THE MORE FREQUENT USE OF ACCOUCHEMENT FORCE.\*

By CHRISTOPHER TOMPKINS, M. D., Richmond, Va.,  
Dean and Emeritus Professor of Obstetrics, etc., Medical College  
of Virginia, etc.

*Accouchement force* is defined to be forcible delivery either with the finger and hand or by metal instruments. Of late years, however, this term has come to be considered or to mean a method of rapidly dilating the os and cervix uteri, followed by the quick emptying of the uterus and its contents. It is used in cases where induction of premature labor is required, as in contracted pelves and in uræmic poisoning; or to hasten the act of labor when it is essentially important to terminate it as soon as possible, as is often the case with puerperal convulsions, placenta previa, etc. Occasions like these—such as are above enumerated—are not infrequent in the life of the busy practitioner, and, to be dealt with successfully, require immediate action on the part of the physician. It is therefore important that he be well prepared to meet the emergency, should it arise. Two lives—the mother and that of her child—are in jeopardy; delay and hesitation might be fatal to either or to both. The doctor, therefore, should have fixed in his mind what he would do at such a time, and thereby be enabled to act at once.

It is my purpose, not to treat of this subject fully, but to say something of my experience in dealing with such difficulties in the hope that other members of the profession present may do likewise. In such a way, and in such a way only, can there be obtained a consensus of opinion, and thus be formulated a definite form of action.

I will limit myself to the consideration of such cases as occur when labor has not set in, but has to be induced, and to those where labor is eminent, or in its first stage—the os only partly dilated—and where the viability of the child can reasonably be expected, which, roughly speaking, is on or about or after the woman has completed seven months of pregnancy.

As a result of many deliveries of this kind, I have only had one fatal case. In this instance both the mother and child perished. The subject was a lady advanced in age—thirty-nine or forty years old—had been married thirteen

years, and, except an abortion (which occurred about two years after marriage, when she was two and a half months pregnant), had never conceived before. At that time the patient was in the hands of another practitioner. I saw her when the abortion was quite old. From what I could gather, the uterus had not been well cleaned out, and septic metritis followed, from which, after a long illness, she seemingly recovered. That recovery, however, was never complete was evidenced by the presence of more or less continued tenderness and pain over and in the hypogastric region.

When eight months gone in pregnancy—I refer to the illness which caused her death—she was suddenly seized with convulsions, after an aggravated attack of indigestion and cramp colic from eating imprudently the night before. The urine had been examined three days previously and found to contain no albumin. I saw her in about twenty minutes after the first spasm. On catheterization the urine was then found to be slightly albuminous. Digital examination revealed the os to be soft and patulous. She was chloroformed, manual dilatation was practiced, and in a few minutes was, by podalic version, delivered of a large still-born child, which, in spite of efforts to resuscitate it, never breathed. The secundines were delivered and the uterus re-examined. It was found to be intact except a slight tear in the cervix, and was well contracted. The lady herself, after coming from under the anæsthetic, was, for a few minutes, conscious. She was then again seized with repeated convulsions, and in about one hour died—the remedial measures resorted to appearing to be of no avail. Her case was one of those rare ones of accumulation of urea where no albumin was present on examination of the urine—fulminating in convulsions. She died, it is true, but I, at least, had the melancholy satisfaction of feeling that before she died I had done for her what I thought was best, and what had, in my experience, saved many others similarly affected.

The case but shows that ours is not an exact science, and that even the most scientific practice will fail at times. It ought not to offset, and did not in my mind offset, the good results of similar treatment in many others troubled in the same way, whose lives were saved. In obstetrical literature, if searched, will be found many cases of this kind not treated by accouchement force, but which resulted in death. I am

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

glad to be able to say that in all of my other cases so situated and so treated, without exception, the mother's life was saved, and in the majority that of the child also. Some of these cases appeared to be very desperate, and were of a kind which commonly resulted in death in spite of all other known treatment, even when in the hands of the most reputable practitioners. I make no special claim for my own skill in dealing with them, but I do claim that, comparatively speaking, unusual and great results can be obtained by practicing this method of delivery.

I will now give a short synopsis of a few cases. They are, except in result, not extraordinary in character, but are what any good doctor can reasonably hope to accomplish when using this plan.

Mrs. Y. C. A., age about twenty-five, primipara, at term, first pregnancy, her own physician unexpectedly out of city, swollen, anasarca all over the body, dull, apathetic, mumbling delirium, had eaten very imprudently; urine, with heat and nitric acid, solid in test tube—the tube can be inverted without disposition of contents to fall out. On examination, found os closed and no labor pains. Anesthetized; os and cervix uteri dilated with fingers and hands, child delivered by podalic version; mother and child both did well; complete recovery.

Mrs. C. H. S., multipara, age about thirty-eight years; when about seven months gone, urine scant and albuminous; continued to grow worse until eight months had gone. when the urine was solid in the tube on boiling, and the use of nitric acid; secretion not more than half pint daily; marked hebétude. Anesthetized; os and cervix uteri dilated with fingers and hand; quickly delivered by podalic version of twins; mother and children both did well; complete recovery.

Mrs. A. E., multipara, age about thirty-five years; urine albuminous at about six months pregnancy, till when eight and a half months gone, it was nearly solid in tube on boiling and use of nitric acid; total secretion in twenty-four hours not more than six ounces. The usual uremic symptoms developed. Anesthetized; os and cervix uteri dilated with fingers and hand, twins quickly delivered by podalic version; mother and children both did well; complete recovery.

Mrs. T. F. W., primipara, thirty-seven years old; uric acid diathesis, imprudent eater. Show-

ed albumin in urine when six months gone in pregnancy. Continued to grow worse as substantially related of the above cases. When seven months advanced in pregnancy, urine solid in tube on boiling and use of nitric acid; determined to deliver. Os and cervix uteri dilated as above described; found vertex presenting, finished delivery with forceps. Twenty-four hours later mother had two convulsions, which yielded to treatment. She gradually improved, and finally made perfect recovery; the child lived about eight hours, and, apparently, died of immaturity and uremic poisoning.

Mrs. S., multipara; pelvis contracted; never had child born alive. After measuring the pelvis, advised premature labor at end of seven months' pregnancy. Bougies introduced between amniotic bag and inner wall of the uterus; after twenty-four hours they were removed. The os and cervix uteri dilated as heretofore described. Bag of water ruptured. Child delivered by podalic version. Mother and child both did well, and both made a complete and uneventful recovery.

These cases could be multiplied until they reached a considerable number. They are, however, typical, and sufficient to serve the interest of this paper, and I will not weary you with repetition.

In conclusion, I wish to say that in all probability that the operative character of this treatment and its name have much to do with its infrequent use. Much of this prejudice may, perhaps, be dispelled by informing our patient that, although it is an operation, no knife is used, and, indeed, generally no instrument except the hand. Usually I have found after this explanation the patient and her family no longer object, but readily submit to what has been advised. No particular strength of fingers or hand is needed in the dilatation; the os and cervix uteri being muscular tissue, yield gradually in the presence of continuous pressure. Tears of the os and cervix uteri, and of the perineum are more common than in normal labor. None such have occurred, however, in my experience of a dangerous character; when they do occur, they should be treated in the usual manner.

Before closing, I also would suggest that in conditions as grave as these, if time will permit, and the emergency is not too great, a consulting physician ought to see the case and share in the responsibility of its management. The family ought to be informed of the dangerous nature

of the illness, and have explained to them the fact that not to interfere would cause our interesting patient and her prospective offspring to be the almost sure prey of death.

116 East Franklin Street.

After reading the paper, Dr. TOMPKINS exhibited an instrument—"Gan's Obstetrical Dilator"—used for the forcible dilatation of the os and cervix uteri. Though commending it on general mechanical principles, he stated that he had never had occasion to use it—having always been successful with his fingers and hand in the cases described.

Dr. EDWARD RICKETTS, Cincinnati, Ohio, called attention to the fact that the inventor, whose name he recognized, was a native of Cincinnati.

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## Analyses, Selections, Etc.

### Sublamine as a Hand Disinfectant.

Dr. H. Fueth, assistant in Prof. Zweifel's Gynecological Clinic, at Leipzig University, in a "Contribution to the Subject of Hand Disinfection," details the excellent results obtained from four series of animal experiments made with ethylenediamine citrate of mercury. The hands were infected with a virulent culture of tetragenus organisms (the method is given in detail), disinfected with soap spirit (by Mikulicz's process), and the skin scrapings administered to some guinea pigs by intraperitoneal injection; they all died from tetragenus infection, as did some control animals. The same process was employed previous to and after disinfection with mercury citrate ethylenediamine, but none of the animals developed tetragenus.

In discussion, Dr. Græfe asked if mercury ethylenediamine citrate is identical with sublamine.

Dr. Fueth answers that sublamine is mercury ethylenediamine sulphate. It has been chosen because it can be prepared in pastil form; this cannot be accomplished with the citrate.

Dr. Græfe: I have been very glad to employ sublamine. In contrast to corrosive sublimate, my hands stand it very well, and I do not get eczemas from its use.

Dr. Zweifel, replying to a query as to the

cause of the comparatively high cost of sublamine, states that it is due to the fact that the ethylenediamine contained therein is an alcohol derivative.

Dr. Krœnig: I think that the preparations demonstrated to-night very beautifully illustrate the value of animal experimentation in the question of hand disinfection. I cannot acknowledge the cogency of Schæffer's objection that the animal experiment needlessly introduces into the question a new factor—the virulence of the bacteria employed. Virulence is indeed a variable quantity in different tetragenus cultures, but this is of no importance, since all biological experiments are comparative only. This is a fact that cannot be too much dwelt upon. In all our experiments, therefore, where it was in any way possible, we have only compared results which were obtained with the same tetragenus culture. Schæffer's criticisms seem to me to have the less weight, inasmuch as not only does the virulence of the bacteria vary from culture to culture, but also the resistance and other conditions, a fact which has perhaps been taken too little into account in previous experimentation.

I believe I can claim that our series of experiments are well calculated to solve those questions which are of importance to the clinician. For, since it has been abundantly demonstrated that complete germ freedom of the skin is an impossibility, the practitioner wants to know the method by which his hands, contaminated with infectious material, may be so sterilized as to reduce the danger of infection to a minimum if a second operation should be necessary. Our experiments, as Dr. Fueth has demonstrated, show plainly that a purely mechanical disinfection, even with Schleich's marble soap, lately so highly advocated, is entirely insufficient.

It is a fact, as Dr. Græfe has stated, that sublamine is dearer than corrosive sublimate; but in practical employment this is compensated for by the fact that no alcohol is employed, as is the case with the Fuerbringer method.

Dr. Bumm: I think that we must leave Fuerbringer the credit of having introduced a disinfection method which is one of the best we have. I am quite ready to admit that sublamine may be several per cent. better, that the hands are left in a nicer condition, and that it is more efficient than the older drug. But the Fuerbringer method is an excellent one as compared with that by means of marble dust and green

soap.—*Centralblatt für Gynecologie*, September 27, 1902.

### Diseases of the Ribs Following Typhoid Fever.

Dr. J. Shelton Horsley, of El Paso, Texas, read a paper before the Southern Surgical and Gynecological Association, held at Cincinnati, Ohio, November, 1902, on diseases of the ribs following typhoid fever. He reported the case of a man forty years of age, in whom disease of the left sixth and seventh costal cartilages, the anterior end of the sixth rib, and part of the sternum developed a few weeks after convalescence from typhoid. The abscess had been opened and later the resulting sinus curetted before the patient came under Dr. Horsley's care. Then two extensive resections, involving a portion of the sixth rib, the costal cartilage of the sixth and seventh ribs and part of the sternum had to be performed before cure was effected.

Attention is called to five peculiarities that differentiate post-typhoid disease of the ribs from similar affections of other bones:

(1) The marrow of the ribs is a particularly favorite seat for typhoid bacilli.

(2) The superficial position of the ribs and their continuous movement make a *locus minoris resistentiæ* more liable to occur here.

(3) Necrosis of the ribs very rarely occurs, which is not the case with other bones.

(4) Post-typhoid disease of the ribs invariably occurs in adults.

(5) Thorough operative treatment is more difficult in the case of the ribs than of most other bones.

A table containing 48 cases, gathered from literature on the subject and personal communications, was appended to the paper. Analysis of the table shows 47 cases of men and seven women. This is accounted for partly by the fact that men being more frequently subjects of typhoid, and also by the fact that, owing to the mammæ, the blood supply of the ribs is better in women, and consequently there is greater resistance to infection.

The youngest case is a man 19 years of age; the oldest 69 years. Peritonitis and osteomyelitis are the most frequent diseases.

In the matter of treatment conservative measures are advised in mild cases. If these are unsuccessful, incision and curettage is advocated, and if, after a few weeks, the wound has not healed, extensive resection, going well into apparently healthy bone, should be practiced.

He also demonstrated a new holder for Gigli saws. The holder consists of a steel arch with a handle at each end. By means of a set screw at one end and a traction hook at the other any desired tension can be obtained on the Gigli saw; when stretched tight it may be used as an ordinary saw, or to cut convex surfaces, as in resection of the knee joint. When used as a chain saw, one end is fastened with the set screw, and the other, after being passed under the bone, is hooked on the traction hook. By taking up or letting out "slack" with the set screw any desired angle may be obtained.

### Points of Similarity and Difference in the Onset of Typhoid Fever and Appendicitis.

Dr. Wm. Francis Campbell, Professor of Anatomy, Long Island College Hospital, etc., read a strong paper on this subject during the meeting of the Associated Physicians of Long Island, October 18, 1902, which we find in the *Brooklyn Medical Journal*, December, 1902. He says that appendicitis is conceded to be a surgical disease. To treat it medically is to play a game of chance. Radical removal is the rational remedy.

Appendicitis does not simulate other diseases, other diseases simulate it. In this class, typhoid fever plays an important role.

Classical typhoid does not simulate appendicitis, but an atypical variety seemingly presents many of the features of appendicitis. Atypical typhoid is not rare, and is often found in ambulatory cases. In such cases we may have apparent sudden onset, diffuse tenderness in the right iliac region, elevation of temperature, increase of pulse. Such a group of symptoms naturally direct one's mind to the appendix.

In differentiation, consider—

1. *The History*.—Close and careful investigation will usually show that the apparently sudden symptoms were really preceded by days or weeks of certain prodromal symptoms, like headache, backache, malaise, etc., unrecorded by the patient and almost forgotten in the sudden abdominal symptoms. In appendicitis, there are no prodromata. The attack is sudden, abrupt, acute in a patient previously well.

2. *Pulse and Temperature*.—To put it tersely, the point of impression in typhoid is the temperature; in appendicitis, it is the pulse. True, we have elevation of temperature in both, but the relation of pulse to temperature is the important point. *In typhoid*, the pulse is rela-

tively slow in relation to temperature; in *appendicitis*, it is usually rapid, and if the *appendicitis* continues, remains rapid though the temperature may come down to normal.

3. *The Tongue* in typhoid is usually characteristic. It is the dry, glazed tongue never seen in *appendicitis*.

4. *Pain and Tenderness* are similar in both affections—sudden abdominal pain localizing in the right iliac fossa. We may not get the pointing of pain so sharply defined in typhoid as in *appendicitis*, but there is no point of appreciable differentiation in the pain. The *tenderness* in typhoid is a general regional tenderness; in *appendicitis*, you can often put the finger over a particular point of tenderness. Concisely stated: In *typhoid*, general tenderness of particular region; in *appendicitis*, special point of tenderness in particular region.

5. *Muscular Rigidity*.—Of the three cardinal symptoms of *appendicitis*—pain, tenderness and rigidity—rigidity is frequently of most value in differentiation of other diseases from it. In the 15 cases of atypical typhoid studied, rigidity of the right rectus is not once recorded. Sometimes a "general rigidity," and again, "a boardy feel" to the abdomen have been recorded in typhoid. But this absence of right rectus rigidity in other abdominal lesions simulating *appendicitis* is very characteristic; so that we may regard rigidity of the right rectus muscle as a symptom of much importance and indicative of appendicial inflammation.

6. *The Blood*.—Blood examination is of inestimable value. Cabot says: There are few diseases in which the blood count is so often of value in diagnosis as typhoid. The blood count is to determine the presence or absence of a leucocytosis. Local inflammatory processes have leucocytosis. *Typhoid does not*. Though chart and symptoms may point to typhoid, persistent leucocytosis means an inflammatory focus. In 45 cases of *appendicitis* in the Massachusetts General Hospital, leucocytosis was found in every case. This means of diagnosis is too little used to be appreciated. It will often confirm what other symptoms suggest.

The Widal reaction and the serum test of typhoid are purposely omitted in this discussion, since the former is of little value at the onset, and the latter of variable value in adults.

No isolated symptom can make a diagnosis; a proper number of suggestive symptoms are necessary for conviction. Of these, rigidity of

the right rectus and a blood count are the most important points of diagnosis in favor of *appendicitis*, and are most decisive.

Tabulated symptoms are often of value and helpful when rightly used. A *Table of Differentiation* of symptoms in typhoid fever and *appendicitis* might read as follows:

TYPHOID FEVER.	APPENDICITIS.
Previous history (prodromata).	No previous history.
Onset only apparently sudden.	Onset really sudden.
Tongue dry and glazed.	Tongue coated.
Temperature elevated (stationary).	Temperature elevated (fluctuating).
Pulse slow in relation to temperature.	Pulse rapid in relation to temperature.
Pain in right iliac region.	Pain in right iliac region.
General tenderness of a particular region.	Special point of tenderness of particular region.
Rigidity general if present.	Rigidity confined to right rectus.
Leucocytosis absent.	Leucocytosis present.

### Coca in Nervous Depression, as Heart Tonic, etc.

It is now nearly half a century since Angelo Mariani, a pharmaceutical chemist of Paris, France, cleverly blended the properties of the marvellous coca leaves with a nutrient wine. This was prompted through the phenomenal action of coca upon the Audean Indian, who is supported by its use through the most arduous trials to which mankind can be subjected. Long after this early adaption, the potent quality of the several alkaloids of coca were made known to the physiologist, proving the wisdom of this selection, and Vin Mariani is accepted throughout the world by conservative physicians as a worthy tonic-stimulant the merit of which has been confirmed through the severe tests of time. It embraces the true qualities of the whole coca leaf, selected under special facilities and scientifically preserved in a mild and wholesome wine. In fact, coca has been termed the panacea for the ills of overtired humanity. It has been therapeutically classed as a nervous stimulant, but unlike any other substances, its use is not followed by depression. Primarily it affects the cerebral cells, but with this, it has a depurative influence on the blood, and because of this, renders the possibilities for repair in every organ of the body favorable. Owing to the subtle action of coca on the muscular structure, it has rightly been advocated in disease of the heart associated with muscular deficiency.



Unlike digitalis, it does not simply increase muscular power—an effect which, in certain cases, might be a disadvantage; but by a chemo-physiological change induced in the muscular substance, it aids toward repair.

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## Book Notices.

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**Practical Obstetrics.** By EDWARD REYNOLDS, M. D., Visiting Surgeon to the Free Hospital for Women, etc., and FRANKLIN S. NEWELL, M. D., Assistant in Obstetrics and Gynecology in Harvard University, etc. *Illustrated with 252 Engravings and 3 Colored Plates.* Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 554. Price, \$3.75 net.

The authors some years ago published a non-pretententious book aimed only at rendering the technical details of obstetrical practice accessible to the student. Its favorable reception and the advice of friends have induced the authors to present the work now before us—"a text-book for practitioners and students." While it is dogmatic in its teachings, still it may be relied on that the dogmatism relates almost wholly to well established facts. Its paragraphs are terse and to the point. Its description of facts and statement of theories based thereon are made in clear, easily intelligible language. Seldom, indeed, have we found descriptions so complete, and diagnostic points so clearly brought out in a few words, and the line of treatment of special conditions so graphically drawn within limited space as in the book before us. It is a reliable teacher, a practical guide for the practitioner, and a generally useful work.

**Development of the Human Body—a Manual of Human Embryology.** By J. PLAYFAIR McMURRICH, A. M., Ph. D., Professor of Anatomy in the University of Michigan. *With 270 Illustrations.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Small 8vo. Pp. 528. \$3 net.

To every student mind it will ever be a source of interest to trace the development of human body from the moment of the fertilization of the ovum, through all the developmental changes in utero, and its growth after birth. But so much of dry detail is to be encountered in such a study that unless the teacher can keep the pupil's at-

tention fixed upon the purpose of each developing part of the human organism, the study is apt to be dropped with merely a superficial understanding of the principle enunciated by Virchow—*omnis cellula a cellula*. To Professor McMurrich must be awarded the honor of bringing out the most attractive book on the subject of human embryology—the only continuously readable book—that we know of. There is not a chapter of even the heaviest detail or description that his pen has not made interesting and instructive. While, of course, best suited for the student doctor of medicine and the college student, such a book will be profitable instruction to the man who applies himself to natural sciences, to biology, to the general reading man, etc. Such a book cannot be reviewed in the limited space at our disposal, but it can be and is unreservedly commended.

**Guide to Practical Examination of Urine.** For Use of Physicians and Students. By JAMES TYSON, M. D., Professor of Medicine in University of Pennsylvania, and Physician to Hospital of the University, etc. *Tenth Edition. Revised and Corrected, With Colored Plate and Wood Engravings.* Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. 12mo. Pp. 297. Price, \$1.50 net.

Dr. Tyson has found it necessary to issue his book on Practical Examination of Urine for the tenth time. Since the book first made its appearance, over 25,000 copies have been published, although comparatively little special advertising, and no canvassing, have been done. When the book is carefully examined, the reason for the cordial reception it has received at the hands of the profession is easy to be seen. The author is a characteristically clear writer, and his books on Urine Analysis, Practice of Medicine, and Physical Diagnosis, are standard. In his book on Urine Analysis he makes many suggestions as to causes of failure in certain tests, etc., at the same time mentioning how these errors are to be avoided. In speaking of the various tests and methods of examination, he gives his personal views as to their value, and tells which give him his best results. Among other things of interest we note that he says: "I have never been very partial to the modifications of Fehling's solution, suggested by many chemists, because I have never found them any more satisfactory or reliable, and I deprecate multiplying tests unless there is a distinct advantage in the new one suggested." The whole

make-up of the book gives it an "air" of practicability, and we like it very much. Dr. T. Mellor Tyson, the author's son, has assisted in the preparation of this new volume.

**Compend of Human Physiology—? Quiz Compend?** No. 4. Especially Adapted for Use of Medical Students. By ALBERT P. BRUBAKER, A. M., M. D., Adjunct Professor of Physiology and Hygiene in Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Anatomy and Physiology in Drexel Institute of Art, Science and Industry, etc. *Eleventh Edition. Revised and Enlarged.* With Illustrations and a Table of Physiologic Constants. Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. 12mo. Pp. 270. Price, 80 cents net.

Although this little book is called a quiz compend, and is—because of its small size—evidently intended to meet the needs of the student and practitioner as a hasty reference book when there is but little time to consult the larger works, we find the usual easy reading arrangement of the standard text-books. Heavy black type and italics are abundantly used at the beginning of paragraphs and elsewhere to indicate in general the subject matter under consideration. Dr. Brubaker's physiology—now issued for the eleventh time—is well and favorably known to most doctors, but to those who are unacquainted with its merits, we would say that its small cost—eighty cents—is not in proportion to the general usefulness of the book, nor to the great amount of information it contains.

**La Peste Bubonique dans la Republique Argentine et au Paraguay. Epidemics de 1899-1900. Rapport Presente au Department Nationale d'Hygiene.** Par les Docteurs LUIS AGOTE et A. J. MEDINA, Inspecteurs delegues du Gouvernement Argentin. Buenos Ayres: Felix Lajouane, Editeur. 1901. Paper. Large 8vo. Pp. 300.

We have been in the habit in the United States of feeling a little too secure against leprosy, bubonic plague, etc. But we must not forget that even now homes for the lepers have to be provided in this country, and that bubonic plague has occurred in the ports of New York and San Francisco. It was a new disease in the Argentine Republic in 1899-1900, when it also spread over Paraguay. It was then that the disease appeared to be so threatening that the Argentine Republic, through its Department of Hygiene, delegated Drs. Luis Agote (Rue Cordoba, 1420), and Arturo J. Medina (Rue San

Jose, 151), both of them physicians to the Rawson Hospital, of Buenos Ayres, to study and to report on the epidemic of bubonic plague on the South American continent. Their work has been well done, and is embodied in the publication before us. Chapters I-V, inclusive, relate to the importation of the plague into South America and its march through different sections, which form the historic side of the "pesee"—so far as its occurrence in South America is concerned. But the chapters of greatest interest to practitioners of medicine generally are VI, VII and VIII, which relate respectively to symptomatology, treatment and prophylaxis. An appendix of about 70 pages reports some cases and gives the autopsies. The three chapters referred to afford an immense deal of original information as to the symptomatology and diagnosis of the disease—its treatment and prophylaxis. These chapters to book makers will long form the basis of their descriptions of the disease in its manifold forms, and will serve as the guide for treatment—especially emphasizing the value of serum treatment and "vaccination" (?) with serum that has been deprived of the true germ of the disease, which proves more or less prophylactic. But our object is accomplished if we point to this report as a work of great value to governments in the protection of the seaports, etc., and to the practitioner for the excellent and graphic description of the disease, and for the report of the results of treatment—especially by serum therapy. The authors have accomplished a praiseworthy and ever useful work for the profession and the public generally.

**Genito-Urinary and Venereal Diseases.** By LOUIS E. SCHMIDT, M. Sc., M. D., Associate Professor of Genito-Urinary Diseases, Chicago Polyclinic, etc. Cloth. 12mo. Pp. 250. With 21 Engravings. Lea Brothers & Co., Philadelphia and New York. 1902. \$1 net.

This is one of Lea's Series of Medical Epitomes, edited by V. C. Pedersen, A. M., M. D., recently Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, of City of New York, etc. The systematic yet practical character of this book, as a sample of the series, makes it exceedingly useful to the doctor in search of practical truths and suggestions, while for the student reviewing for examinations, etc., the system of questions appended to each chapter enables him to review

his studies in short order, and thus greatly assists him in preparing for the examination day. This is a most useful book, covering descriptions of most of the venereal diseases, and embodying prescriptions that time and experience have proven to be the best.

**A Pocket Text-Book of Dermatology.** By JOSEPH GRINDON, M. D., Professor of Clinical Dermatology and Syphilis in the Medical Department of Washington University, St. Louis. 12mo. 367 pages, with 39 illustrations, in black and colors. *Lea's Series of Pocket Text-Books.* Edited by BERN B. GALLAUDET, M. D. Cloth. \$2.00, net; Limp Leather, \$2.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This is a compact, compendious and trustworthy guide book for the practitioner as well as student—embodying the most recent developments in dermatology. As a therapeutic adviser for the doctor, it is replete with directions and valuable formulæ. Value is added to these formulæ, etc., as being in great part approved in the extended experience of the author—both in clinical work and private, special practice. The 39 illustrations—some of them in colors—are mostly drawn from photographs of cases under the author's observation, although some of the rarer diseases of the skin are illustrated by drawings from other standard authorities. The practitioner in search of a small book that is really serviceable with reference to the diagnosis and treatment of skin diseases, will find in this *Pocket Text Book on Diseases of the Skin* the work he wants.

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## Editorial.

### Series of Popular Lectures at the University College of Medicine, Richmond, Va.

The faculty has instituted a course of popular Saturday night lectures on subjects related to the professions of medicine, dentistry and pharmacy, which are attracting large, appreciative audiences of students, doctors and citizens generally. These lectures are open to the public—ladies and gentlemen as well, and great good is being accomplished by them on subjects which could scarcely come within the curriculum of either of the three departments. Attendance of the students is entirely voluntary. The first lecture of the course was by Prof. J. Rufus Hun-

ter, of the Richmond College, on the natural or physical sciences as introductory to the study of medicine. Dr. Jacob Michaux, Professor of Obstetrics, etc., University College of Medicine, etc., made the next lecture on the Schools of Practice—such as the regular, the homeopathic, the eclectic, and then reviewed some of the pretensions of quacks and charlatans—especially osteopathy, "faith curing," "christian science," etc. Dr. Geo. E. Barksdale, of the Pharmacy Faculty, delivered the next lecture on the Pharmacist and his relations to the doctor. Prof. T. A. Miller, chairman Faculty of Pharmacy, gave a lecture on how to conduct a drug store. Dr. J. N. Upshur, Richmond, Va., President of the Medical Society of Virginia, etc., delivered the next lecture on medical ethics, and he is to deliver two or more other lectures of the series on the History of Medicine. Dr. R. W. Miller, Professor of Chemistry, etc., gave the next lecture on History of Pharmacy.

### Tri-State Medical Association of the Carolinas and Virginia.

We are in receipt of the *Transactions* of the fourth annual meeting of this Association, held last February at Asheville, N. C., presided over by Dr. J. N. Upshur, Richmond, Va. With such an one as president—a conscientious, earnest, able and an indefatigable worker—aided by a corps of as untiring and progressive assistants, we are not surprised to find that this volume of over 200 pages is filled with papers of much practical interest. As an index of the good work done by this Association, and following its predecessors, this *Transactions* emphasizes the fact that there is a place and a mission for this Association in its benefits to members, and in the promotion of fraternity among the members of the profession of the Carolinas and Virginia. We feel sure that all who may connect themselves with the Association will fully appreciate these benefits. The volume of annual *Transactions* is worth more than the annual amount of dues. The next annual meeting will be held at Columbia, S. C., probably some time in February, 1903 (the exact date yet to be announced). We trust there will be a full attendance by the members of the profession of the three States especially included in the organization, and that there may be a large addition to the membership. Dr. J. A. Burroughs, of Asheville, N. C., is President; the Secretary and Treasurer is Dr. Rolfe E. Hughes, of Laurens, S. C.

As stated in the President's address by Dr. Uphur, last February, such an Association "is not antagonistic to, nor incompatible with the welfare and usefulness of our State Societies, but rather contributes to their strength and efficiency. \* \* \* It is well to cement fraternal relations with members of our profession at home and within our own borders; but it fosters useful emulation, broadens and matures a man to be brought into mental friction with our brethren in the Tri-State and National Associations, makes us feel more keenly the universal brotherhood of medical men and a greater community of interest of every kind."

### Physicians' Protective Visiting List.

Issued by The Clinic Publishing Co., Ravenswood Station, Chicago, Ill., is a "daily record of practice and accounts without the use of signs, which is the only strictly legal pocket visiting list and financial record on the market." It should be used in connection with the "Ledger of Monthly Balances and Index of Accounts." With this "Ledger," the "Visiting List" constitutes the "Physicians' Protective Accountant." The "List" consists of a ruled and letter book of 66 pages,  $7\frac{3}{4} \times 3\frac{1}{2}$  inches in size, in tough Manilla back, which is slipped in a pocket book with two pockets, and is therefore of convenient size for the pocket. The "List," on the first fly leaf, has a calendar for the years 1901, 1902, and 1903. Next comes an index of two pages, on which to record the name of patients and the number of page, etc. Then comes the "List" proper, leaving a blank for the month, with the 30 or 31 days in print on different lines. At bottom is a statement of charges and balances for the month, etc. Space is left under each date for the services made. When this List is filled, each with enough rules for 125 patients a month, it is taken out of the wallet and filed away, while another is introduced. On a fly leaf of the "Ledger," of the same size as the List, full directions are given as to how to make use of books. This "Ledger" consists of 208 indexed pages, so ruled as to admit of four accounts to the page. Following these indexed pages are 24 pages, properly ruled, of Cash Receipts for the month, with an added page for recapitulation and summary. Some 32 pages for obstetric record are added. The system of book-keeping is simple and clear. When one List is used up, slip another in its stead. The total cost of 12 of these Lists is 40 cents. A

complete outfit for the new year can be got by addressing the publishing company for \$2, which is cheap for the merits, and prime cost of the 13 books.

### Prevalence of Pneumonia.

All air borne diseases seem to be on the increase just now throughout the country. "Unseasonable weather, no matter how pleasant, is, as a rule, unhealthful weather." The unseasonable mild weather of October and the first part of November, with the deficient rainfall, the high humidity and the wind movement—while apparently providential in view of the unprecedented coal strike—are showing their effects in an increased mortality rate throughout the country.

Of all the *Health Bulletins* that come to our office the Weekly Bulletin of the Chicago Health Department is by far the best. Other cities might well adopt the methods of this department with credit to themselves and value to the profession and people. Instead of denying the existence of epidemic diseases, the Chicago *Bulletin* brings them to light conspicuously so as to keep everybody on the lookout.

With reference to pneumonia, the Chicago *Bulletin* for the week ended November 15, 1902, says: "Pneumonia is the disease causing the greatest concern at present. \* \* \* Thus far this month, there have been 152 deaths from consumption, and 164 from pneumonia—an excess of 15.5 per cent. of pneumonia deaths.

"It would seem important, first of all, to insure precautions against the spread of the disease by teaching the general public that there is always an element of contagion-danger in a pneumonia case, and certain protective and prophylactic measures are at least eminently advisable in order to avoid all danger. The secretions of pneumonia patients should be thoroughly sterilized by heat or should be subjected to chemical antiseptics. The expectoration of pneumonia reeks with bacilli. It is often received into napkins or handkerchiefs, and must not be allowed to dry and find its way into the air, but must be carefully disposed of by those in attendance on the patient. Practically the same precautions as are now invariably (?) instituted with regard to tuberculosis should be suggested for pneumonia.

"To this the department would add that the pneumonia germ is widely distributed in the atmosphere, and is, consequently, taken into the

throat and air passages of every one. It does not, however, grow and cause the disease except in persons of great susceptibility or in a lowered state of health and decreased vital resistance. Winter is the season of lowered vitality, and, therefore, of greatest pneumonia prevalence.

"The best means by which to control and avoid the disease is by securing a sound body through regular rest, diet and hours of work and exercise. Over-work and anxiety increase susceptibility, and exposure when tired is responsible for many cases of pneumonia. A "cold" should always be considered a warning that the body is not properly cared for. When a person takes cold easily, he is, as a rule, either overfed or overworked or under slept, and a proper ratio of these will greatly decrease the chances of pneumonia. *Do not neglect a cold.*"

### Christian Science in New York State.

The *Brooklyn Medical Journal*, December, 1902, reports a case that is occupying the court of White Plains, N. Y. It seems that Esther Quimby, age 7 years, was under treatment by one Lathrop, a "Christian Science Healer," for diphtheria, and the child died. Assistant District Attorney Weeks, of Westchester county, has charge of the prosecution under clause 1, sec. 288, of the penal code, which reads: "A person who wilfully omits, without lawful excuse, to perform a duty by law imposed upon him to furnish food, clothing, shelter or medical attendance to a minor, or to make such payment toward its maintenance as may have been required by order of a court or a magistrate when such minor has been committed to an institution \* \* \* is guilty of a misdemeanor."

At the inquest, it was disclosed that the dead girl's mother was ill with diphtheria, and that the girl's sister, Bessie, aged 16 years, and one of the older boys had diphtheria also. Mrs. Quimby was too ill to attend the inquest, but her husband and Lathrop, accompanied by several other prominent "Christian Scientists" of New York and Mount Vernon, were present.

Mr. Quimby testified that of his ten children three were living—the last to die being his daughter Esther. His older daughter fell sick on Sunday night. Esther was unconscious most of the time from Sunday 9 P. M., until about 8:30 A. M., Monday, when she "passed on." She did not choke, but there was some odor from the mouth. No hypodermic nor other treatment was used. She was a bright child and a

believer in Christian Science, as are all of the family. The only treatment given Esther was "Christian Science." Both the father and the mother had the degree "C. S." in Christian Science, for which they had paid \$100 at the Second church in New York, for instruction, which instruction was gleaned from the works of Mrs. Eddy. Quimby did not claim to be a practitioner, but had alleviated his own sufferings by the "Science." Mrs. Quimby, however, was a "healer," and had "healed" some of her neighbors or friends, for which she always charged. When their oldest daughter, Bessie, was taken ill, she exerted her powers, and then they employed a "healer," Lathrop, who stands "very high" in the science. He said the children had tonsillitis, and so did Quimby and wife think. Lathrop's fee was his railroad fare and \$1 for each treatment. When Quimby, on Sunday night thought Esther had diphtheria, he telephoned Dr. Birch and asked if it would be wise for him to go into the room and afterwards go to work? Dr. Birch testified that he asked Quimby how he knew that Esther had diphtheria, when he answered that the "healer" believed it was, and had advised Quimby to notify the Board of Health. Dr. Birch examined Mrs. Quimby, Bessie and the son, and found each affected with false membrane, etc. Autopsy of Esther, held by Dr. Geo. C. Weiss, revealed diphtheria unmistakably. Dr. Edward S. Newell made bacteriological examination, and found diphtheria germs in great abundance. He also testified as to the efficacy of antitoxin.

On October 30th the grand jury indicted the "healer," Lathrop, and Mr. and Mrs. Quimby on charge of manslaughter in second degree, and their bonds for appearance at the next session of the court were recognized. The indictment charges the parties with "maliciously and feloniously" causing the death of Esther, by neglecting to provide medical attendance, etc. If found guilty, the law does not allow the magistrate any latitude, but imposes a prison term of 15 years or a fine of \$1,000, or both.

Coroner Banning, who has pushed the movement against "the healers" to its present stage, looks upon the indictment as a big victory, and he is backed by the medical societies. It is not thought the accused will ask a change of venue, but it is not likely that any resident of White Plains will sit on the trial jury. What the defence of the Christian Scientists will be is unknown; but it is probable they will force the

court to show some law compelling persons to swallow medicine.

With the indictment, the grand jury delivered to the court the following presentation: "The attention of the grand jury has been called to an evil existing in the county of Westchester, which we deem a source of danger to the health of the community. Our attention has been directed to the treatment of infectious and contagious diseases by persons who are not regularly licensed physicians and surgeons, where the rules of the local and State Boards of Health are violated.

"We have given careful consideration to a complaint made to us concerning the death of a seven-year-old child from neglect, the child being treated by a so-called Christian Science healer from the city of New York, who made many visits to the home of the child, and mingled with the inhabitants of the county both upon the streets and in public conveyances. This child was allowed to die without any of the remedies known to medical science being used, and medical men called before us testified that the life of the child could have been saved had proper treatment been used and proper remedies applied.

"This so-called Christian Science treatment was used at the instance and request of the parents of the child, the father daily attending to business after nights spent in the sick room. This child was allowed to attend school while an older sister was sick in the house. The attention of the local Board of Health was not called to the case until a few hours preceding the death of the child.

"We feel that flagrant violations of the health laws in this respect should be sought out by the local Boards of Health throughout this county, and respectfully request that a copy of this presentment be sent to the State Board of Health, and to the several Boards of Health in this county, to the end that quarantine regulations be more strictly enforced and the danger of the spreading of infectious and contagious diseases be lessened."

This presentment of the Westchester county grand jury, if it does not conform to the laws of any of the other States, is so filled with common sense and good judgment that we sincerely hope to see laws enacted in such other States as will protect the people from this craze of some persons and trickery of a large number of others. Life and health are too precious to each owner of them to be trifled with by quacks, charlatans,

imposters, etc. There are too many sad stories of such impositions. For instance, Miss Louise Hoge, of Evanston, Ill., died November 12, in Washington, D. C. She had been ill for almost a month, suffering from typhoid fever, and was under treatment by a "Christian Science healer." An official autopsy was held.

It is true the *Christian Science Sentinel*, the official organ of the "healers," has ordered that "until the public thought becomes better acquainted with Christian Science, the Christian Scientists shall decline to doctor infectious or contagious diseases." But how is the Christian Scientist to diagnose between these and other diseases unless he is a student of medicine and knows the principles of diagnosis? Such imposters should all be compelled to pass satisfactory examinations before their respective State Boards of Medical Examiners.

### The Southern Surgical and Gynecological Association

Had an able and indefatigable organizer in the person of Dr. W. E. B. Davis, of Birmingham, Ala., fifteen years ago, who has just served his term as president of that Association of more than national repute. In his presidential address at the Cincinnati, Ohio, meeting, November 12th, he reviewed the history of the organization, and now advises that the Association limit its membership to 200, and that the secretary's salary—the man who does the real work of such bodies—be increased to \$500 a year. In his advocacy of special societies, he pointed out that they had wielded a wonderful influence in the medical profession, and that medical literature had been enhanced in every way by them. As individual societies they should be encouraged, but their union into a national congress would not be conducive to the best interests of the medical profession. Special societies, composed as they are of leaders in several specialties, are under obligation to the American profession to assist in the better organization of these specialties. There must be one class of membership for the section that can be held by only those who are recognized as teachers and leaders in order to make membership very desirable and sought after. The South had suffered greatly from the removal to the larger cities of the East and North of many of its ablest surgeons and gynecologists. This was due largely to the poor fees received by Southern surgeons. But with the South's great increase in wealth this condition will not obtain

in the future. He paid a tribute to the medical profession of the South, and spoke of McDowell, Sims and Battey (why omit Crawford W. Long?) as epoch makers in surgery. He also referred in glowing terms to the work of Dudley, Paul F. Eve, Warren, Stone, Dugas and Pope. Gaston of Atlanta and Maury of Memphis are yet with us. Of the many dead who have done excellent work in giving renown to the medical South in recent years, he named Hunter McGuire, Yandell, Briggs, Rogers, Sr., Kinloch, Westmoreland, Sr., Campbell, Gilmore, Nott, Martin and Richardson. The American profession had always been foremost in all that was good for the country; and after the civil war, it was prominent in its efforts to break down the barriers between the sections.

### The Physician's Visiting List for 1903

Has recently been issued in its fifth-second annual edition by the publishers, Messrs. P. Blakiston's Son & Company, of Philadelphia. We find but few, if any, changes in this last volume as compared with its immediate predecessors—there being the customary list of contents, including incompatibility, poisoning, weights and measures, dose table, asphyxia and aprœa, blank leaves, etc. There are three different styles of visiting lists published—the regular edition being intended for 25, 50, 75 or 100 patients per day or week, the perpetual edition being same as the regular, except that there are no dates; and lastly, the monthly edition, which likewise has no dates. The prices for the first style vary according to the number of patients to be registered, from \$1 to \$2.25, while the perpetual edition sells for \$1.25 to \$1.50, and the monthly at 75 cents to \$1.

### A Dangerous Swindler.

The publishers of the *Success Magazine* call attention to a swindler who is passing under several aliases, taking orders for numerous magazines. He works rapidly, jumping from town to town, and always among doctors and dentists. All the money he obtains is appropriated, and the magazines are never ordered or received. The Success Company offers a reward of \$50 for any information which will lead to the apprehension of this swindler. He is about 25 years of age, 5 feet 9 inches in height, medium build, weighs about 150 pounds, dark hair—almost black—very curly about temples, dark grey eyes—almost hazel, rather sallow complexion, with scattered dark brown

freckles; face unusually round for man of so light build; general untidy appearance for a man in the soliciting business.

### Congress of American Physicians and Surgeons, 1903.

The preliminary programme of the sixth annual meeting of the *Congress of American Physicians and Surgeons*, to be held in Washington, D. C., May 12-14, 1903, is just being issued. Dr. William W. Keen, M. D., LL. D., of Philadelphia, Pa., is the president, and Dr. William H. Carmalt, New Haven, Conn., is the secretary. Each of the presidents of the following American Associations is a vice-president: American Gynecological, Physiological, Pediatric, Ophthalmic, and Otological Societies; the Dermatological, Laryngological, Surgical, Climatological, Genito-Urinary Surgeons, Orthopedic, Anatomists, and Neurological Associations. The special subjects to be considered will be symposia on "The Pancreas and Pancreatic Diseases" and "The Medical and Surgical Aspects of the Diseases of the Gall-Bladder and Bile Ducts."

### Hospital Accommodations for the Insane.

Dr. Benj. Blackford, superintendent of the Western State Hospital of Virginia, at Staunton, one of the most efficient medical officers that that institution for the care of the insane of the State has had, is much interested in devising a plan by which the present congested condition of his asylum may be relieved. The hospital at Staunton will accommodate 1,046 patients. It is now very much overcrowded—so much so that were it not for the system of furloughing patients there would be no room for constantly incoming patients. The death rate and the discharges are not sufficient to offset the ever increasing condition of this or either of the other State hospitals for the insane.

The epileptics by all means should be separated from the wards of the other patients. Their convulsions have a very distressing effect on the other inmates of the hospital; and as more frequently than otherwise, the mentally diseased epileptics are possessed of a homicidal mania, the lives of other patients, not epileptics, are endangered by their presence. In a separate ward or building, properly constructed, these epileptics could have better care, especially during their convulsions, as they could be constantly kept under the eye of the medical attendants and nurses, and it would be much

better for all the other patients. Dr. Blackford thinks that if, instead of establishing a colony for epileptics remote from the State hospitals for the insane, separate buildings were erected at each asylum of the State for the special care of the epileptic insane, it would answer equally as well, and would occasion a much less expenditure of money.

The erection of these additions to each of the other four hospitals of Virginia would certainly temporarily, at least, relieve the congested condition of affairs which is now such a serious menace to the State. Such relief of present congestion would at least save the State from the urgent necessity of immediately building an entirely new and distinct hospital, which, however, according to recent years of increase of insanity, will be demanded in a few years.

Epileptic colonies have been established in some of the other States remote or distinct from the hospitals for mental diseases—notably in New York State. But New York is a wealthy State, and the colonies are well provided with medical attendants and nurses, etc. But notwithstanding this great expenditure of money in some of the States, the insane are not cared for any better or more humanely in those States than in Virginia. Separate buildings, etc., for the insane epileptic class on the grounds of the Virginia State hospitals would afford them as much care as could be given in the colonies.

The questions involved in the above remarks are of vital interest to every State, and we sincerely trust that due regard will be given to the views of one so experienced and valuable to the State. We believe that each of the other superintendents of the State hospitals of Virginia at least are of the same opinion.

#### **Dr. G. Frank Lydston, Chicago, Ill.,**

Has just returned from an extended tour of Australia, New Zealand, Samoa, and the Hawaiian Islands.

#### **The Medical Examining Board of Virginia**

Will meet in semi-annual session in this city December 15th (next week), for the examination of candidates for license to practice in Virginia. The examinations will begin promptly at 9 A. M., Tuesday, December 16, 1902. Dr. R. S. Martin, Stuart, Va., whose term of office as President of the Medical Society of Virginia has just expired, is Secretary of the Board; Dr.

R. W. Martin, Lynchburg, is President. The usual reports of the results of examinations will appear in due time in this journal.

#### **Scarcity of Cadavers in Indianapolis and Louisville.**

According to the newspapers, a scarcity of cadavers for legitimate purposes in medical colleges in Indianapolis and Louisville is said to be impending, and prices of bodies or "stiffs" have risen to unheard of figures. It is said that ghouls in the employ of medical colleges all over the Central States have become apprehensive for fear that a general investigation is to be made. It is said that there has been no "body-snatching" in Indiana since the investigation began. Such interruption of anatomical studies should be prevented by appropriate legislation in each State relative to the procuring of subjects for the legitimate uses of colleges, etc.

#### **The Central (Va.) State Hospital, Petersburg,**

Is one of the few hospitals solely for the colored insane in the United States. Dr. Wm. F. Drewry is superintendent, and has been continuously connected with the hospital in his professional capacity for sixteen years. A more efficient medical officer is nowhere to be found. Since the opening of the hospital near Petersburg, Va., in 1869, 4,734 cases have been admitted. Of these, 2,443 have been discharged; 1,491 have died, leaving 1,000 colored patients in the hospital at the close of the fiscal year. Of the present inmates, 486 are males and 514 are females. The hospital is filled to its normal capacity, and more room must be provided within a year, else insane negroes must be kept in the jails at great expense to the State until vacancies occur by death or discharges, etc.

#### **Dr. McGuire Newton, Richmond, Va.,**

Has returned to the city, ready to resume his professional duties, after a vacation of some six weeks spent in visits to Colorado, Utah and California.

#### **Drs. Geo. E. Wiley and L. H. Gammon,**

Of Saltville, Va., have recently purchased valuable property at Bristol, Va.-Tenn., where they will establish a large hospital, which will be conducted as a private institution. The special need of a hospital at Bristol seems to have been a long felt want.



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## Original Communications.

### NEW METHOD OF OPERATION FOR LACERATION OF PERINEUM. AND FOR RECTOCELE AND CYSTOCELE.\*

By ALFRED B. TUCKER, M. D., New York, N. Y.

The chief object of operators, since Emmett first devised his operation for laceration of the perineum and procidentia, has been to invent a method of operating to restore to their normal positions the separated fibres of the levator ani and transverse perinei muscles.

Starting from the fourchette or the beginning of the mucous membrane, between the labia majora posteriorly, the direction is upward, backward and downward in the normal vaginal inlet. After the normal continuity has been destroyed, following labor, the incomplete laceration, with the accompanying condition of constipation, causes a *rectocele*, pushing upward the posterior wall of the vagina. This condition lengthens the distance of the posterior wall of the vagina from the normally situated cervix; and as the rectocele increases, we have first a drawing of the cervix downwards and in the axis of the vagina, thus throwing the fundus uteri back into the hollow of the sacrum, forming a retroversion or a retroflexion, according to the degree of displacement and the size of the fundus. Should this condition be allowed to continue, the rectum becomes constantly filled with fecal matter, and so distended that we have a more pronounced prolapsus uteri.

In consequence of this condition, the distance between the vaginal attachment of the anterior lip of the cervix and the pubic bone becomes shorter, and the anterior vaginal wall sags, and the accompanying *cystocele* results.

The ligamentous supports of the uterus are stretched beyond the normal, and lose their

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

ability to retain the organ after it has been replaced in its natural position.

While operating before the students of the New York Polyclinic Hospital, my attention was first called to this; and during a conversation with the late Dr. Hunter McGuire, of Virginia, on the subject, he said that he had used in some of his operations a *purse string suture*. In studying the operation on the cadaver, I found, in passing the suture by the old method, through the skin into the vagina, that the skin afforded the greatest point of resistance, and consequently, when my sutures were tied, the vaginal mucous membrane was drawn out toward the skin, instead of backward.

This gave me the idea of passing the sutures through the mucous membrane of the vagina out to, but not through the skin, so as to get the greatest point of resistance within the vagina, and thus restore to its normal place the already protruding perineal flow.

Starting at the caruncle on one side, I split with a pair of scissors the junction of the mucous membrane and skin as far as the caruncle on the opposite side; then find and catch with the tenaculum the mucous membrane at a point one-sixth or even eighth of an inch above the highest part of the tear. With this as a guide as to the extent of the length of my dissection, I next catch with a pair of artery forceps the mucous membrane of the vagina at the raphe, which has already been split from the skin. I then pass a pair of blunt-pointed scissors on the flat, under the vaginal mucous membrane up to the highest point of the laceration, already marked by the tenaculum. I then open the scissors, and gently draw them outward until I have made a complete dissection.

Passing my finger beneath the dissected mucous membrane, to make certain that the dissection is complete so far as both caruncles (and if not complete, finish dissections on the finger), I then grasp the flap between the forefinger and

thumb of the left hand; and starting from the caruncle, I cut the flap completely off on both sides up to the highest point of the laceration. This gives a triangular denuded area—the base being formed by the splitting from caruncle to caruncle of the mucous membrane from the skin, and the apex by the highest point of the laceration.

Starting at a point about two-thirds of the distance from the caruncle on the left side, to the highest part of the rectocele, I pass my first silk worm gut suture through the mucous membranes, directing it outward, downward and inward, bringing it out at the middle of the base of the triangle. Continuing with the same suture, I re-enter at the point where it has been brought out, and passing it well outward, upward and inward, bring it out on the right side, at a point corresponding to its entrance on the left side.

The second silk worm gut suture I start on the left side, half an inch above the beginning of the first suture, and bring it down directly towards the centre until I reach a point half an inch above the first point of incision or splitting. I now re-enter the suture at the point where it was brought out, carrying it up on the right side to a point corresponding to that from which it was started on the left side.

You will find that by drawing these two sutures well up and together, that it brings the mucous membrane together, and also pulls the tissue back, forming a good solid buttress.

I now start a superficial suture of catgut, bringing the edges of the mucous membrane together as far as the insertion of the second suture introduced. At this point I tie the second suture. I then continue my catgut suture until I reach the point of introduction of my first suture. I then tie the first suture introduced. Then continuing the catgut suture, I bring all the denuded part of the mucous membrane together. The most important step is to carry the needle with the first suture sufficiently outward until you are convinced that you have caught the contracted fibres of the ruptured muscles.

The sutures are removed in about a week, and the patient is allowed to get up.

181 West 75th Street.

## HEADACHES AND THEIR TREATMENT.

By C. W. CANAN, B. S., M. D., Ph. G., Orkney Springs, Va.

Probably no symptom is so prevalent as headache; it is no exaggeration to say that it constitutes the largest share of the sum of human suffering. In certain diseases it not only is the chief symptom, but it constitutes almost the disease itself. It has all degrees of severity, from a dull, disagreeable sensation, to one of terrible agony. It may be paroxysmal, lasting only a few moments and recurring like the pain of colic; or it may be continuons, lasting a number of hours, days, weeks, or months uninterruptedly. Again the pain may migrate during the attack from one point to another; starting in the forehead it may radiate to the supra-orbital regions, the temples, the vertex, or the base of the brain. Or, in that form known as hemicrania, the entire half of the head may be involved. As a rule, the more localized the pain the greater the suffering—known as *clavus*.

Headache may disturb vision and hearing; the eye may be flushed; the conjunctiva congested; and the whole eye may be inflamed, producing photophobia to a marked degree. The sight may be lost temporarily, or there may be other aberrations of vision during the attack or just preceding it. The patient is often as sensitive to sounds as he is to light. In some cases the slightest noise will greatly increase the suffering. The pulse may be slow or accelerated. In headache not induced by some contagious disease with rise of temperature the extremities and general surface of the body are cool or cold. The head may be cool or hot, according to the cause and severity of the case. Anorexia is generally present, but the opposite is sometimes the case to a marked degree. The urine is increased, clear and of low specific gravity in some patients, while in others the quantity is diminished, the color high, and the specific gravity increased. Mental activity and worry increase the patient's suffering.

Headache has been classed into many forms, and is known by many names. That form known as *sick headache* would be more clearly understood were it known as periodical headache. These attacks recur at intervals varying from days to several months, frequently with a good deal of regularity, which may be unbroken from childhood to middle life. Another form is that known as *bilious headache*, which is far more often due to indigestion than to biliousness. Nausea and vomiting are frequently

As a rule, the plainer a theorem in geometry is to a woman, the plainer she is.

present, and in this respect it resembles periodical, or, as the laity calls it, sick headache, but in other respects it differs widely.

*Nervous headache* is seen among those who are overworked mentally or who have great business cares and troubles. This form causes much suffering during middle life, when men and women are facing the stern problems of life and are trying to get on in the world. It has no apparent relation with digestive derangement, but a very close one with nervous phenomena and disposition. In fact, it has its origin in these. Those who are emotionally inclined are the ones that first succumb to this disorder.

*Carbonic acid headache*, as the name implies, is produced by bad ventilation. The common experience of many persons after remaining for a while in church or in crowded rooms, with unchanged air, or sleeping in badly ventilated apartments, is to suffer severely from this kind of headache.

Another form is known as *malarial headache* or malarial cephalalgia. This is paroxysmal in character, is nearly always unilateral and supra-orbital, and has a periodicity as regular as ague chills. Then there is the headache of childhood due to a variety of causes, such as indigestion, torpid liver, constipation, etc.

*Rheumatic headache* is due to a rheumatic affection of the muscles and aponeurosis covering the cranium. The pain and tenderness are very severe, but this condition is rather rare. There is a form which has lately been named, and very wisely so, *reflected headache*. This is the result of certain diseased conditions remote from the head, especially diseases of the generative organs, and is therefore observed most frequently in women. It is that form that we frequently see in hysteria, coming on with great violence, without warning, and often disappearing as quickly as it came.

There is a headache in anemic and debilitated persons known as *anemic headache*. This is seen in girls who suffer from chlorosis, and in most cases in which the red blood cells are reduced in number and the percentage of hemoglobin decreased below the normal.

Then we have the *headache of heat-stroke*. This is sometimes very distressing, and may last for many years, especially if the patients expose themselves to the sun's rays.

*Nephritic headache* is present sometimes in acute desquamative nephritis, but is often noted in the slow progressive interstitial nephritis.

Besides the types already mentioned, headache is one of the principal symptoms in many of the acute contagious diseases, and is the chief source of suffering in quite a number of these cases.

My aim in writing this article is to give to the profession in as brief a manner as possible my experience in treating this very complex condition.

In the treatment of headache three objects should be kept in view. First: To relieve the immediate attack; second, to lengthen the interval between the attacks, and to reduce the predisposition to them; and third, to remove the cause and produce a real cure whenever it is possible. The treatment in each of these three divisions consist of both medication and hygienic regulations. To be able to relieve a patient promptly who is suffering from a severe attack is a nice accomplishment, and one that will increase you in the patient's favor.

There is no lack of remedies recommended for this purpose; yet there are only a few that will yield the desired results without producing ill after-effects. The drug superior in my opinion to all others in affording quick relief is hemieranin, and, if properly administered, it will produce more lasting effects than any ever prescribed by me, and I believe that the field has been well gone over. This drug is not only the most efficacious in ameliorating the attack when present, but taken judiciously it will aid very materially in preventing recurrences and often aborts an oncoming attack if administered in time.

In periodic headaches there is a very poor show of ever bringing about a complete cure, but by proper care and regulation they can be greatly ameliorated. To relieve the pain 5 grain doses of hemieranin should be administered every ten minutes until three or four doses are taken, or the pain ceases. Instructions should be given to begin the powders as soon as the first symptoms of an attack are discovered. The treatment between the paroxysms should be along hygienic lines and to promote the proper functional activity of the different organs. In bilious headache, which is most frequently due to indigestion, there is little chance of alleviating the attack until the stomach has been emptied. I have seen cases in which all remedies failed to relieve the nausea and headache until the stomach had been completely evacuated. This can be encouraged by drinking warm water

or by the use of lavage with the tube. Then if the nausea persists a full dose of bismuth to which 5 grains of hemicranin have been added should be administered. In other cases small doses of aromatic spirits of ammonia should be given at short intervals until the nausea ceases; then if the headache still continues 5 grains of hemicranin, repeated in 15 or 20 minutes, will quiet the nervous system and completely allay the pain. If the case be one of purely bilious headache, which is evidenced by the patient vomiting bilious matter repeatedly, after the stomach has been emptied, one grain of calomel should be rubbed up with five grains of bicarbonate of soda and sugar of milk, and divided into 15 powders. One of these should be given every fifteen minutes until the nausea ceases. This should then be followed by a free saline purgative. If the patient still remains excited and cannot sleep, a dose of hemicranin, repeated if necessary, will have a happy effect.

The attacks of nervous headache can, as a rule, be promptly relieved with hemicranin administered in small doses and at close intervals. These attacks can often be aborted if the patient can be induced to give up his business cares for the day and remain in a quiet dark room and rest, or, if possible, sleep, until the time for the seizure has passed by. To cure these headaches it is necessary to secure tranquillity of the nervous system, to keep emotional perturbations at a minimum, except the pleasurable ones, and even these should never be exciting. The duties of life should be as free as possible from worry of mind and bodily exhaustion, and the greatest possible measure of sleep should be obtained. It is also very important that all stimulating food and beverages should be abstained from. If the system is below the standard a tonic line of treatment should be instituted—iron, malts, hypophosphites, strychnia, quinine, cod liver oil and arsenic will be found the best to choose from.

In carbonic acid headache, which is generally experienced on rising after sleeping in a badly ventilated apartment or on spending an hour or two in a crowded hall, one or two doses of hemicranin and exposure to pure air will be all that is necessary. To prevent further attacks instructions should be given in regard to proper ventilation.

Malarial cephalalgia is seen in patients who suffer from chronic malaria. As a preventive quinine or arsenic will give the best results. To

allay the severe attacks hemicranin in full doses will generally give prompt relief. To effect a cure the patient should be sent to the mountains during the hot months, where he can drink freely of mineral waters and bathe regularly. For those who suffer from torpid liver, with constipation, alkaline laxatives are of service. For the relief of pain, which is generally supra-orbital, a useful domestic remedy is the bark scraped fine from peach tree twigs, made wet with vinegar and tied tightly over the forehead. In rheumatic headache hemicranin is an excellent palliative.

The headache of childhood requires special study and consideration, as children can but imperfectly describe their sensations, and cannot reason about them. First, the cause may be discovered and removed with small if any assistance from the patient. To relieve the attack itself we have no better agent than hemicranin. In most instances I follow the same plan with children that I do with adults—that is, divide the drug into small doses and repeat often until relief is obtained. To produce a cure it is essential to find the cause. If it be indigestion, this should be corrected by appropriate remedies and dietary. A great deal of headache from which children suffer is caused by mental overwork and too close confinement. So many parents think that their children, although weakly, must be kept in school and must keep up with their classes, and that outdoor air and exercise is harmful. The fact is these children should spend as much of their time out of doors as possible, and when indoors they should be in well lighted and ventilated rooms. Their race for an education is of secondary matter when compared with their vigor of body. When the headache is due to defective vision, as is often the case, the child should be kept away from its studies until glasses have been adjusted or the trouble corrected.

Reflex headache is found in adolescents of both sexes who are undergoing the changes that take place before they reach maturity. This type of headache is often seen in women and girls, and is called by some writers menstrual headache. In some women it precedes the flow by a day or two and ceases when it is fully established, but in others it lasts the greater length of the period unless treated. These paroxysms are very severe and require large doses of anodynes to relieve them. To ward off the attacks I have found that valerinate of ammonia, taken

repeatedly, is one of the best remedies. It should be administered as soon as the first symptoms develop, and in those who are regular it should be begun twenty-four hours prior to each period. In chlorotic girls and those who are anemic, with cold extremities, five grain doses of hemicranin should be administered every fifteen minutes until relief is obtained or twenty grains have been taken. This, together with hot hip baths, is sufficient to control the attack. If the first round of doses fails to give relief, it can be repeated in a few hours. The after treatment should consist of tonics and hygienic measures.

The headache of cerebral congestion or hyperemia is best treated with bromides, ergot, counter-irritants, and depletive measures. The bromides should be given in large doses, and should be continued for weeks without bad results. During the severity of the suffering the head should be elevated and kept cool by the application of cold water or ice, and the patient should be kept scrupulously away from noise and excitement of every kind. Gentle bodily exercise is often beneficial after the intensity of the attack is over.

The treatment of headache of inflammatory diseases of the brain and spinal cord should follow the same line as that just described—bromides, chloral, hyoscyamus, opium, and cold to the head, and heat to the extremities. Opium should never be prescribed unless the suffering makes it positively demanded, and then it should be given hypodermically.

To relieve nephritic headache the cause must be kept in mind. The accumulation of uric acid in the blood is the cause, and the most satisfactory results are to be obtained by lessening the formation of this product in the body in proportion to what the kidneys are capable of excreting. This is accomplished by reducing the mental and bodily exercise and continuous rest, in bed if need be. Paroxysms of unusual suffering can be relieved by administering full doses of hemicranin. This acts upon the skin and kidneys, thereby not only allaying the pain, but removing the cause to a certain degree. In all the headaches occurring in acute diseases there is no remedy more efficacious than hemicranin. In scarlet fever and diphtheria it quiets the heart action, reduces the temperature, and increases the action of the skin and kidneys, relieves the pain, and induces sleep. The same is true of it in la grippe, tonsillitis, colds, etc. It not only alleviates the headache in pneu-

monia, but produces an active state of the skin and improves the labored breathing when due to weak heart-action and lack of oxygenated blood. Given during the first week of typhoid fever it removes the headache, the pains in the limbs and back, reduces the temperature, and produces rest and sleep. One great advantage of hemicranin over other remedies of its class is that it is a heart stimulant, whereas the majority of those that exert a decided analgesic effect depress the heart action or interfere with proper oxygenation of the blood, therefore rendering them unsuitable in many diseased conditions. A drug that will relieve the many forms of headache and at the same time strengthen the heart action, increase the vascular tone, promote the elimination of excrementitious products from the system by stimulating the channels through which they are thrown off, and reduce an abnormal high temperature is certainly worthy of our most careful study. This is why it is superior in all those headaches that occur as a prominent symptom in all the acute maladies. It can be administered in capsule, in powder upon the tongue, in wafers, or in solution. Small doses should be given at short intervals until relief is obtained or 20 to 30 grains have been taken.

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### ANTISTREPTOCOCCIC SERUM IN SEPTIC CONDITIONS.\*

By C. E. RUTH, M. D., Keokuk, Iowa,

Vice-President, and Professor of Descriptive and Surgical Anatomy, Keokuk Medical College, etc.

Believing that experience may be of more value than any amount of theory, I herewith present results of experience in the use of anti-streptococcic serum.

CASE 1.—January, 1901, operated upon Miss E. B., aged 23 years, for relief of abscess in the abdomen. As free drainage as possible was made, but owing to the mixed nature of the infection, chills, fever, rapid pulse and anoxia grew worse and dissolution was imminent. Ten c. c. of serum were injected and several times repeated as occasion required, resulting each time in prompt reduction of the temperature with corresponding improvement in the

\* Read before the Mississippi Valley Medical Society, held at Kansas City, Mo., 1902.

pulse, appetite, and general well being. The patient finally succumbed to tuberculosis. It was unreasonable to expect so thoroughly mixed an infection as existed in this case to be cured by the serum. Strepto- and staphylococic infection was found to exist with the tuberculosis. So marked was the amelioration in this patient's condition from the use of the serum that I could not question its neutralizing influence on at least a part of the toxins.

CASE 2.—Mrs. P. K., June 19, 1901, was operated upon for appendicitis and pyosalpinx. Within forty-eight hours, the temperature was 104°F., pulse 140 and very weak. Death was apparently to be confidently expected within a few hours. Ten c. c. of serum were injected with a fall of temperature of two degrees in four hours. Ten c. c. were again injected with the result that the temperature became normal in six hours and remained below 100°F. In thirty-six hours the pulse fell to less than 100, and was of good volume. Convalescence was thereafter uninterrupted.

CASE 3.—Mr. Fenton, January 18, 1902, was operated upon for appendicitis. Appendix was found sloughed in pus sac, and, with adherent omentum, was removed. In twenty hours the pulse reached 160 and could not be taken at the wrist. Temperature 104 $\frac{3}{4}$ °F. Ten c. c. P. D. & Co's. antistreptococic serum were injected. No fresh serum being at hand, serum three months over age was used. Pulse was promptly reduced to 120, and temperature to 102°F. Pulse and temperature began to rise again and ten c. c. of serum were injected. In five and one-half hours temperature was normal and remained so. Pulse regained strength and lessened in frequency more slowly but improvement was steady. In this case there was every indication of prompt dissolution, including cyanosis of the already ghastly death-like face. Drainage in this case was maintained for two weeks.

CASE 4.—Mrs. May B., February 28, 1902, vaginal hysterectomy for retroflexion and myofibroma of uterus. Though there existed a slight rise of temperature and pulse, no anxiety was felt regarding her case till the fourth day, when obstruction of the bowels came on with general peritonitis. Death occurred in eleven days from date of operation, the last three days showing every indication of a severe septicemia. One hundred c. c. of serum were used in ten and twenty c. c. doses without pronounced benefit.

Bacteriological examination showed a pure streptococic infection; but, before the condition was recognized, the peritonitis was so extensive, and the toxemia so profound, together with resulting obstruction, that failure was to be expected. Post-mortem showed peritonitis extending to diaphragm with large muco-purulent accumulation free in Douglas' cul-de-sac.

*Control experiment.*—March, 1902, injected a guinea pig with urine containing mixed strepto- and staphylococic filtrate. Pig had severe chill and was very sick within six hours. One antistreptococic injection of serum, P. D. & Co's., was made with prompt return to the normal. Pig remains well after six months.

CASE 5.—A. F., aged 23 years, March 26, 1902, was operated upon for floating kidney. Operation was without incident save for great venous vascularity of the muscular tissues of the back. Within twenty hours rise of temperature, quickening of pulse, and facial expression betokened profound toxemia. Anti-streptococic serum was used freely but without avail and death took place in five days. Post-mortem revealed staphylococic infection in and about the wound. Owing to the fact that the infection was staphylococic we were not surprised that the antistreptococic serum was inadequate.

CASE 6.—Mrs. F. M. F. was confined February 5, 1902. Labor was severe; forcep delivery with perineal laceration to rectum. Perineum was immediately repaired. Union was procured throughout about one-half the extent of the tear. Recovery was tedious. Catheterization was done for two weeks under chloroform. Ten days after labor, erysipelas started in the vulva and rapidly spread over the perineum and almost the entire buttocks to the iliac crest. Temperature and pulse, for her enfeebled condition, ran sufficiently high to cause alarm. One hundred and twenty c. c. of serum were injected in doses of ten c. c., with pronounced amelioration of the symptoms following each injection. Temperature was always reduced one or two degrees, while the pulse lessened in frequency and increased in force. In this case the serum was relied on almost to the exclusion of all other treatment. This patient at her best is a very frail, delicate woman. In any case, erysipelas in the parturient must be considered grave. That the serum was a material aid, if it did not save her life, I have no doubt.

CASE 7.—Reported by Dr. C. F. Mehler, of New London, Iowa. Mrs. Mc., age 69 years,

convalescent from a very severe attack of broncho-pneumonia, was attacked April 22, 1902, with a severe chill and vomiting. Saw her April 23rd, 7 A. M. Temperature  $104\frac{1}{2}^{\circ}\text{F}$ ., pulse 90. Erysipelas had started at ala of nose and had spread over nose and forehead. Vomiting constantly. Could not retain anything on stomach. Applied ichthyol locally. At 8 P. M. temperature was  $105^{\circ}\text{F}$ ., pulse 90, and still vomiting. Suggested the use of antistreptococcic serum on the favorable report of Dr. C. E. Ruth but was refused.

April 24th, 7 A. M., temperature  $104\frac{1}{2}^{\circ}\text{F}$ ., pulse 92, and still vomiting. Gave nutrient enema. Stomach would not retain anything. At 7 P. M., temperature  $105^{\circ}\text{F}$ ., pulse 90, and still vomiting. Erysipelas had spread all over face, head, ear, and partly down the neck. Administered ten c. c. of serum, P. D. & Co's.

April 25th, 7 A. M., temperature  $102^{\circ}\text{F}$ ., pulse 90, no spread of erysipelas. At 8 A. M., temperature  $102\frac{1}{2}^{\circ}\text{F}$ ., pulse 91, no spread of erythema, nutrient enema continued. Gave ten c. c. of serum.

April 26th, 6 A. M., temperature  $99\frac{3}{4}^{\circ}\text{F}$ ., pulse 90, no vomiting. Took some nourishment and stimulants, which were retained. Continued enemas. At 8 P. M., temperature  $98\frac{3}{4}^{\circ}\text{F}$ ., pulse 88, erysipelas fading and no extension. Took nourishment freely. From this time on she made a steady improvement and good recovery.

CASE 8.—Mrs. T., reported by Dr. C. F. Mehler, aged 40, was attacked with erysipelas April 28, 1902. Saw her April 30th at 8 A. M. Erysipelas extended over face, head, and neck nearly to sternum. Temperature  $104^{\circ}\text{F}$ ., pulse 110. Applied ichthyol. Gave her ferri chloridum and quininam internally. At 10 P. M., temperature  $105\frac{1}{2}^{\circ}\text{F}$ ., pulse 128, vomiting some. Gave ten c. c., P. D. & Co's serum.

May 1st, 8 A. M., temperature  $101\frac{3}{4}^{\circ}\text{F}$ ., pulse 110. Repeated serum. At 10 P. M. temperature  $99^{\circ}\text{F}$ ., pulse 100. No spreading, stomach quiet.

May 2nd, 9 A. M., temperature  $98\frac{3}{4}^{\circ}\text{F}$ ., pulse 90. Erysipelas fading, patient takes nourishment freely, and from this time improved steadily and made a perfect recovery.

CASE 9.—Reported by Dr. Mehler. Mrs. S., aged 76 years, was attacked with erysipelas May 21, 1902. Saw her May 23d, 5 P. M.; temperature  $106^{\circ}\text{F}$ ., and pulse 110. Erysipelas ex-

tended over face, head, and neck. Vomiting. Applied ichthyol and gave ten c. c. P. D. & Co's serum.

May 24th, 10 A. M., temperature  $101^{\circ}\text{F}$ ., pulse 98. Taking a little nourishment. Gave ten c. c. of serum.

May 25th, 10 A. M., temperature  $100\frac{3}{4}^{\circ}\text{F}$ ., pulse 96, no vomiting nor spread. Took nourishment and tinctura ferri chloridi and strychnin. Gave ten c. c. of serum.

May 26th, 10 A. M., temperature  $99^{\circ}\text{F}$ ., pulse 95. Takes nourishment freely. Redness and swelling disappearing.

May 27th, 10 A. M., temperature  $98\frac{3}{4}^{\circ}\text{F}$ ., pulse 90. Takes nourishment well.

May 30th, 5 P. M., temperature  $98\frac{3}{4}^{\circ}\text{F}$ ., pulse 90. Made a good recovery.

CASE 10.—Reported by Dr. W. G. Doern, Fort Madison, Iowa. Mr. Fred P., American, aged 33 years. Evening of September 30th, patient was taken with severe chill, with pronounced swelling and burning of the nose. October 1st, 4 P. M., found entire nose bright red and greatly swollen. Prescribed tinctura ferri chloridi, grt. XV every two hours. Oct. 1st, 9 P. M., inflammation had extended three-fourths of an inch; temperature  $103^{\circ}\text{F}$ ., and pulse 120. Injected ten c. c. P. D. & Co's serum.

October 2nd, 9 A. M., general symptoms subsided. Temperature  $99^{\circ}\text{F}$ ., pulse 100. Slight extension but inflammation more diffused, the distinct border-line being absent. Injected ten c. c. of serum. 9 P. M., patient feeling well, temperature  $99^{\circ}\text{F}$ ., and pulse 98. Redness extended slightly higher on forehead but gradually shaded off to normal skin. Slight swelling and burning.

October 3rd, 9 A. M., no change. Injected ten c. c. of serum. I made no local application that I might see exactly what the serum would do. The course after the third day was uneventful.

CASE 11.—Fred Shaw, May 1902. First seen by me in consultation with Dr. Tobin about a week after receiving barbed wire injury to right thumb. Profound septicemia had rapidly followed the injury, resulting in a diffuse cellulitis, which spread up the forearm and arm, then over right side and back, involving the cellular, connective, and muscular tissues to great depth both in the axilla and right lumbar region. Gave ten c. c. of serum May 12, 1902, which was repeated daily for five days by Dr. Tobin. Improvement was thought to be satis-

factory for a couple of weeks, when pus began to discharge with the urine, and this was preceded and followed by severe pain with rapid prostration. He was brought to St. Joseph's Hospital and operated on by me June 8, 1902. Right kidney was opened and drained from the pelvis. All pus cavities were thoroughly opened and supportive treatment carried out with ultimate complete recovery.

CASE 12.—Mrs. George H., referred by Dr. A. J. Nossaman. Operated on September 4, 1902, for suppurating ovarian cyst of large size. Cyst had been twice tapped by Dr. Nossaman in the three preceding weeks. From leakage and rupture of the cyst, peritonitis with very extensive adhesions existed. Cyst wall was so rotten that it would not bear its own weight, and in spite of all care many points of rupture were produced in separating adhesions and lifting out the sac. Cyst contents were distributed generally through the cavity. Abdomen was thoroughly irrigated with hot saline solution and wound closed over all the water the abdomen would hold. The entire posterior surface of the omentum was adherent to the tumor. This extensive infected surface bled persistently. To control the oozing the entire omentum was rolled into a close mass and sutured in position. Patient was very feeble and rallied slowly. Pulse began to quicken and lessen in force until, at 5:45 P. M., September 5th, pulse was 140 and temperature 101°F. Gave ten c. c. of serum. 10 P. M., temperature 102°F., pulse 150. Injected ten c. c. of serum.

September 6th, 2 A. M., temperature 99°F., pulse 124. I injected ten c. c. of serum. At 3 P. M., temperature 100°F., pulse 132. Gave ten c. c. of serum. At 7:20 P. M., temperature 100 $\frac{3}{4}$ °F., pulse 136. Gave ten c. c. of serum.

September 7th, 2 A. M., temperature 99 $\frac{3}{4}$ °F., pulse 120. At 2 P. M., temperature 100°F., pulse 108.

September 8, 1902, temperature averaged 99 $\frac{1}{2}$ °F., pulse 100. September 9th, temperature 98 $\frac{1}{2}$ °F., pulse 96. Progress in this case has since been devoid of incident and complete recovery is assured.

#### REMARKS.

Judging from my past experience with septic conditions of great severity, I am certain that cases two, three, six, and eleven would have been lost without the use of the serum.

"The streptococcus of erysipelas resembles very closely the streptococcus pyogenes of Rosen-

bach; in fact, cannot be distinguished from it microscopically while the cultures of the two organisms resemble each other very closely." (Tyson, *American Year Book of Medicine and Surgery* 1901.)

As to antistreptococic serum treatment:—"There are plenty of cases on record in which good results are obtained by its use. A few facts are quite certain—it is useful only in cases of undoubted streptococic infection. Before using the serum an accurate bacteriological examination should be made. Also there appear to be varieties among the streptococic, the infection of some of which will be influenced by a peculiar kind of streptococic serum, but all streptococic infections will not be improved by the serum treatment." The absurdity of waiting for a bacteriological identification of the streptococic infection appears in the same work, on the next page of the same article in which the following statement is made: "The serum can do no more harm, and if it does no other good it acts as an excellent food." (Art. by Stevens.)

In the *American Year-Book of Medicine and Surgery*, 1902, Dr. A. W. Harrison describes a case of facial erysipelas of unusual severity. The temperature had reached 105°F., and the patient was thought to be moribund. He injected twenty c. c. of anti-streptococic serum and improvement began at once. Injections of ten c. c. were repeated twice daily at first, subsequently once per day. The patient made a rapid and complete recovery.

In the *Courier of Medicine for September*, 1902, we find the following: "Marmorek claims that all pathogenic streptococci are identical. He bases this claim on three common characteristics that he has found present in all the bacteria taken from forty-two diseases. These peculiarities were: The production in vivo of hemolysis in rabbit's blood, the inability to grow upon a filtrate of their own cultures, and the immunization of animals by Marmorek's anti-streptococic serum. The immense amount of labor in trying to separate different species of streptococci is, therefore, wasted, and clinicians will be compelled to find some other excuse why the antistreptococic serum does not cure. But it must be remembered that the virulence of the micro-organism varies greatly."

In pure streptococic infection uncomplicated, however severe, improvement has been immediate and recovery has been complete even when



the use of the serum was not begun until the patient was almost moribund.

The average individual seems to be able to take care of a very large and virulent dose of the streptococci provided their toxins are rendered innocuous. Two doses of the serum were sufficient in some of the most severe case, while others required five or more. Ten c. c. produced no unpleasant symptoms whatever, while twenty c. c. sometimes produced severe itching and one or more crops of urticaria. No attention was paid to the morphology of the streptococci infection, and though the benefits obtained were prompt in all, the degree of benefit varied, as I had expected. I considered this due to difference in virulence of the infection, vital resistance of the patient, and potency of the serum. My best results were obtained with the P. D. & Co.'s serum, even when considerably over age. I am convinced that the best results will be obtained by the early use of the serum and, thereby, severe complications will be sometimes avoided. Bacteriological examination should be made in all cases when possible, but the use of the serum should not be delayed until the examination is completed, for in many cases it would mean that the patient would be dead or beyond help. In no case of streptococci infection, uncomplicated, can I record a failure of the serum, even when apparently used in the last extremity.

In my single case of pure *staphylococci* infection, though lost after persistent use of the serum, I am convinced that not only did the serum do no harm, but that the first few doses reduced the temperature and improved the pulse. If it is of no other benefit, it is an excellent though very expensive food. The majority of the grave infections are of the streptococci variety, and therefore, in a measure, amenable to serum therapy.

In a mixed infection of strepto-staphylococci, the serum properly used will neutralize the toxins of the streptococci; and the "vis medicatrix" will usually take care of the staphylococci infection, if it has not already gained too extensive a lodgment and multiplication in the circulating medium. My experience with the serum in erysipelas has been a delightful surprise, converting the most grave and apparently hopeless cases in four to twelve hours into certain convalescence.

My experience with the serum has given such satisfactory results that cases which were for-

merly certainly lost, giving a mortality of 100 per cent., in the last eighteen months have given a mortality of but 40 per cent. Besides, the amelioration in other cases has been so great that I am convinced that it has a much wider field of usefulness than I had even suspected when I first began its employment in septic conditions.

Tavel reports forty-six cases of various infections treated with antistreptococci serum. This list includes puerperal fever, erysipelas, pneumonia, appendicitis, and four cases of staphylococci infection. He attributes the recovery in many cases to the prompt use of serum, which was eminently beneficial in some but was absolutely ineffective in other cases of the same diseases. The serum was used with marked success in a case of recurring erysipelas, both as a curative agent and as a prophylactic.

In a metastatic infection following an angina with rheumatism, endocarditis, and nephritis, no benefit followed other treatment, but improvement began immediately with the use of the serum, and the temperature reached normal after the third injection. Tavel's experience indicates that the streptococci serum has a favorable influence even on staphylococci infections. The variability in the action of the serum of which he complains may be due in part to the varying source from which the serum was obtained and to its preparation for use. Tavel used new cultures without passage through animals, which Marmorek considers indispensable, but which he (Tavel) considers not logical. While we are still unsettled as to the best source of obtaining and best methods of preparing and using the serum, we may expect a greater variability as to results than will be secured when it is positively determined where it shall be procured, and how it shall be made and used.

The results reported in the treatment of *cerebro-spinal meningitis* by the serum are truly wonderful; but here, as elsewhere, disappointment is occasionally experienced, and this may be readily understood when we remember that the infection may be the diplococci of pneumonia, staphylococci or streptococci, etc., one or all in the same case; but if only one case in ten were benefitted instead of one half being immediately cured by the serum our duty would be to use it in all cases like this which give a primary mortality of 30 to 80 per cent. and leaves one-half the remainder worse than dead.

The recent investigations published by Singer in the *Wiener Klin. Wochenschrift*, in reference

to *rheumatic fever*, considering it as a variety of pyemia, and reporting the finding of streptococcus pyogenes in cover glass preparations, and having made cultures of the germs from various internal organs, together with the recognized relations of follicular tonsilitis to rheumatic fever, account at once for the remarkable benefits from using the serum in some cases of rheumatic fever.

Though all points with reference to the serum are not settled, my experience with it warrants me in saying that in no case of severe sepsis would I consider that I had discharged my obligations of responsibility to the patient until I had used the antistreptococcal serum. It does not in any way interfere with any line of treatment that the surgeon may see fit to carry out.

The injections properly made are not more painful than an ordinary hypodermic, and have never caused inflammation or any serious local or general disturbance. I have always made the injection deep in the gluteal region.

## PREGNANCY AND LABOR FOLLOWING COMPLETE NEPHRO-URETERECTOMY.\*

By J. WESLEY BOVEE, M. D., Washington, D. C.

Removal of the kidney has become a frequent operation and no longer excites surprise or comment on the part of the medical profession. It is well understood that removal of a kidney, the function of which has not been previously suspended, entails additional eliminative work upon the kidney of the other side. It must be admitted that one kidney is rarely able to perform the functions of two healthy ones, and that any extra taxation upon its eliminative powers incident to auto-intoxication of various forms is liable to seriously embarrass its functional activity. When nephrectomy has been done for renal calculi with pyonephrosis or tuberculosis, the same condition is liable to be present, in some slight degree at least, in the remaining kidney. Its function is accordingly interfered with.

Various investigators have found a marked toxicity of the urine during pregnancy. Neph-

ritis during this condition is very common. Winckel claimed that two per cent. of women that are healthy before pregnancy have albumen in the urine during pregnancy, and further that six per cent. of all pregnant women have albuminuria. Goucher says the nephritis of pregnancy is of an autotoxic nature, and consequently epithelial at first. If the cause persists, either prolonged intoxication or repeated invasion from successive pregnancies, the lesion becomes interstitial and assumes the anatomico-clinical characteristics of chronic mixed nephritis, predominantly interstitial. Whatever the nature of the poison, whether mineral, vegetable or animal, all varieties of toxic nephritis have the same evolution.

One notable fact in connection with the toxemias of pregnancy or urinaemia, is that the amount of urea in the urine is always found markedly diminished.

Another important matter in conjunction with pregnancy and labor is the changes in arterial tension, which has been found to be normal during the first eight months, diminishing during the ninth, and undergoing various changes during and following labor, as will be later mentioned. It is generally understood, however, that the changes going on in the economy of the woman in pregnancy call for greater demands on the heart, liver and kidneys, and any interference with the action of one or more of these organs results disastrously to the others. As elimination during pregnancy is increased, naturally the arterial tension would be expected to be correspondingly increased. During labor it rapidly rises, reaching its highest degree at the moment of the birth of the child and reaching its minimum at the time of expulsion of the placenta. It then rapidly increases to above normal, remains so for four or five days, and then returns to normal. Marked increase of arterial tension has been frequently observed in eclampsia and albuminuria. A kidney obliged to perform all the renal eliminatory work of the body, which is naturally increased during pregnancy and labor, is working under great strain. If it be crippled by traces of the condition which required removal of its fellow this strain or taxation is of greater moment. I have been able to find recorded but two cases, and because of their rarity I will give them briefly.

CASE I.—Steinheil (*Deutsche Medicinischen Wochenschrift* (Leipzig), 1901, XXVII, 821)

\*Author's abstract of a paper read at the fifteenth session of the Southern Surgical and Gynecological Association, at Cincinnati, O., November 11-13, 1902.

reports a case which came in his care in June, 1895, which was of a woman twenty-five years of age, whose left kidney was removed for tuberculosis by Professor König seven years before. The patient was delivered of a healthy boy at full term with the slight assistance of forceps, February 4, 1896. She had a slight rise of temperature a few days after delivery, but the further course was normal with the exception of intractable retention of urine, which required finally a retention catheter for a few weeks. The pulse varied from 100 to 120 and the condition of the urine was very variable. She was discharged from the hospital nearly two months after delivery. The patient died November 25, 1897, the tubercular process having apparently become re-kindled in the fall of 1897.

CASE 2.—Justice Schramm, of Dresden, in *Berliner Klinischen Wochenschrift*, 1896, XXX, 113, in an interesting paper on "Pregnancy, Parturition and the Puerperal Period After Extirpation of the Kidney," relates the following case: On April 1, 1891, he removed the right kidney of a woman twenty-five years of age for hydronephrosis. On the 6th of May the patient was discharged, having in the meantime experienced fever, retention of urine with abundant pus and arrhythmia. The left kidney had been found to be entirely normal. For six months she was employed as a kitchen maid at heavy work and various other pursuits. At the end of that time she complained of a stitching pain in the region of the left kidney and hypertrophy of the left ventricle with arrhythmia. She married in November, 1894, and appeared before him in April, 1895, in her fifth month of pregnancy, complaining of a tight feeling in the wound. The urine was abundant with only a slight amount of pus. The child, a six pound female, was born after seven hours labor July 31, 1895. Except for the cardiac condition, her child-bed was normal. A persistent and extreme arrhythmia was present. The pyuria was slight and finally disappeared. The mother left her bed on the ninth day. Her recuperation was slow and tedious, to which the nursing of the child contributed not a little.

CASE 3.—My own case of complete nephro-ureterectomy stands alone, though not varying from the two mentioned from a practical standpoint. The report of the nephro-ureterectomy was reported to this Society at its last meeting. The operation was done March 18, 1901, for pyonephrosis, renal calculi and military ab-

cesses in the ureter. Her last menstruation was July 23, 1901. There was no marked symptom of pregnancy or very little gastric disturbance or nervous phenomena. Nothing of moment occurred during pregnancy except the gradual enlargement of the abdomen and the production of a hernia at the site of the former incision. April 15, 1902, after a normal labor of six hours, she was delivered of a male child weighing ten and one-half pounds. On the third day after delivery she complained of intense pain diffused over the abdomen and on the following day becoming localized along the course of the left ureter. There was tenderness for several days after cessation of the pain in this region. The urine was carefully watched for calculi but none were found. With the pain mentioned the temperature rose to 102° F., and continued from 100° to 102° for nearly a week, when it gradually declined to normal. Urinalyses made during the pregnancy showed nothing abnormal except the presence of albumen. An examination of a catheterized specimen in July, 1902, showed as follows: Specific gravity 1.022, albumen in large quantity, normal amount of solids and urea excreted and no casts. Since the birth of her child she has breast nursed it, and she has remained in splendid health.

A question of vital importance in these cases is a permanent effect of pregnancy and labor upon the remaining kidney. In the case of Steinhilf the patient succumbed to the extension of the tubercular process to the remaining kidney. Whether pregnancy and labor caused this extension in part or entirely cannot be determined. Certainly the woman had not suffered from renal trouble during the seven years following nephrectomy, but died one year and nine months after delivery. In Schramm's case no history of the patient subsequent to her discharge from the hospital is given. In my own case the condition of the remaining kidney does not seem to be worse than before pregnancy, and one seeing and talking with my patient would certainly not consider her suffering from any illness. I have no doubt other members of this Association have met with cases similar to these cited, and I trust this paper may be an incentive to the report of all such cases.

To my mind there is little doubt that pregnancy and labor following nephrectomy seriously jeopardize the life of the patient; that the renal complications must necessarily be greatly increased, and therefore induction of premature

labor and other forms of treatment of these complications more frequently necessitated. In these cases the evidence of permanent impairment of the remaining kidney as a result of pregnancy and labor is by no means convincing, but my individual opinion is, as records are made of such cases, such effects will be apparent.

1404 H Street.

## A PLEA FOR MOTHERS AND THEIR OFFSPRING.\*

By THOMAS SCOTT HENING, M. D., Winterpock, Va.

My object in choosing this subject is simply from a human standpoint, and not for the amount of scientific knowledge that is in it. I have always wondered why this Society has never done something along the line of suggestion of this paper. While it has successfully done so much in many ways for suffering humanity, this has passed unnoticed.

There is not a member of this Society who, I dare say, has not come in contact with cases similar to the ones I intend bringing before you. The best way to bring this matter before the Society will be to report some of the cases I have seen in my short career as a practitioner. Of eight cases of the grossest neglect, I will report five—two of the mother and three of the offspring.

CASE 1, of the mother.—Mrs. A. (white); aged 23. I had just located in the country, after leaving the Sheltering Arms Hospital at Paint Creek, W. Va., full of aseptic training. I was called to Mrs. A., some eight miles distant, and found on reaching her home the black, illiterate, and impudent "granny." She lived in sight of the patient's home. The messenger who had been dispatched for me went by and sent her on to the house. So when I arrived the mother of Mrs. A. met me, and said: "Doctor, everything is O. K. The child is coming right." "How do you know that?" I asked. "Why, the granny has just made the fourth examination." "Did she wash her hands?" "No, but she rubbed plenty of grease on them." I went in and told the old granny that she should

not make another examination; that Mrs. A. would certainly have child-bed fever, whereupon she grew furious, and wanted me to understand that she had delivered babies before I was born. I said: "May be so, but you will not deliver this one. You have already infected the mother," and sure enough she had a furious case of puerperal fever, which came near ending fatally.

CASE 2, of the offspring.—Had the proverbial "granny." Cord tied improperly or not at all—simply twisted. The father saw the child gasping for breath, and remarked to the "granny," "Something is wrong with the boy." She said: "O, no"; and laughed at him; told him he was new in the business. So his first born, a strong, robust boy's life blood, was slowly but surely flowing away. Imagine the sorrow of those parents, and especially of that mother, who had suffered so much to bring that child into the world, to find her boy one-half hour later still in death, and upon further examination, find the child's clothes saturated with blood! The old illiterate "granny" was equal to the occasion, and accused the father of going there and turning the child on the wrong side. Shall we allow this state of things to continue in our professional work—one of the noblest of all professions?

CASE 3, of the mother.—Mrs. M., aged 29 (white). Had trusted her life during her first labor to one of those black fools, whose charges ranged from one to five dollars. The child was born all right—yes, then that direst of all complications faced this old "granny." Said the young and anxious husband: "She is flooding?" "No," said the "granny," "that has to come away." "I feel so funny," said the mother; "everything grows so black; what must I do?" The old woman had reached the end of her row, so said: "Get the doctor at once." The doctor lived three miles away. The messenger found him at home, but when he got to the home of the patient she was too far gone—gasping her last! Just think of it! That young life snuffed out! Why? Simply because she did not have some one with her who knew what to do. The result would have been different had the doctor been there when the child was born.

CASE 4, of the child.—The same old one-dollar "granny" officiating. The husband sent for me against the wishes of "granny" after the birth of the child—not being satisfied with the treatment of the child and wishing to know if the mother was all right. I found a fine child

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

cold in death. I said to the granny: "Why did this child die?" "I don't know, doctor. She just kept on gasping and growing blacker, until she just took and died."

Who among you present could not have saved that poor infant? I said to the old "granny" for fun, "Why didn't you use artificial respiration?" "Use what, doctor? I never learned that." I said: "No, I think not, or anything else."

CASE 5, of the offspring.—The same old mid-wife. Infant born of mother with gonorrhœa. Both eyes infected. Called me in when the child was about twelve days old. I asked, "Who has been practicing on this child?" The mother told me that the old granny had said she would cure "it in nine days with breast milk." Yes, she cured it, alas! It was too late. What have the parents now? A blind, invalid child. Would such have been the result if they had had a doctor? I say, never! Would we allow a graduate of any medical school of Virginia to practice midwifery and charge a fee (even though it be \$1.00) unless he had a diploma and a certificate from our Medical Examining Board. I say, nay! Still we allow these incapable "ganny" fools to do it.

In conclusion, I appeal to every member of this Society, in the name of God and humanity, to stop this grossest of all ignorance, which is being practiced in the noblest of all professions, of which we have the honor of being members.

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## Analyses, Selections, Etc.

### Radiotherapy or X-Ray Therapeutics.

Dr. G. P. Edwards, Professor of Neurology, Dermatology and Electro-Therapy in Vanderbilt University, Nashville, Tenn., reviews this subject in the *Southern Practitioner*, December, 1902.

Experimentation in X-ray therapy began in 1896, when Dr. H. P. Pratt, of Chicago, successfully treated a case of lupus referred to him by Dr. John B. Murphy. Since then many cases of successful treatment of malignant new growths, etc., have been reported by various authors. In a paper on "Radiotherapy for Cancer," Dr. Wm. J. Morton claims that the X-ray

has a curative effect on internal cancer and other internal diseases, and recommends it prior to any operation to clear the tissues of cancer particles or foci, and to circumscribe the disease. He thinks that X-ray radiation, in competent hands, gives more nearly than any other treatment a solution of the problem of curing cancer. Up-to-date X-ray procedure shows a continued improvement in cases, and a percentage of recoveries which undoubtedly compares favorably with surgical operations. For superficial diseases a medium soft tube may be used; for internal cases, a hard tube. Dr. Carl Beck reports a case of melano-sarcoma cured by prolonged irradiation, and evidences of marked influences produced by X-ray are continuously coming in.

That X-rays have a powerful effect on cell life is shown by observations on X-ray burns—although the definite cause of such burns has not yet been determined. Some patients are more susceptible to these burns than others—probably dependent largely upon the temporary or permanent condition of vitality of the tissues of the individual. Again, some tubes burn the patients much more readily than others, even with the same degree of exciting force; hence we must study the individuality of each tube in use. One operator said that when he found a tube to be a "bad burner," he broke it to pieces; but Dr. Edwards values such a tube for therapeutic work more than any other, for the reason that it is much more effective, and cures in much less time; but such a tube requires much more care in its management. The distance of exposure from the tube should vary with the intensity of the tube—being closer for the soft tube.

A peculiarity of these burns is that they do not manifest themselves for, sometimes, several days, and again several weeks after the use of the tube. No one as yet seems competent to explain this peculiarity.

There is much to be learned about the X-ray; and he who attempts to use it without a careful study of its physical and physiological action will certainly have unfortunate experiences. This is particularly true of the coil apparatus. Its practical application requires considerable skill; harm may result to both physician and patient by carelessness or ignorance.

Dr. Morton reports a number of cases of cancer and sarcomata improved and cured by X-ray therapy—sarcomata being much more readily destroyed. Dr. Johnson reports cases of super-

ficial growths; and believes that with a more powerful apparatus than he used it would be possible to attack the deeply seated new growths. Coley, Allen, Turnure, Hopkins and Piffard have all done successful work in New York city (and we may add the large experience of Dr. Stuart McGuire, of Richmond, Va.) Williams, of Boston, however, has probably done more work in this line than any one else.

For *lupus* and *epithelioma*, no one questions its efficiency; but the list of diseases amenable to the X-ray is very rapidly growing.

Pusey reports a case of *carcinoma of the orbit* in a man 70 years old, which had involved intracranial tissue when treatment began. Treatment by X-ray continued for two months with marked improvement at first, but evidences of rapid intracranial extension were noted and treatment was discontinued and the patient sent home to die. The eye was destroyed by the disease before radiotherapy was resorted to; the orbit was filled with carcinomatous tissue and the orbital bones were involved. About five months later, the patient's physician wrote Dr. Pusey that the old gentleman called on him returning from Chicago with a recipe for morphine when in pain. Examination of the eye at that time led him also to believe that it was only a question of a short time before death. But now, he presents an entirely different appearance. "The mass that occupied the orbit has shrunken, allowing the lids to close. He is free from pain, eats and sleeps well and uses no anodyne. There are a few little nodules on the nose near the commissure of the eyelids; with this exception he looks quite well," which "is certainly the result of the X-ray treatment." Dr. Pusey adds that this case "illustrates very strongly (1) the persistence of X-ray effects," and (2) "the evidence of the deep-seated effects of the X-rays." "Such a case offers another lesson, and that is the agreeable surprise from the use of X-rays that may confront one in even the most desperate case of circumscribed carcinoma."

Dr. Pusey concludes, giving the advantages of X-ray treatment as follows:

1. It is painless.
  2. It destroys diseased tissue but leaves the healthy tissue in its place.
  3. It leaves a minimum scar.
  4. It can be used in cases where the surrounding healthy tissue cannot be sacrificed.
  5. It relieves pain and induces sleep.
- [All of these points have been fully demon-

strated by work done with radiotherapy by Dr. Stuart McGuire, at his private hospital, St. Luke's, Richmond, Va., during the past year or so.—Editor *Va. Med. Semi-Monthly.*]

*Aene* responds very promptly to X-radiation, and the result is permanent.

*Keloid* seems to be very quickly cured, according to Dr. Edwards' limited experience and the reports of others.

Such diseases as *eczema*, *scleroderma*, *syccosis*, *goitre* and other *hypertrophies*, *rheumatoid arthritis*, *syphilitic* and other *indolent ulcers* are rapidly healed.

Deeply seated carcinomata and sarcomata are *not amenable* to its influence; yet nearly every case treated is benefitted, and the disease is arrested or destroyed.

Recognizing the peculiar elective effect of the X-ray as an obliterater of cells of low vitality, and a stimulant to more healthy action and increased resistance of normal tissue, Dr. Edwards has done experimental work on certain sclerotic or degenerate states of the cords and nerves. During the past few months, he has exposed the spinal cord to deeply penetrating rays, with the hope of, at least, arresting the progress of the degenerative changes in *tuberc patients*. The result has been an agreeable surprise and very gratifying. Three patients have had return of knee-jerk, arrest of the lightning pains, and reduction in atoxic symptoms. In all, the general condition has been improved. [Work in this direction is original work, and the results accomplished should encourage others to make further observations. To restore the locomotor ataxic patient to comparative health will be a discovery that will entitle the originator of the proper treatment to a permanent name in medical history.—[Ed. *Va. Med. Semi-Monthly.*]

The most important part of the X-ray apparatus is the tube. Its efficiency depends upon the spark length, the volume of the spark and the technic of the operator. Perhaps the most important point in technic is the regulation of the current, the vacuum and the interruptor so as to keep the tube uniform in action and the light as constant in intensity of radiation as possible. This feature has not yet been perfected and requires much thoughtful research. It is probably one of the most difficult features of the X-ray work.

Tubes vary greatly in efficiency, the same tube giving different results under the same conditions at different times. The vacuum varies

or at least the resistance of the tube fluctuates, from time to time. For a complete outfit for therapeutic and photographic work, five or six tubes are necessary. They should be of different degrees of exhaustion. The tubes used for photography should not be used for therapy, and the therapeutic tubes are not desirable for photographic work.

A tube's capacity should be determined and much care should be exercised to avoid crowding the tube to its limit; neither should it be run greatly below its average capacity. Tubes are sensitive to abuse and their efficiency is impaired. Periods of rest are beneficial to tubes. They should not be worked constantly. It is found that when a tube gets to working badly, if laid away for a month or two it will be found much improved by the rest. The tendency is for tubes to get harder with use—that is, the vacuum decreases and it becomes necessary to have them re-exhausted. This is obviated by some manufacturers by having a minute pinhole valve in the sealing-off tube so that a very small quantity of air may be admitted when the tube becomes too high.

Baking a tube will lower the vacuum for a time and may be repeated as often as necessary without injury if it is properly done. The life of a tube may be greatly prolonged by proper care in opening and closing the current passing through it.

Two forms of apparatus are used for exciting the X-ray tube: the static machine and the induction coil. For many reasons the current from a static machine is the ideal one for X-ray work. It has the high oscillation, the voltage and safety to patient and operator. The machines used by many are not of sufficient current quantity for deep penetration but are much preferable for therapy. A static machine for both photography and therapy should have at least sixteen revolving plates, and the plates should not be over thirty inches in diameter. These large machines are cumbersome, require considerable office room and a one-half horsepower motor to operate them. For this reason many operators prefer the coil. A large coil is necessary for photographing the deeper parts, just as a large machine is necessary for the same character of work.

With the proper tube and coil, or machine, as the case may be, the next point for consideration is the radiance and its regulation for the different kinds of work. For photography, the tube

should be adjusted according to the part to be penetrated, the hand or foot requiring a much lower vacuum and shorter exposure than the shoulder or hip.

A radiograph is a shadow picture, and its definition between different intensities of shadows depends upon the density to the ray of the substance photographed. As the ray is reflected from a plate about one inch in diameter and the outlines in the shadow are produced by the diverging rays from this small focussing plate, it may be readily seen that the shadows would be magnified more or less according to the relation between the object, the dry plate and the reflecting plate in the tube. If the tube is near the object and the plate some distance from it, the shadow would be greatly magnified. If the tube is some distance and the object near the plate, the shadow would be very nearly normal in size. The locating of foreign bodies and the study of fractures requires exposures from two directions, preferably at right angles to each other, when the exact condition may be estimated, allowance being made for the divergence of rays in bodies not central to the focus point of the tube. The distance of the tube from the plate is very important and should vary according to the character of the part and the intensity of the tube's radiance.

There has been some difference of opinion as to what the therapeutic agent is. Some have contended that it is the electricity in the form of an induction current around the tube, but this hypothesis has been pretty generally abandoned. It has been noted that deeper structures are markedly influenced, and even skin surfaces on the side opposite the exposure, and induced currents could hardly be expected to accomplish such results. Believing that the light is the only feature of the various components of the X-radiation which has such penetrating power, we are forced to the conclusion that the therapeutic results must come through the light; and further, we find the other lights, sun, violet and red, have therapeutic value.

Reasoning from this standpoint we are disposed to believe that there are many functional and organic disturbances of the deeper tissues which may be susceptible to cure or improvement by this agent, and it is difficult for the most conservative operator to avoid an attitude of uncertain expectancy toward the future development of light therapy.

### Choloform for Tape Worm.

Dr. James M. Clopton, Huntsville, Ala., says [*Southern Practice*, Dec., 1902,] that more than eighteen years ago, while practicing in St. Louis, Mo., he was a victim of tape worm, and had been for several years previously, and resorted to all the then prescribed remedies without benefit. Dr. William Porter then prescribed Squibb's chloroform  $\text{ʒij}$  in a number of large size capsules, with directions to take one every few minutes until well under the influence. Have a medical friend with you to note effects, etc., and when sufficient have been taken to produce stupor, then take an active purgative, such as salts and senna. "Before night came, I was parted from my old enemy; and since that time I have had the pleasure of relieving several patients of this most obnoxious depraved company. In my opinion, if properly given, it will never fail to so stupefy the worm" that it will turn loose its hold on intestinal wall, and its expulsion is made easy. "I have never heard of a failure with its use" when given in the manner indicated.

### Arterio-Sclerosis and Chronic Interstitial Bright's Disease.

While the coexistence of vascular atheroma and interstitial nephritis is too well known to need comment, the question of which bears a causal relation to the other has been a matter of considerable discussion. Just now the general opinion is trending to the belief that any one of these conditions may prevail, namely: The arterio-fibrosis and contraction of the kidney may go on *pari passu*; secondly, the arterial changes may be secondary to primary changes in the kidneys and may be caused by noxious material retained in the blood; thirdly, the arterial degeneration may be primary with consequent hypertrophy of the heart, which results in frequent strains upon the vascular system, and especially upon such organs as the kidneys which pass albumin under the pressure, and may then also become permanently affected.

Recently attention has been called to a point of distinction in diagnosis between the foregoing varieties of interstitial nephritis. It appears that this point was first advanced by Senator and some other medical men, but it has lacked general confirmation. It is this, When the affection of the kidney is primary, the heart becomes hypertrophied simply, but dilatation is

not likely to be present unless it be late in the disease. On the other hand, if arteritis is the primary trouble or there is any other condition tending to cause increased blood pressure or venous stagnation, the heart usually hypertrophies easily, and by the time the kidney is affected the heart is in a condition of dilatation. When arteritis is present, the heart walls probably take part in the atheromatous degeneration, and, for this reason, this organ more easily undergoes dilatation. Thus, then, in a condition of nephritis coexistent with arteritis, if the heart is dilated the arteritis likely preceded the nephritis, and the nephritis may not be so far advanced as one might suppose; while if the heart is merely hypertrophied, the nephritis is likely primary, in which case, too, the arterio-sclerosis is probably not quite so advanced, though the kidney may be much diseased. As said before, this distinction is by no means confirmed; nevertheless it is a point worth keeping in mind in these cases.

The practical importance of such a means of differentiating these forms of disease is apparent. In the first case (primary arteritis) more might be expected of cardiac stimulants or sedatives and vaso dilators, while in the second (primary nephritis) one would rather direct treatment toward the kidney, using Basham's mixture or alkaline diuretics, although the relief of the heart by nitroglycerine would still prove excellent practice.

It is generally taught that increased urine of low specific gravity is a characteristic symptom of contracted kidney. Regarding this, in cases of primary arteritis, we wish to call attention to a quotation made below in the body of this article. The amount of albumin, as every one knows, is usually small and is sometimes absent for weeks, while the number of casts is by no means great, and these are chiefly of the hyaline variety. Some one has very aptly explained these symptoms associated with kidney undergoing contraction somewhat as follows: Regarding the contraction as beginning at one end of the kidney, it creeps steadily across the whole organ. Along the edges of the advancing process is an area of inflamed tissue which passes albumin and furnishes the tube casts. This small area naturally furnishes but a small portion of albumin and few casts. The contracted area behind is possibly thrown entirely out of function and the area in front is yet healthy. Meanwhile the obstructed circulation gives rise to in-



creased blood pressure and cardiac hypertrophy, which in turn urge the kidney to secrete increased urine. To be sure, the degenerative process begins at several foci in many instances. The amount of albumin would thus depend upon the extent of inflamed area and the rapidity of the progress of the disease. While this picture may not be quite accurate, it may help immensely to order our ideas of these cases. We all know, too, that the large, white kidney sometimes undergoes contraction at places, but it would present quite a different clinical history, such as would not fit in the least the description just given.

The above, however, is not suited to a case of nephritis following arterio-sclerosis. The whole state of affairs is different. In explanation we wish to make use of a quotation to which allusion was made above. Dr. Futeher, of the Johns Hopkins, in a discussion upon this topic several months ago spoke as follows:

"I think I am right in stating that Dr. Osler is of the opinion that arterio-sclerosis is more frequently a cause of chronic nephritis—i. e., contracted kidney, than is generally supposed. The arterio-sclerotic kidney does not show the same grade of atrophy the kidneys of interstitial nephritis of other causes do. The kidneys are apt to be comparatively large, red and beefy in appearance. They are very firm, cut with difficulty and frequently present numerous large depressions on their surface. I think that an examination of a series of cases will show a material difference in the general macroscopic and microscopic appearance of the small kidney, due to primary arterial disease, and the ordinary kidney of chronic interstitial nephritis." "The condition of the urine in two varieties of cases differs somewhat. In the arterio-sclerotic form the specific gravity of the urine is either normal or high, the color good and the urine generally contains more albumin than in ordinary interstitial nephritis. The prognosis of the renal condition in an arterio-sclerotic kidney does not so much depend on the condition of the kidneys themselves as upon the condition of the heart and the general vascular changes." Dr. Futeher also called attention to the extensive arterio-sclerosis often present in elderly people, and the probability of such kidney trouble occurring and being overlooked. Experience teaches us that in such cases of advanced arterio-sclerosis, when there is excitement of the circulation from any cause, the pulse being full and hard, though

often slow and irregular, there may be a quantity of albumin in the urine, sometimes with increased secretion of urine; but after the circulation becomes more equable the albumin may entirely disappear and the patient remain fairly comfortable for a long period, and this upon very little medicine but merely by paying attention to diet and other measures of general hygiene.

Another report from Johns Hopkins is of interest in this connection. While four per cent. of a large number of hospital cases were diagnosed as cases of nephritis, more than thirty per cent. of the first thousand autopsies performed at the hospital showed cases of diseased kidneys. A large number of later cases were no doubt secondary to other affections, but even with this consideration this percentage seems exceptionally large. At any rate there is suggested the possibility of partly diseased kidneys being common in persons apparently healthy, and who show no signs of any trouble of the kind.—Editorial in *Medicus*, November, 1902.

### Sublamine Instead of Corrosive Sublimate in Practice.

Kronig and Blumberg, of Berlin, in 1900, recognizing the drawbacks to the use of mercuric bichloride as a surgical disinfectant, general antiseptic and parasiticide, induced the Schering factory in Berlin to prepare for them a combination of mercury with ethylenediamine, which has been named *Sublamine*. It is composed of three molecules of mercuric sulphate and eight molecules of ethylenediamine, and contains about 43 per cent. of mercury. It occurs as white needle-like crystals, which readily dissolve in water, but are only slightly soluble in alcohol. Experience and general observations have convinced all who have used it that it has not the disadvantages of corrosive sublimate; on the other hand, it has all the good properties to which mercuric chloride owes its effectiveness. In fact, it has the following advantages: (1) Sublamine dissolves instantly, causing a pleasant softening of the water; (2) disinfection by sublamine does not require the amount of time demanded by the older methods; (3) nickel plated instruments are not attacked by sublamine solutions, hence such instruments may be sterilized by such solutions; (4) sublamine is absolutely non-irritating; it does not attack the skin even in strengths of 1:50 solution; it never causes the desquamation or irritation or

ezeema, etc., which mercuric chloride so frequently produces—even in solutions of 1:1000; (5) sublamine penetrates deeper into the tissues than does sublimate—due to the ethylene-diamine, which the former contains; (6) sublamine does not precipitate soap solutions, hence preserves its disinfecting power in the presence of suds—in contra-distinction to sublimate; (7) solutions of sublamine of 1 per cent. and stronger do not coagulate albuminous material of the same strength—even at a temperature of 109° to 113° F. Solution of corrosive sublimate 1:1000 coagulates albumin solutions at ordinary room temperature. This advantage of non-precipitation is readily apparent when blood covered hands are immersed in sublamine solution; no brown precipitate on the hands is formed thereby.

Sublamine can be advantageously employed in all cases in which bichloride of mercury is indicated. It especially promises to play an important role in obstetrical, gynecological and dermatological fields.

For vaginal irrigations, sublaminic solutions of 1:1000 or 2000 should be employed in cases of leucorrhœa, after miscarriage, etc. Dr. M. A. Goldstein, Professor of Otolgry in Marion-Sims Beaumont College, St. Louis, has employed a 1:2000 solution in syringing and flushing after mastoid operations with good effect. In Dr. Emil Senger's clinic, Crefeld, Germany, it has been used in the place of corrosive chloride as subcutaneous injection in 1:500 solution, without the addition of sodium chloride, and with very satisfactory effects. It caused no irritation at all.

Sublamine is obtainable only in the form of 1 gram (15 grains) pink colored tablets. 20 in a tube.

When about to use sublamine for the surgical amphitheatre, etc., wash the hands with lukewarm water and soap (preferably soft or sand soap); scrub with brush 8 to 10 minutes, and rinse well in water. Then treat the hands, etc., with a nail brush and warm 1:1000 solution of sublamine—made by dissolving one tablet in one quart of water. Alcohol need not be employed. When an immediate and more superficial disinfection of hands only is required, as after visiting an infectious disease patient, thorough washing with 1:1000 solution will suffice.

### Severe Extrinsic Traumatisms of the Spine.

Dr. Thomas H. Manley, New York, presents

the following abstract of an essay read at Mississippi Valley Medical Association at Kansas City, October 16, 1902. He says: Severe spinal injuries reduced to an anatomical basis may be divided into two classes—(1) Those which involve the rachidian structures alone—the osseous, ligamentous, muscular and vascular. (2) Those in which the effects of violence fall with greatest force on the central organ, the cord, its meningeal investments, its ganglia or medullary substance, and nerve roots.

The former, or *extrinsic injuries*, are much the most common; and though not so serious to life or function, may, by extension of pathological processes, involve the deeper or more vital parts; but in most cases they are recovered from, however, sometimes leaving deformity or impaired function.

The osseous structures of the vertebral column consists essentially of two parts: (1) A segmented whole, made up of the vertebral bodies, with an intervertebral substance, and an enveloping sheath of a tough, fibrous structure. This, properly speaking, is the triple curved backbone, which supports the head and carries the whole trunk. This is a flexible structure, which, within various limits, may be bowed or twisted with remarkable impunity. (2) The posterior stage-work of the spinal column—the vertebral apophyses which serve chiefly the double purpose of providing a hollow tube for the cord and attachments for ligaments, muscles and tendons.

All the structures external to the theca spinalis are provided with an abundant circulation, while the cord itself and its membranes are but very sparsely supplied with vessels.

The primary extrinsic lesions of the spine are: Contusions, blows or falls; sprains, hyperflexion, or torsion; fractures, simple and open; diastases, fracture and luxations; and visceral complications.

Contusions, blows or falls on the back seldom involve danger to the spinal structures, except when the volume of force is great and is concentrated on a limited area. The spinal defences provide frequent immunity by sudden sinking of the head, the projecting shoulders and ribs, the iliac crests, the ponderous lumbar development and gluteal projections. A sudden violent blow over the neck is the most serious, because of the large sympathetic ganglia here located and its contiguity with the bulb at the base of the brain. The pneumatic, thoracic areas are well calculated to resist shock, and lower down,

afford protection to many of the solid, floating organs of the abdomen.

The spinal cord ends at the last dorsal vertebra, and hence, concussive force on the lumbar or sacral regions can only effect the terminal nerve cords contained therein, and the meningeal envelope.

The result of a blow on the lumbar or sacral region is from direct concussion and contre-coup effects, transmitted shock.

Sprain of the spine implies the effects of a complex force, with consecutive pathological conditions. Torsion, with over-stretching or sundering of ligaments is invariably an essential factor.

The neck, the most mobile segment, suffers most frequently, and grave sprains are most commonly produced by the body being projected against the occiput, as in diving, or falls on the side of the head. The costal bases which laterally support the thoracic spine, safeguard this segment against torsion injury. The lumbar region frequently suffers from sprains after great efforts in various exercises, or in making heavy lifts with the spine in a laterally inclined attitude.

A severe sprain of a joint is always a serious accident: of the spine more so, because of vital and delicate organs which it encases. Spinal sprains may involve a diastasis of the cerebral segments, though generally the apophyseal articulations alone are engaged. In lumbar sprain the tendons may suffer rupture or luxation.

Spinal hemorrhage may be broadly divided into two varieties—viz., that which occupies the cord and that which occurs external to the theca in any of the overlying structures. The former can never occur, as a primary, uncomplicated lesion; the latter, the extrinsic variety, occurs frequently in nearly every type of severe spinal injury; it is usually venous, it may take place in the vertebral hollow, alongside the cord, or into the subcutaneous intermuscular spaces, posterior to the apophyses.

The most confused ideas obtain in relation to "spinal hemorrhage"—the prevailing impression being that the blood escapes into the meninges or the medullary elements of the cord—hemato-meningea; while quite invariably the blood leak is into the spinal canal—hemato-rachis. The latter is of itself rarely a cause for serious apprehension, but when complicated, it becomes an aggravating factor in provoking

pathological changes, tending to meningitis, or myelitis, ascending or descending. The gravity of this hemorrhage depends on its site, volume and complications.

Fractures of the spine should always be considered in a category, separate to itself. This fracture may exist—a broken back without any definite symptoms at all. Diagnosis of it, by any means known to art, may at times be absolutely impossible. When the spinal cord escapes impingement, as it does in the greater number of cases, *restitutio ad integrum* may speedily follow, or the fragments may unite, leaving an ankylosis, or a deviation, most commonly, a kyphos. This involves a deformity with impairment of function, in the mechanical action of the column, in its oscillatory movements and its strength, but in no manner impairing the function of the cord.

Fracture of the spine is seldom attended with palpable displacement, the ligamentous attachments being so numerous and firm that the fragments are usually sprung into position automatically. This fracture only assumes a serious aspect when the cord is divided.

Diastasis, or fracture-luxation: A genuine, complete luxation of the spine, without simultaneous destruction of the cord, can be only imagined, it can never occur.

A displaced vertebral body is a diastasis, and not a dislocation, because the intervertebral junctions are not true joints, and luxation of the apophyses can only occur with coexistent fracture of an arch or pedicle, except in the cervical region. It is very frequently impossible to distinguish an apophyseal luxation from a fracture, except, possibly, in the neck, and even here a luxation of the vertebrae has often been suspected, when, on autopsy, none was found, but a fracture of the base of the skull. Again, I have known of an exploratory operation for luxation—fracture when none was discerned through the incision, but it was later known that one existed, three vertebrae further down.

Visceral complications, coexistent or consecutive to violent spinal injuries are not infrequent. The thoracic and abdominal organs most frequently suffer. Mediastinal, pleural or pulmonary hemorrhage may occur after a fracture through the vertebral blocks, or a diastasis through the intervertebral substance, in consequence of a laceration of the anterior ligaments and the intra-rachidian plexus of vessels. The

heart or great vessels may suffer from the effects of violent commotion of the thorax.

In the abdomen the kidney may suffer displacement, contusion, or laceration; the spleen, pancreas or liver are liable to similar lesions; a distended gall or urinary bladder, or stomach may suffer rupture and leakage; the pregnant uterus in any stage may sustain shock with the premature expulsion of its contents.

In many severe extrinsic rachidian injuries, though the spinal cord may previously escape such damage as will induce paralysis, yet later symptoms may follow, suggestive of meningeal changes, or disturbances of nutrition, and pronounced disturbance of the ganglionic connections with the sympathetic involved.

In all this class of traumatisms it will be well to be reserved in prognosis until, at least, the primary effects have been recovered from and function is fully regained.

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## Book Notices.

**Treatise on Diseases of the Eye, Nose, Throat and Ear.** By VARIOUS AUTHORS. Edited by WILLIAM CAMPBELL POSEY, A. B., M. D., Professor of Ophthalmology in Philadelphia Polyclinic, etc., and JONATHAN WRIGHT, M. D., Attending Laryngologist to Kings County Hospital, Brooklyn, etc. Illustrated with 650 Engravings and 35 Plates in Colors and Monochromes. Lea Brothers & Co., Philadelphia and New York. 1903. Large 8vo. Pp. 1238.

Of the 27 contributors to this great work, we find but one author South of Washington, D. C.—Dr. Edward C. Ellett, of Memphis, Tenn. And yet, as we look over the list of names, we recognize in the Southern States many specialists in one or the other of the departments included in this volume from whom authors equally as prominent and capable as a number of those honored by authorship of articles in the *Treatise* who could have given as valuable and as practical papers. And when we consider the number of medical students in Southern colleges who are daily hearing the clinical lectures of some of these great men in their specialties, and who are looking to them as their guiding advisers, it would seem good policy, at least, to have interested at least several others of these

prominent Southern specialists as contributors. Leaving aside this sectional view as to authorship, we must recognize the merits of this well designed and well prepared *Treatise*, which must long occupy the rank of standard authority. "The practical convenience afforded (to physicians and specialists alike) by combining the subjects of the eye, ear, nose and throat within a single volume needs no demonstration." The chapter of greatest interest to the general practitioner is the one on "the eye in its relations to general diseases," by Prof. C. F. Clark, of Starling Medical College, Columbus, Ohio. It covers 70 pages, and considers the eye in its relation to constitutional diseases, such as anæmia, leukaemia, rachitis, Addison's disease, diabetes, etc.; to diseases of the digestive system, of the respiratory tract, of the circulatory system, of the urinary and sexual organs; to poisons and infectious diseases; to diseases of the skin; to diseases and injuries of the brain and spinal cord; to trophoneuroses; and to diseases of the nerves, etc. In short, diseases and injuries of the eyes take up over 680 pages of the book. Diseases, etc., of the nose, throat and ear occupy the remainder of the volume; but we find no distinctive chapter set aside for the general practitioner with reference to diseases of either of these organs as related to general diseases. The double column index takes up 38 pages of the book, without which the owner would scarcely be able to find the subject he seeks, unless he were to lose time in scanning the individual chapters to find the item he wishes to examine.

**Memoranda on Poisons.** By THOMAS HAWKES TANNER, M. D., F. L. S. *Ninth Revised Edition.* By HENRY LEFFMANN, A. M., M. D., Professor of Chemistry in Woman's Medical College of Pennsylvania, etc. Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. 32mo. Pp. 177.

Every practitioner knows "*Tanner on Poisons.*" The present is only a new and revised edition—omitting nothing but what had become obsolete, and substituting modern clinical nomenclature. The toxicology of poisonous food has been concisely presented. As the book is intended for practitioners in an emergency, space for the new matter has been gained by the omission of bibliography. Bites of venomous reptiles, of rabid animals, and the stings of bees, etc., are also considered. A good index aids ready reference. Every doctor should

keep this book in his visiting satchel or on his office table for immediate aid in time of need.

**Practical Medical Series of Year Books.** Edited by *Eminent Specialists and Teachers under the General Editorship of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, etc. Second Series, Vol. I. General Medicine.* Edited by FRANK BILLINGS, M. S., M. D., Dean Rush Medical College, Chicago, etc., and J. H. SALISBURY, M. D., Professor of Medicine, Chicago Clinical School. October, 1902. Chicago: The Year Book, Publishers. Cloth. 12mo. Pp. 358. Price, \$1.50.

This volume is the beginning of this new series of the volumes issued monthly on the year's progress in medicine, surgery, etc. The present volume on medicine takes up advances made in diseases of respiratory and circulatory organs, diseases of the blood and blood-making organs, general infectious diseases, metabolic diseases, diseases of the ductless glands, diseases of the kidneys, miscellaneous diseases, etc. This is one of the best reviews of practice of the year published. The series of ten volumes a year, like the one under notice, has a subscription price of only \$7.50. Any volume, however, if bought separately, costs from \$1 to \$1.50 each. But even this is cheap for the mass of systematized up-to-date material secured.

## Editorial.

### Southwestern Virginia Medical Society.

About fifty of the most prominent doctors of the southwestern counties of Virginia—all those west of Roanoke county, representing about one-fifth of the State of Virginia—met at Abingdon, Va., December 3, 1902, and organized themselves into the "Southwestern Virginia Medical Society." Its objects are the promotion of good feeling and intimacy among the profession of their section, mutual improvement by the reading of papers and the interchange of opinions, and to increase interest in, and to promote the aims, and to enlarge the membership of the Medical Society of Virginia, of which it wishes recognition. It is from this section that some of the ablest men of the profession come. The counties represented in this organization are: Bland, Buchanan, Carroll, Craig, Dickenson,

Floyd, Giles, Grayson, Lee, Montgomery, Patrick, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe—including all counties west of Roanoke county. The society is to meet three times annually. Its next meeting will be held at Pulaski City, Va., April 1, 1903. The officers-elect for the ensuing year are: *President*, Dr. Wm. H. Bramblett, Pulaski; *Vice-Presidents*, Drs. P. B. Green, Wytheville, and W. K. Vance, Bristol; *Secretary and Treasurer*, Dr. E. T. Brady, Abingdon, Va.

### The Southern Surgical and Gynecological Association

Will hold its next annual session at Birmingham, Ala., during the week preceding Christmas, 1903. Dr. John D. S. Davis, Birmingham, is chairman of the Committee of Arrangements. The officers elected at Cincinnati for the new year are: *President*, Dr. J. Wesley Bovee, Washington; *Vice-Presidents*, Drs. Bacon Saunders, Fort Worth, Texas, and Christopher Tompkins, Richmond, Va.; *Secretary*, Dr. W. D. Haggard, Jr., Nashville, Tenn.; *Treasurer*, Dr. Floyd W. McRae, Atlanta, Ga.

### The Medical Examining Board of Virginia

Held its second semi-annual session for 1902 in one of the halls of the Medical College of Virginia, Richmond, December 16th, 17th and 18th. The Board held its preliminary meeting during the night of December 15th, and was largely attended. The full report of the Board's transactions, and the list of those permitted to secure license to practice in Virginia, etc., will appear in this journal in the usual order of events. It requires time to examine and grade papers—an immense deal of work being thrown upon the secretary, Dr. R. S. Martin, Stuart, Va., after the report of each examiner is sent him.

The New Orleans Polyclinic opened its 16th annual session November 3, 1902, with a large class, and brilliant prospects for a successful term. New Orleans offers exceptional advantages for this kind of work. Practitioners in colder climates who wish a few weeks of profitable respite from icy blasts, as well as to those in the South and Southwest, the advantages of the New Orleans Polyclinic are clearly apparent.

### The Hunter McGuire Statue Model

Is on exhibition at the Nowlan Company's store, on Main street, Richmond, Va. It represents this eminent surgeon in a familiar position, seated in a chair, as so many of his friends have seen him. It is the purpose of his friends to place the statue, when completed, near that of the great "Stonewall" Jackson, on whose staff as surgeon of the Confederate Army Corps, he was during the memorable war of the Confederacy. In a short while the model will be transformed into bronze, so as to remain a durable statue of this great leader of men. It is a special pleasure to note the desire of the public to preserve in statue the recollections of this world-famed surgeon.

### The Richmond Academy of Medicine and Surgery,

During its December meeting, elected Dr. Wm. F. Mercer president for the year 1903, Dr. Mark W. Peyser being re-elected reporter. The retiring president, Dr. Lewis C. Boshier, has made an excellent officer, and during the year the Academy has grown in members and influence. We do not recall that he has been absent during a single meeting of 1902, and papers or discussions have been presented each semi-monthly meeting. We have every reason to believe that still further progress will be made during the coming year under the administration of the new officers.

### Practitioners of Medicine in the United States, etc.

There is a vast amount of interesting and useful matter in Polk's Medical Directory of 1902 that the profession apparently overlooks. Beside the names and post-office addresses of all doctors of the recognized schools of medical practice, etc., it gives, as introductory remarks of each State, the population of the same, the number of physicians, a synopsis of the medical laws, and the names and addresses of the officers of the Medical Examining Boards, State Boards of Health, etc.—reference to which pages would save a great deal of delay of information wanted, and the worry of unnecessary correspondence, etc.—replies to which must be based on the information secured from this wonderful book.

We are continuously being asked by correspondents—doctors looking out for a large population where there are relatively few doctors—

about this or that State for a location, so that we have determined to compile from *Polk's Medical Directory* for 1902 the population of each State, according to the census of 1900, and the number of physicians in each State up to 1902, and a third column, giving the proportionate number of doctors to the *population of each State*:

STATES, ETC.	Population.	No. Physicians.	Ratio of Doctors to Population.
Alabama.....	1,828,697	2,190	1:855+
Alaska.....	63,592	68	1:935+
Arizona.....	122,212	177	1:696+
Arkansas.....	1,311,564	2,573	1:509.4
California.....	1,485,053	3,869	1:384—
Colorado.....	529,700	1,265	1:418.7
Connecticut.....	908,355	1,365	1:665.4+
Delaware.....	184,736	271	1:684—
District of Columbia.....	528,542	987	1:282.4—
Florida.....	2,216,331	2,861	1:760.5—
Georgia.....	2,216,331	2,861	1:774.6+
Idaho.....	161,772	216	1:749.—
Illinois.....	4,821,550	8,849	1:544.9—
Indian Territory.....	391,960	812	1:482.7+
Indiana.....	2,516,462	4,958	1:507.5+
Iowa.....	2,231,853	4,117	1:542.1+
Kansas.....	1,470,495	2,709	1:542.8+
Kentucky.....	2,147,174	3,507	1:612.2+
Louisiana.....	1,381,625	1,469	1:940.6—
Maine.....	694,466	1,304	1:531.7+
Maryland.....	1,190,050	2,152	1:553—
Massachusetts.....	2,805,346	4,832	1:580.6—
Michigan.....	2,420,982	4,250	1:569.6—
Minnesota.....	1,751,394	1,862	1:946—
Mississippi.....	1,551,270	1,555	1:997.6
Missouri.....	3,106,665	6,314	1:492+
Montana.....	243,329	322	1:756.—
Nebraska.....	1,068,539	1,532	1:606.1—
Nevada.....	42,335	69	1:613.3
New Hampshire.....	411,588	732	1:562.—
New Jersey.....	1,883,669	2,281	1:824.5
New Mexico.....	195,310	165	1:1183.6
New York.....	7,268,012	12,279	1:592
North Carolina.....	1,893,810	1,556	1:1217+
North Dakota.....	319,146	294	1:1085.5
Ohio.....	4,187,545	8,426	1:494.4
Oklahoma.....	398,331	816	1:498.5—
Oregon.....	413,536	635	1:651.2
Pennsylvania.....	6,302,115	9,684	1:640.5
Rhode Island.....	428,556	652	1:657.2
South Carolina.....	1,340,316	1,198	1:1119.2
South Dakota.....	401,570	485	1:827.3
Tennessee.....	2,020,616	3,688	1:550.—
Texas.....	3,048,710	5,241	1:581.7
Utah.....	276,749	297	1:931.9
Vermont.....	343,641	735	1:465.1
Virginia.....	1,854,184	2,215	1:837.1
Washington.....	718,103	770	1:919.5
West Virginia.....	758,800	1,445	1:525.+
Wisconsin.....	2,069,042	2,389	1:865.5
Wyoming.....	92,531	128	1:723—
<b>Total in U. S.</b>	<b>75,650,540</b>	<b>122,360</b>	<b>1:618.3</b>

From the above table, it would appear that there are *relatively* fewer doctors in North Carolina than in any of the States or Territories; and, *relatively*, there are more doctors in District of Columbia than any of the States or Territories—although this may be accounted for by the very large number of "moonshiners," as they

are called—doctors who clerk in some of the departments of government who undertake to supplement their salaries or wages by “picking up” night practice. The *State* that has *relatively* the largest number of practitioners is California.

The above list of doctors does not include the medical and surgical officers of the United States army, navy and Marine Hospital service.

It will thus be seen that the population of the United States proper is about 76,000,000. The total number of physicians is about 123,000—including all schools of practice, or licensed irregulars, etc. This shows an average of about one doctor to every 618.5 of population.

To these figures must be added about 9,000,000 as the estimated population of the Philippine Islands—including 155,000 as the population of the Hawaiian Islands, and 900,000 as the population of Porto Rico—thus making a total estimated population of territory under United States of American laws, about 85,000,000.

To supply these new possessions, there are only 74 physicians in the Hawaiian Islands, or one doctor for every 2,094 of population. In Porto Rico, there are 77 physicians, or about 1 to every 14,688 of population. In the estimated population of about 8,000,000 in the Philippine Islands, there are only 303 physicians, or about 1 physician to every 26,402 of population.

The Hawaiian Islands have a total area of about 6,740 square miles—about 1,000 square miles less than New Jersey. The climate is equable—the mean average of temperature being about 72°—about that of Northern Florida. The 74 physicians are located in about a dozen of these islands. The well known leper settlement is located on Molokai Island.

Porto Rico is about 1,050 miles from Key West, Fla., and has a total area of 3,600 square miles—about a third larger than Delaware. The climate is hot, but tempered by prevailing north-east wind—the temperature dropping from 97° in the shade during the hottest hours to 67° or 68° at night. There is an abundance of water supply, and the land is exceedingly fertile—agriculture and lumbering being the principal industries.

The Philippine Islands—about 1,200 in number—measure about 115,000 square miles—about the same amount of land as is included in Maryland, Virginia, West Virginia and Kentucky

collectively. Manila city alone has about 150,000 population, of which there are about 25,000 European residents—and a total number of about 250 doctors—leaving less than 75 doctors for all the rest of these islands.

We mention these facts because we believe under American rule, civilization will rapidly increase among the population of most of these Pacific “new possessions,” and in less than fifteen or twenty years many a young doctor who dares now to venture a residence in some of these building of islands will have won renown and wealth. We speak thus especially to graduates of the Southern States medical colleges. Horace Greely spoke with prophetic truth when twenty-five or thirty years ago he advised “go West, young man.” We believe the advice to settle in one of the “new possessions” good advice now.

From all we can hear from the goodly number of American doctors who have already gone to Manila and other places in these far-off islands, they are all doing well in a professional sense.

Porto Rico is another field for occupation by the American doctor. Where industries are profitable, crops plentiful, etc., the doctor may safely go with a prospect of making his living, and more. Under American education, these new fields will be very different places in ten or fifteen years.

Again, with all of this development of territory, different branches of the National Government itself will need surgeons. We are told that about 200 are now needed for the “new American Navy.” The Marine Hospital Medical Corps will have to be kept supplied, and the varying conditions of the army will cause demand for more surgeons. Thus there are numerous fields opening for the young doctor who is looking for a habitation and a practice—outside of the congested condition of the profession in numerous large and old cities of the country.

### “Grannies” in Practice.

During the thirty-third annual session of the Medical Society of Virginia, held at Newport News, Dr. Thos. S. Hening, of Chesterfield county, Va., read a short paper, which we publish in this issue. While in the graphic style of his writing he presents an amusing side of the intolerant ignorance of certain grannies, he yet records facts which find too many confirmations in the rounds of practice of other doctors to allow to exist any longer. It is true the city doctor meets with such cases rarely because he is in

easy reach of either a graduate or a pupil nurse from some of the hospitals of his town. But the time was when such illustrations of gross ignorance occurred in city practice. Even to this day many of the "old-time people" prefer to have the old "mammy" of the family with them in times of confinement; but now, rather to play the part of the baby's nurse and general attendant on the mother during the period of her childhood than as officiating at the birth, etc.

We present the paper for the purpose of giving emphasis to the resolution presented by Dr. Ramon D. Garcin, of Richmond, Va., and unanimously adopted. The resolution, which reads as follows, has been referred to the Legislative Committee of the Medical Society of Virginia for their action: "*Resolved* by the Medical Society of Virginia, that we request the Legislative Committee of the said Society to use its best efforts to require midwives to be licensed only after passing a suitable examination."

As the Virginia Legislature is now in session, we trust every member of the Virginia profession will promptly give all due assistance to the Legislative Committee of the Medical Society of Virginia in securing suitable legislation to meet the demands of the case. Too many lives are sacrificed, and too many mothers and children are invalidated for life by the gross ignorance of "grannies" to permit incompetent ones to carry on their trade any longer. The matter is too important to allow of further delay in remedying the evil.

### The Rappahannock (Va.) Valley Medical Association

Will hold its quarterly meeting at Fredericksburg, Va., December 30, 1902. Papers will be read by Dr. Barksdale Hales on "Some of the Most Common Diseases of the Female Pelvis, and Their Treatment," and by Dr. J. P. Stiff, on the "Treatment of Diseases of the Antrum of Highmore." Dr. J. Edward Tompkins is president, Dr. W. Jeffries Chewning, secretary, etc.

### Recollections of the Quarter

Is a book just published by the Moose Bros. Company, of Lynchburg, Va. The author is Dr. William S. Gordon, Professor of Practice of Medicine in the University College of Medicine, Richmond, Va., whose literary tastes and contributions to periodicals, etc., have long ago established for him an enviable reputation. The

present book is historical in nature as to the Eastern part of Virginia, and consists largely of dialect studies and stories. It is a handsomely gotten up volume, and copiously illustrated from photographs. It is not a medical book, and suits well for holiday reading in the family circle—reviving recollections of the happy past of old Virginia days, instructive to the young, and withal most entertaining reading. The price of this handsomely issued volume is only \$1.50, and should receive a large sale.

### Obituary Record.

#### Dr. Linneas B. Anderson,

Formerly a practicing physician of large influence in Norfolk, Va., and an able man in every particular, died December 5, 1903, at the home of his son, Dr. H. B. Anderson, of Noel, Hanover county, Va., at the ripe age of 78 years. For some years he resided in Charlottesville, Va. He graduated from the Medical College of Virginia in 1844, and for many years was a prominent member of the Medical Society of Virginia.

#### Dr. Joseph Charles, Newport News, Va.,

Whose special courtesies to the Medical Society of Virginia during its recent session at Newport News will long be remembered, died at his home December 12, 1902. He was one of the best known medical and surgical authorities of the Eastern section of Virginia. Just after performing an operation at the Newport News Hospital on the afternoon of December 9th, he was stricken with symptoms indicating gastritis. That night his condition was critical; he improved during the next day. The next day, however, he began to sink, and died during the morning of December 12th. He graduated in medicine from the College of Physicians and Surgeons of Baltimore, 1881. He then moved to Newport News, where he has ever since resided. He joined the Medical Society of Virginia in 1890. With his wealth, his charity toward the poor of Newport News was well known, and they recognize in his death that they have lost one of their best friends. He was a public spirited man, and his place will be hard to fill.



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## Original Communications.

### PAUCITY OF THE GENERAL SYMPTOMS MANIFESTED IN SOME CASES OF BRAIN TUMOR.\*

By J. ALLISON HODGES, M. D., Richmond, Va.

Professor of Nervous and Mental Diseases, University College of  
Medicine, Richmond, Va.

Four comparatively recent cases of brain tumor have directed my attention anew to this subject. In the diagnosis of these cases, I believe that we often attribute too much importance to the successive development of the classical symptoms as recorded in our text-books, overlooking for the time their relative frequency, and the comparative rapidity of the evolution of the case in point.

The manifestations of brain tumors, it is well known, present the widest variations. The clinical picture in each case is dependent upon the situation, the kind of tumor, the rapidity of growth, and the age of the patient.

The location of a new growth near the surface of the brain, so that it impinges upon the meninges or invades them may be attended by topical conditions of some significance, while, on the other hand, a slow growing tumor starting from the meninges may deform an entire hemisphere without giving rise to serious symptoms. Another tumor of even insignificant volume may likewise produce the most marked motor, sensory and mental disturbance, or lead to sudden death. It is perfectly certain, also, that a great part of the basal ganglia, the lenticular and the caudate nucleus, the corpus callosum, the fornix, etc., may be the seat of neoplasms with a complete absence of all focal symptoms.

To properly appreciate, then, the symptomatology of brain tumors, it must be remembered

first of all that the brain is the only organ confined within inelastic walls, and that the presence and development of any adventitious mass must produce symptoms referable to the physical laws governing such a condition. The symptoms that we are accustomed to observe in brain tumors are consequently due to the mechanical influence which the tumor exerts by general or local compression of the skull contents, and, further, to destructive or irritative actions, which depend upon certain vital peculiarities of the growth.

Moreover, pressure symptoms and irritation symptoms often overlap one another, and they cannot always be sharply distinguished.

As a rule, one or the other of these factors will influence the clinical picture of the disease in a more or less characteristic manner; and as one or the other is more prominent, the whole aspect of the case will vary, the focal symptoms depending almost entirely upon the location of the particular lesion.

The majority of cases of brain tumor are of insidious onset, and hence the diagnosis is rendered more interesting, as well as more difficult. It is not intended here to rehearse nor analyze the general symptoms of brain irritation, brain compression, nor, indeed, the focal symptoms, in determining the presence of a tumor, but rather to call attention to some general features, and especially to the fact that many brain tumors may exist, as the four cases I shall mention will show, without many of the usually accepted symptoms in such cases.

It must be remembered, also, that the classical symptoms of brain tumor are also significant of diseases of other organs.

The course of the disease is not always a steady one, there being often slight remissions, although the majority of cases show progressive development. The nature of the growth, likewise, in some degree determines the rapidity of the evolution of the case, but in turn is subject

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

to its localization, while the succession of symptoms is again determined by the nature and location of the growth.

Nearly every disease is supposed to have certain pathognomonic symptoms which individualize it; but in the case of brain tumors it is relatively rare that even the localizing symptoms are positively definite, and these even must be modified to a large extent by the general symptoms present.

These so-called general symptoms are more often than otherwise vague and confusing, and frequently at the time of examination are seemingly absent, or cannot be elicited from the patient or friends.

This fact emphasizes the first point to which I would draw attention, namely, *the importance of a careful review of the prior habits and individual characteristics of the patient.*

In this way only is it possible to arrive at the individual's former physical standard, and compare it with his present condition, and judge if there be mental defects.

It is well known that mental defects are nearly always observable in the later stages of brain-tumor, but I do not believe that sufficient importance is attached to their earlier manifestations.

As a rule, the mental symptoms consist of such slight changes of the mind in the early stages, as is sometimes the case also even in the final stage, as to be scouted by the patient and relatives.

The lessening of mental vigor, the slowness of the mental processes, the condition of hebetude, the tendency to somnolence, the bewilderment of ideas, the loss of the sense of locality, the impairment of memory for present things and present environments, the lessening of the power of attention, convulsions, etc., in the early stages, can usually be detected by the careful observer; but I hold that the elicitation of this information is of the greatest moment in confirming a diagnosis, and often prepares the physician for more satisfactory study of the subsequent invasion symptoms.

The physical changes in the early stages are as truly mental defects as the grosser changes met with in the final stage.

In greater or lesser degree, then, these changes are present in many cases, being in the initial and ultimate stages as well, in my opinion. It is true that they are more frequent in

tumors of the frontal lobes, and also with large tumors, although their fullest development is witnessed in syphilomata with gummatous meningitis.

If one of these changes—namely, recurring periods of somnolency—be associated with another of the general symptoms, as recurring headache, either slight or severe, it should arouse a suspicion, amounting almost to a certainty, of the presence of an intracranial growth, excluding nephritis, diabetes and trauma.

As an illustration of this, I mention the following case, which at the time of the first physical examination manifested no other general or focal symptoms except a tendency to recurring somnolence and periodical headache, but on ophthalmoscopic examination furnished a confirmatory diagnosis of brain tumor:

G. H., male, age 55; ophthalmoscopic examination revealed pupils normal; fundus; choked disc. few small retinal hemorrhages near disc; no ocular muscular paralysis nor paresis; vision only slightly affected. This patient died six weeks later, no localizing symptoms having appeared.

Headache is another of the general symptoms which I believe to be one of the most constant. I do not believe, as many text-books assert, that it is usually excruciating to an almost unbearable degree. It varies enormously in character, and, in children, intracranial growths are very frequently accompanied by no headache at all. In my experience, the only cases manifesting violent headache have been those of intracranial syphilitic growths, usually conjoined with a gummatous meningitis. When the growth of the neoplasm is slow there of course may be an entire absence of this symptom.

Illustrative of the fact that at the time of examination the headache may be the only symptom discoverable on physical examination, I might mention a very recent case in a young man, C. G., age 28, with a specific history, who complained of no other symptom except severe headache, yet upon ophthalmoscopic examination, revealed clear evidences of brain tumor.

Vomiting and vertigo, two other general symptoms, are often absent in cases of brain tumor, the former occurring in from one-half to two-thirds of the cases, and the latter in from one-third to one-half of the cases, according to the best statistics I can obtain.

The other two cases to which I would refer in this connection as illustrating the paucity of the general symptoms manifested in some cases of brain tumor, showed only these two symptoms, vomiting and vertigo, to any marked degree at the time of the first physical examination. Both proved, subsequently, to be cerebellar tumors, one of them being a tuberculous neoplasm.

Optic neuritis, to which I have incidentally alluded, is one of the most frequent and important of all the general symptoms of brain tumor, and is believed to occur at some period of the disease in at least four-fifths of the cases.

This condition may run a somewhat rapid course and then improve, or even for a time disappear, but ordinarily the course is progressive. The examination of the fundus, then, in brain tumors should be as imperative upon the physician as it should be frequent, for, otherwise, a positive diagnosis cannot often be authoritatively made, nor the progress of the disease intelligently prognosticated.

103 East Franklin street.

## SOME FACTS ABOUT ELECTRICITY AS A THERAPEUTIC AGENT.\*

By F. B. BISHOP, M. D., Washington, D. C.

The therapeutic application of electricity is similar, if not identical, to the therapeutic application of other agents. For the sake of some comparison we will take mercury: Here we have blue-mass, calomel, corrosive-sublimat, blue ointment and other combinations of the same drug, varying somewhat in their degree of action, according to the combination used and the susceptibility of the patient. On the other hand we have the direct, the alternating, the slowly rapidly interrupted induced, the sinuoidal, the static, together with the high frequency, high tension currents—all these being electricity, but varying in their physical, physiologic and therapeutic action according to the combination used and the susceptibility of the patient. The combination of the different preparations of mercury is familiar to you

all, but perhaps the expression as applied to electricity will bear some explanation.

The working power of electricity consists of a combination of volts, amperes, ohms, time. And when we hear the expression of volts, amperes, etc., it means work accomplished. The unit quantity of electricity is called coulomb, while the ampere is the unit rate of flow. The volt is the unit of pressure; therefore an electric current carrying one coulomb per second is called a current of one ampere. And a volume of one ampere of current under an E. M. F. of one volt, will pass through resistance of one ohm. Roughly stated, the ohm is the resistance offered by two miles of ordinary copper trolley wire.

Again, when a pressure of one volt causes a current of one ampere to pass through the circuit, work is done at the rate of one watt, or 1-746 of a horse power. This rule holds with all electric currents, whether of high or low pressure, large or small amperage, alternating, direct or interrupted currents.

With the direct current, we have large volume or great ampere and low voltage. The chemic action of this current is very great. While the current from the modern static machine is one of exceedingly small amperage and great voltage, frequently running up into the millions, indeed the pressure is so great that it is impossible to completely insulate the static current. Between these two extremes comes the induced or Faradic current of moderately high voltage and low amperage.

Thus we may see, as in prescribing medicine for a patient, that we must first make our diagnosis, and consider the individual peculiarity of the patient, that we may suit the treatment to the case in hand. So in administering electricity, we must endeavor to select that current and the modification of that current which, according to our judgment and experience, is best suited to each case. Especially is this so when we consider that with electricity we seek to modify or cure disease by acting directly upon the part affected, or upon the nerves or nerve centres controlling it, and through these upon the blood vessels and sometimes upon the vessels themselves—remembering always that it is not the amount of current generated by our apparatus that we must look to, but to the amount actually passing in circuit through the patient at the proper place and in the right direction

\* Read before the Medical and Surgical Society of the District of Columbia November 6, 1902.

and for a length of time sufficient to produce effects desired.

Blood pressure may be relieved in many cases, and a bounding heart quieted by a moderately strong, continuous current, graduated according to the susceptibility of the patient. Conversely the heart may be often stimulated when weak and flabby, and be toned and strengthened, by a very mild, continuous current, applied over the superior, middle, and inferior cervical ganglia.

We must remember, however, that what is a weak current for one individual may be an exceedingly strong current for another. Some people are so susceptible to the influence of the galvanic current, that three or four M. A. are about all that they can stand in the region of the cervical sympathetic ganglia; and if we are unable to produce the desired effect with this amount of current in these patients, we are not justified in running our currents higher, but must here make use of the element of time, thereby increasing the watts or joules per second, until the amount of work is done which would require a shorter time with a stronger current.

In giving strong and powerful medicines, it is customary to give them freely diluted, in order, in the first place, that the stomach may be protected, and finally that absorption may be more certain. So also, in consequence of the well known law of conduction and resistance, in order to protect the sensitive skin, which is a very poor conductor, if we wish to give a very strong galvanic current, we dilute our current, as it were, by increasing the area of cross section of our contact electrodes. As "the resistance of a conductor is directly proportional to its length, and inversely proportional to the area of its cross section," we thereby reduce the resistance of the skin. The surface electrodes must be well moistened and in perfect contact for all low and medium voltage currents.

The same law of conduction and resistance holds good with the static current. The large heavy spark is less painful than the light thin spark; and in giving the Morton wave current, the more surface covered by the contact electrode, the less the wave is felt by the patient. These large surface electrodes are very necessary when we wish to influence deep structures such as the spinal cord, spinal nerves, the sciatic nerve and even surface nerves, when the

nerves or sheaths are congested or inflamed.

After many years of experience with electricity, my impression is, that it should be very rarely used merely as a stimulant; especially does this apply to treatment of paralyzed muscles. While ordinarily the stimulating effect of electricity is followed by very little reaction, still we should be very careful not to over-stimulate, and tire out muscles already weak from being deprived of their normal supply of nerve energy. Our object should be rather to tone by carefully applied currents, and increase the strength very gradually as the nerve tone returns; in this way we will do much good, and often avoid doing a great deal of harm. We must never forget that electricity while flowing is always doing work, and it is our business to see that it is working for good and not for evil.

It is not the object of this paper to show how any individual disease is to be treated, but merely to show that as electricity is a very powerful therapeutic agent and susceptible of doing a great deal of good, it must be used with intelligence and discrimination if we wish to do the greatest good to the greatest number.

When we consider the subject of static electricity, we are considering therapeutic possibilities beyond our ken; we are simply in the dreamland of electro-therapeutics. With our modern machines and appliances, we are able to accumulate enough energy to knock one senseless, or this same energy may be so broken up and distributed as to make it seem as light as a morning zephyr and as refreshing as a mountain breeze. While the body may be subjected to millions of volts, the period per second running well up into the millions, renders this current absolutely safe. This latter current is known as the high tension high frequency current from the static machine.

From what is generally considered physiological reasons, when an alternating current reaches a certain frequency, the painful effect of the current gives way to a sensation almost imperceptible and quite pleasing. It would seem, however, that we might find physical reasons for this condition. These currents are also subject to the laws previously stated, and to Ohm's law, which states that "the current equals the electro-motive force, divided by the resistance," whereas in the galvanic and ordinary faradic currents, we are dealing with comparatively small resistance; in the static and

high frequency currents the resistances are tremendous.

In the step up, transformers are used for high frequency currents; every turn of the secondary winding increases the voltage and resistance, while the amperage is correspondingly diminished. Hence, as we lose quantity, we gain pressure; and while there may be considerable amperage which would be dangerous with a lesser frequency, this high frequency and high pressure distribute the current so thoroughly that it does not send its full force through a circumscribed area. In fact, the air is full of the current; so that anywhere within the electro-static field, a vacuum tube will glow if held in the hand. Here insulation is no longer considered; glass vacuum tubes, glass rods, wooden rods, hard rubber, in fact anything will conduct this current; and while a shower of sparks may be obtained, large and small, they do not cause pain. The air is full of ozone, and everything in the room is more or less charged by induction. The resistance in circuit is constantly cutting down the amperage, while the voltage is either increased or unchanged. Take, for instance, in the ordinary disruption discharge of the static machine: When using a brass ball, which is a very good accumulator and conductor, the current will remain on the ball until enough energy has been accumulated to cause a considerable spark to overcome atmospheric resistance of several inches and jump to the opposite pole or to anything connected with the earth; while a wooden ball of the same size offers so much resistance that the current comes away in a breeze of violet or blue, because enough current does not accumulate to form a spark. The same is true of other electrodes of various degrees of conduction.

All these various electrodes cause physical changes in the discharge as manifested by the different colors of flame. These in time will find their appropriate therapeutic place. So we can readily see that vast fields of speculation and great possibilities are open to this static current alone, with its many and varied modifications, and that we must study our current and the apparatus producing it, as well as the patient and his peculiarities.

Some patients are very sensitive to the slightest static current and may be made quite nervous thereby. These same patients are readily benefited by the continuous current, and after

taking treatment in this way for a while will take some modification of the static current with great benefit. Conversely, the static current may sometimes be very beneficially used when the direct current is either not well tolerated or has failed to cure. Therefore it is only by a close and constant study of the various currents as applied to the various individuals that we can hope to gain success in electro-therapeutics.

1913 *I street, N. W.*

### A UNIQUE CASE OF PRIAPISM.

By ELMER SOTHORON, M. D., Washington, D. C.

On November 1, 1901, I was called to see W. S., male, age 27, occupation a clerk, habits and family history good. Father dead, age 60. Mother living; and in her 70th year of age. He was suffering from a well marked case of priapism. On inquiry, he informed me the beginning of his erection was about six days previous. He awoke early in the morning finding his penis in this condition.

He had resorted to most every remedy that friends and druggists had suggested, even trying sexual intercourse; but, to use his words, "the more he used it the harder it got." He had no history or evidence of normal disease except an attack of gonorrhoea, about three years previous. Thinking it might have as its exciting cause a urethral stricture, I passed easily four different sizes of sounds, the largest being American scale No. 12.

Not to burden the Society with a long list of different remedies used, both local and general, it is sufficient to say that he was given large doses of bromide and iodide to relieve his pain, which was present almost all the time. Morphine sulph. was given hypodermically in large doses. Opium in any of its different forms and complete chloroform anesthesia failed to relax the spasm to the slightest degree. After treating him for nearly three weeks and exhausting my resources, I asked Dr. W. P. Carr to see him with me. He advised his removal to the Emergency Hospital and operation. He was removed immediately and the next day Dr. Carr performed the following operation:

\* Read at meeting of the Medical and Surgical Society District of Columbia, November 6, 1902.

1st. Incisions into the perineum on each side of urethra in search of pus. *None found.*

2d. The fibres of the suspensory ligament of the penis were divided in hopes of relieving construction of the veins of the organ. *No result noted.*

3d. Incisions in the corpora cavernosa on both sides near the root of the penis.

Dr. Carr claims these last incisions did good, as slight softening was apparent in a day or two in the root of the penis near the incisions.

On account of a previous engagement it was impossible for me to witness the operation, and I did not see the patient until the second day after the operation, but I must confess I did not notice any material softening of the organ or any relaxation from its previous erection.

After his return from the hospital, which was about two weeks after the operation, he sent for me and I found his penis in about the same condition, except a little disfigured from the effects of the surgeon's knife, but head just as erect as before the battle with the knife, and very game looking. Four days later he left suddenly for Philadelphia. I have not heard from him directly, but his brother informed me about four months after leaving the city he received a letter from him, saying that he was suffering from the same old complaint and was then in one of the hospitals.

In regard to the literature on the subject, there is very little written. Ashhurst, in his work on surgery, speaks of this subject as proctitis, and says as follows: It is said to follow on typhoid fever. The complaint terminated by resolution or by the formation of abscesses, or even by the sloughing of the organ. At times pyæmia may ensue. Anti-phlogistic remedies are to be employed at the onset and incisions, and other means as the occasion arises.

Dennis calls it penitis, and recommends multiple incisions of the corpora cavernosa. What makes this case seem so unique to me is its long duration after both local and general treatment, together with surgical interference.

1921 *I Street, N. W.*

Father—You should always remember that life is what we make it.

Spendthrift Son—Yes; but you see, dad, I don't make my own living.

## FORMULA OF A NEW MODIFICATION OF EHRLICH'S TRIPLE STAIN.

By T. H. TOYNBEE, M. D., Richmond, Va.,

Assistant in the Biological Department of Pasteur Laboratory of University College of Medicine, etc.,

Make a saturated solution of lithium carbonate in distilled water.

Make with above solution saturated solutions of orange G, saure-fuchsin, methylene green, using Grublers' stains.

To the saturated solution of saure-fuchsin so made add one drop of nitric acid for each 10 cc. of solution.

To make the stain take—

Solution of orange G. . . . . m. 10

Solution of saure-fuchsin. . . . . m. 5

Solution of methyl. green. . . . . m. 10

Shake vigorously and add—

Glycerine . . . . . m. 5

Alcohol, 95 per cent. . . . . m. 15

Aqua dist . . . . . m. 15

Shake and use at once.

An ordinary medicine dropper is accurate enough. The granular staining is exact and brilliant. Heat must be used as fixative—or cloudiness may result. The stain may be made in larger quantities if desired and apparently keeps indefinitely, but it is so simply made and in so short a time that we find it best to make it up as we need it. Sixty minims is sufficient to stain 30 specimens. In fixing by heat put the dried smear upside down on a copper plate inside the boiling line, and leave for 15 minutes.

## Analyses, Selections, Etc.

### Passiflora for Nervousness Consequent Upon la Grippe, etc.

Dr. H. O. Hoyt, of Sylvania, B. C., remarks that nervousness of a distressing character is one of the sequelæ consequent upon la grippe. Very often patient will have all the appearances of one whose nervous system has been almost wrecked. They are nervous and fidgety; they cannot sleep, and they constantly feel excited, and everything is up to the high water mark in high tension. These patients, too, will be found to suffer with dyspepsia, and this is not

due to gastric disease, but to high nerve tension.

The treatment of this condition is extremely simple, yet many good practitioners make a mistake with these patients. It is a mistake to give such patients tonics, or digestive ferments, or agents of that class at first. All remedies of this class do the most material harm, because they often fasten constipation on to the nervous patient, and in that way increase his or her woes.

The best remedy in this condition is Daniel's conc. tinct. *passiflora incarnata*. This remedy, by its soothing and toxic action on the nervous system, allays the nervousness; the patient is enabled to sleep soundly, and his progress toward recovery begins at once. The remedy is an hypnotic that carries no evil in its train, such as injurious or unpleasant after-effects or drug addiction. It is, therefore, to be given preference in insomnia to all other remedies. But in all cases of nervousness, or nervous exhaustion, we shall find this preparation one of the most prompt as well as one of the best remedies at our disposal. It is best in these cases to have the patient take the remedy in doses of a teaspoonful every two hours. As the patient gets better, the time between the doses is to be made longer. Usually after ten days three or four doses each day will be sufficient to allay the nervousness. But the practitioner will feel free in the matter of dosage, as Daniel's conc. tinct. *passiflora incarnata* is entirely non-toxic. Often it will be found advisable to give the remedy in doses of a tablespoonful—when the nervous condition is extremely urgent.

[*Passiflora incarnata*, commonly known as *passion flower* or *May pops*, introduced into medicine by Dr. L. Phares in 1839 or 1840, who recorded the results of some satisfactory trials with it by Dr. W. B. Lindsay, of Bayou Gros Tete, La. (*New Orleans Med. Jour.*), has undoubtedly become a too much neglected remedy. The shrub is a perennial thriving in dry soils from Virginia to Florida and westward to Missouri and Arkansas. Brazilians long ago used the juice of the leaves for intermittent fevers. It is a domestic remedy in many Southern homes for convulsions of almost every character. Lately Dr. I. J. M. Goss, of Georgia, has revived its use, and its clinical application has been satisfactory with most observers. The

agent is not known to possess injurious or poisonous properties (Ellingwood). In the last edition of Potter (*Materia Med., Pharmacology and Therap.*), we find the statement that it has been used "with satisfactory results in neuralgia, chorea, spasmodic asthma, pertussis, hysteria, dysmenorrhœa, insomnia, infantile and puerperal convulsions and the opium habit. A concentrated tincture is prepared from the whole plant, the dose of which is ʒss to ʒj, every two or three hours." Prof. Scudder long ago characterized *passiflora* as a remedy to relieve irritation of the nerve centres, and to improve sympathetic innervation, and employed it in cases of torpid liver with hemorrhoids, and in congestion of the ovaries and uterus. It has cured tetanus in horses promptly, and has relieved a few cases of general tetanus, and in sufficiently large doses it may be relied upon to relax the tonic spasm of meningitis. In the convulsions of childhood, Ellingwood says (*Mat. Med., Therapeutics, etc.*), it is a most reliable agent—even controlling severe spasms while yet the irritating causes remain. In epilepsy, it lessens the number of paroxysms. It produces sleep that is normal in all its characteristics in cases of insomnia from exhaustion or overwork, or other like cause, if there is no pain, but in inflammatory conditions, it is not reliable. It is best adapted to debility as a rest producing agent. (King's *Amer. Dispensatory*), and does not do so well in sthenic conditions. Hence its value in post-grippal insomnia, etc. Prof. J. Allison Hodge, Professor of Diseases of the Nervous System, etc., University College of Medicine, Richmond, has used the remedy for some years with general satisfaction in one or the other of the conditions named above. A further study of this drug, which has been found to have so many uses, will undoubtedly give us a better guide to its adaptation as a nerve sedative and hypnotic. Among incidental uses, it is said that a pledget of cotton saturated with *passiflora* and introduced into a carious tooth will promptly allay violent toothache.—*Editor Va. Medical Semi-Monthly.*]

#### Petroleum for Winter Coughs, Bronchitis. Etc.

At this season of the year the interest of the medical profession in the treatment of inflammation of the respiratory organs is evidenced by the large amount of space devoted to this subject

by the medical journals. It would seem that such an exceedingly common-place subject as the ordinary cold, worn almost thread-bare by centuries of discussion, would offer little attraction to the modern physician; yet it is a theme that receives constantly the attention of many of the leaders in medicine.

The reason for this can be found in two well-recognized facts.

*First*, that an improperly treated acute inflammation of the respiratory organs is often the precursor of grave pathologic conditions that influence other parts of the body and are difficult if not impossible to permanently overcome. An instance of this is the condition of emphysema that often results from a chronic cough, which in turn leads to dilatation of the heart, with its concomitant changes in the heart muscles.

*Second*, the treatment of acute inflammations of the respiratory tract by the ordinarily employed methods is usually unsatisfactory. That expectorants and cough sedatives are of but little utility is the consensus of opinion of the best men; that they may in a certain limited class of cases be of some value is recognized, but it is also conceded that in the great majority of cases their effects are comparable to that of water on a duck's back. The same may be said of the much-employed cough sedatives, of which opium, morphine or one of its derivatives are the most conspicuous examples. It is true that this latter group of agents has a tendency to reduce the frequency and severity of cough, but the principal effects of opium and its derivatives consist of deleterious influences on other physiologic functions; so true is this that the most discriminating of clinicians reserve opium for scattered, isolated cases. If a physician would call to mind the pathologic conditions present in respiratory inflammations it would give a clue as to the best method of treatment that would be consistent with the laws of nature. For instance, in *acute bronchitis*—by far the most common respiratory affection—the mucous membrane is congested, swollen, and because of disturbance of physiologic function, covered with the products of disordered secretion, i. e., mucus or the products of its decomposition or chemical change. These disordered products act just as a foreign body in any other part of the body acts—it produces irritation, which manifests itself as cough and the usual well-known sensations.

What more appropriate agent could be applied to this condition of congestion, irritation, hyperaesthesia, and abrogation of function than a remedy that is sedative, demulcent and lubricant? *A priori*, petroleum would seem to be the ideal agent, and Angier's petroleum emulsion the form to administer it in a pure, palatable, and most efficacious form. Aside from the above mentioned theoretical reasons for the use of petroleum in acute respiratory inflammation, there exists the incontrovertible clinical fact that it has for many years yielded better and quicker results in these cases than any other remedy or combination of drugs known. It is, first of all, harmless and entirely free from detrimental influences upon any function or organ of the body. Expectorants, cough syrups and sedatives have a predilection for irritating the gastric mucous membrane and thereby causing nausea, oft-times vomiting and almost always disturbances of digestion. In contrast to this, petroleum has a positive sedative influence on the gastro-intestinal tract. If there were no other recommendations for the use of petroleum in respiratory inflammations, the immediate effects of the remedy in affording relief from the bronchial distress, hacking cough and difficult expectoration would entitle it to universal use as a palliative. But it is more than this; there are very few cases of acute inflammation of the bronchi, larynx and pharynx that will not be completely eradicated within a week or so after the administration of the remedy has been started. Patients always comment upon the comfortable feeling of the throat and chest after they begin to take petroleum; this means simply that the rawness and soreness due to the congested, irritable condition of the mucous membrane have been overcome by the well-attested sedative, demulcent and lubricant properties of the petroleum.

Few, if any, acute cases will become chronic if petroleum is employed as soon as the first symptoms appear. But chronic cases form a large part of the physician's winter work and are usually intractable and distressing. In chronic bronchitis of the various clinical forms, and particularly in that class designated "winter cough," petroleum has achieved an enviable reputation. Because of its above-mentioned local effects, it is of specific value in overcoming the morbid secretory disturbances of the bronchial mucous membrane, which constitute the



essential feature of these chronic cases. That it has this effect is proved by the diminution in the frequency and severity of the cough, the alteration of the expectorated material from a thick, viscid, tenacious mass to a fluid easily expelled, less copious, mucoid material and the freedom afforded the patient from the subjective symptoms of irritation in the thorax.

In elderly people with chronic winter cough of yearly recurrence and of obstinate character, the use of strychnine in combination with petroleum yields results far better than any other method of treatment. Probably not a small element of the success of petroleum in chronic respiratory inflammation is due to the positive effects of the remedy as a nutritive; it will be recalled that many of these obstinate cases are associated with or even dependent upon constitutional conditions of malnutrition or general debility. As a nutritive, petroleum is—authorities of the highest class have proved—far superior to cod liver oil. This fact has been demonstrated beyond a question of doubt, and is accepted as one of the established facts of therapeutics.

In view of what the many years' experiences of carefully observant physicians have proved, it may be safely stated that the treatment of both acute and chronic bronchitis and other inflammations of the respiratory tract will be uniformly satisfactory if petroleum is administered as soon as the condition begins and continued until convalescence is firmly established.

### The Class Coccus Causative of Scarlet Fever.

Dr. W. K. Jacques, Professor of Chemical and Microscopical Diagnosis in the College of Physicians and Surgeons of Chicago, read a paper on "The Microscope in the Diagnosis of Scarlet Fever" during the session of the American Medical Association, which has not attracted the general attention it deserves.

Dr. Class discovered the coccus during an epidemic of scarlet fever in Chicago some years ago. Unless the bacteriologist is familiar with it, he would take it for a vigorous growth of the *staphylococcus albus*, but a study of several cultures extending over some days will reveal its individual characteristics. It is very sensitive to environment, and is modified in form, so it may appear as a diplococcus, a streptococcus, or a strepto-bacillus, merging from one to the other in the same culture. Only by studying many

cultures can one appreciate this variation in form. It also has a wide variation in size—from a point which can just be distinguished with an oil immersion twelfth to (in old cultures) a coccus a third the diameter of a red corpuscle. The multiplication is by division, and it multiplies in all its varying sizes. Because of its minute form, it can penetrate almost any tissue of the human body. The shape, as usually seen, is round, with what appears to be a hole in the centre—due to refraction or to staining qualities. As the germ increases in size, a dividing line may be seen in the centre. In the older cultures, where the coccus is large, on each side of this centre line, the cell substance stains in the shape of a crescent with the points toward the line. Its susceptibility to environment makes it often seem to assume the streptococcus form, or it may become egg shaped and sometimes almost a bacillus.

This scarlet fever germ is a pathogenic organism, which requires a susceptible condition in the patient to permit its entrance into the blood and tissues, where it produces scarlet fever. Individual resistance, and also because one such invasion produces a life-long immunity, causes the larger part of the race to be immune against this disease.

Children who have had scarlet fever may be exposed to the infection, and an angina result. A culture from this angina might show the scarlet fever coccus present, but because of the immunity due to a previous attack, scarlet fever would not follow.

The entrance of the infection is usually through the mouth, though it may gain entrance through wounds, and is especially dangerous when introduced through the genital tract during parturition. After this Class coccus enters the blood stream the safety of the individual depends on the ability of the fluids to prevent multiplication, and the tissues to resist the effects of the irritating germs.

The stay of the coccus in the blood of those who recover must be very short, and the time to obtain it is just before or while the rash is appearing.

The surface of the scarlet fever coccus possesses a gluey property, which favors its collecting in the finer capillaries of the skin. Its irritating qualities soon cause congestion, which cuts off the bacteria in the superficial layers of the skin from the destructive action of the blood.

So that when desquamation ensues, the scales are filled with the scarlet fever cocci.

The blood is the fluid in which the infection of scarlet fever multiplies. In the Class coccus, we have a germ capable of passing through the mucous membrane into the blood, and out again through the skin.

Some method by which the multiplication of the germ may be observed should be used. The test tube from which germs are removed by a platinum wire is not suitable. The metal culture boxes used by the Chicago Health Department for the diagnosis of suspected diphtheria are much the best. These permit the pressing on the surface, after a few hours' incubation, of a sterile cover glass; when it is removed, it contains on its surface an imprint of the bacteria on the culture medium. Then the smear may be fixed and stained. This method shows all of the bacteria present, and makes it possible to estimate which germs have multiplied most rapidly. The presence of the Klebs-Löffler bacilli is easily noted.

During the early part of the epidemic, the diagnosis of scarlet fever could be made from the culture with more certainty than later, when the disease became widespread.

The presence or absence of the Class diplococcus decides the disease to be or not to be scarlet fever.

It is possible by means of the test to exclude rotheln. In more than 100 cases, the author has been enabled to diagnose scarlet fever from the culture before the appearance of the rash.

The Class coccus is not pathogenic to many animals. We must have a toxin to produce an antitoxin. The greatest hope of controlling scarlet fever is in a prophylactic stimulation of the exposed person's cells. If in some way the resistance of a child's cells could be increased when it is exposed to the disease, there would be a temporary immunity.

Dr. Jacques accounts for the fact that this germ has heretofore escaped the observation of trained bacteriologists in two ways: (1) It so nearly, in its early growth, resembles that most common germ *staphylococcus albus*; or (2) because of the attempt of bacteriologists to make every pathogenic germ comply with Koch's law. We are breaking away from this. We are certain that the *bacillus typhosus* is the causative germ in typhoid fever, even if it does not comply with Koch's law. Each pathogenic organ-

ism is a distinct living being with its own distinct laws of development.

It is difficult to get the scarlet fever germ from the blood because of its germicidal action. It must be taken from a vein during the appearance of the rash, and at once mixed with a large amount of bouillon. The author has never been able to develop it from blood spread on the surface of culture media. The culture medium is the same as that for diphtheria, and the suspected material can be sent in the same way, and an answer given by telephone, if necessary. Thus the physician can know at once whether he has got to deal with a scarlet fever or must look for diphtheria.

Dr. Jacques does not feel justified in hoping for the discovery of an antitoxin for scarlet fever. A European physician, however, is reported as having succeeded in curing a scarlet fever patient by serum taken from another person who had recently recovered from the disease.

A French observer, Bourgard, claims to have discovered the germ.

The toxin was injected into other animals, and they all took the disease.

The germs of scarlet fever and of diphtheria can frequently be found in the same individual, and this renders it important that we should ascertain what germs are present. Many deaths attributed to scarlet fever are really due to diphtheria.

### Hemoboloids, Arseniated, with Strychnia for Chloro-Anemia.

The Palisade Manufacturing Co., Yonkers, N. Y., has issued a somewhat graphic description of the case of Mrs. S.—noting the marked and rapid improvement of her condition as evidenced by the blood counts as made at the Columbus Laboratories of Chicago. These blood counts showed Mrs. S. to be the subject of marked chloro-anemia. The percentage of hemoglobin when treatment was begun with "hemoboloids, arseniated, with strychnia," April 16th, was 35. On July 16th, the percentage was 82; with corresponding improvement in all the other conditions. Whoever has not yet received this unique portfolio of legal-looking documents should apply to the Palisade Manufacturing Co. for a copy before the supply is exhausted.

## Proceedings of Societies, Etc.

### New York Academy of Medicine.

#### SECTION ON ORTHOPEDIC SURGERY.

(Meeting of Dec. 19, 1902.)

#### RECEPTION GIVEN TO PROF. LORENZ, OF VIENNA.

The President of the Academy, Dr. Robt. F. Weir, called the meeting to order and delivered a brief address, then turned the meeting over to Dr. George R. Elliott, chairman of the Section.

Dr. Weir remarked that an introduction of Prof. Lorenz was almost superfluous, as he was well known, not only in his own department, but in advanced science generally; that his demonstrations of his methods in this country were of educational value to the American physician as well as of great benefit to the special department of orthopedic surgery. The opportunity of actually seeing Dr. Lorenz at work offered a chance of learning altogether different from and in advance of simply reading about his methods, as object teaching is a superior educational method. His special peculiarities were observed in a way not revealed from his writings.

Dr. George R. Elliott said, as Chairman of the Section of Orthopedic Surgery, it was a great pleasure to give expression to the honor the section felt in having Prof. Lorenz present. It was also a great personal satisfaction to know that his work had received some of the recognition it deserved. From medical men much had been said about the great force used. It was true that Prof. Lorenz was a very strong man, but those who had seen him operate must have observed that the essential element in his operations was the intelligent direction of that force, graduating it to overcome the resistance of the contracted tissues, so that they were reduced to a state of flaccidity. Dr. Elliott further said that six years ago he reported his first case of congenital dislocation of the hip successfully treated by the Lorenz method, and in the report made the following statement: "The operation which we have just considered is a real advance in surgery, and, throwing all enthusiasm aside, I feel convinced that it will soon be performed with strikingly good results in all civilized parts

of the world." It was unnecessary to say how that prediction had been fulfilled.

Dr. Elliott then called upon Prof. Lorenz to address the meeting, who responded as follows:

### Some of the Principles in Prof. Lorenz's Orthopedy.

I consider it a great honor to be allowed to appear before you, and I know of no better way to show my gratitude than by asking your permission to explain to you some of my principles which hitherto have ruled my orthopedic work.

I hope to meet your approval at least regarding some of these principles; as to others which may rouse your opposition for the moment, I hope you will find them worthy of your objective trial. Even if these principles do prove to be different from yours, certainly we who are on both sides of the Atlantic, which divides the places of our work, completely agree on the same aim, that is, to help our patients in the best way. As to my methods, I can recommend them as both safe and successful to the patient. In saying this, I touch upon my leading principle, that is, curing my patients without danger of loss of life. Luckily deformities seldom offer what we call *indicatio vitalis*; therefore when we operate on deformities we should never arouse even the possibility of putting the life of our patient in danger. Following this principle, I generally prefer bloodless operations to the bloody ones. Usually the results are the same, but in many cases those of the bloodless ones are even better. As long as the bones are elastic enough, I prefer osteoclasis to osteotomy; this latter operation is exclusively reserved for adolescents and adults. In hip deformities I prefer bloodless corrections to osteotomy as long as even the slightest motility of the joint can be stated; only in cases of complete bony ankylosis do I operate with the chisel.

All cases of knee contracture I correct by the intra-articular modelling redressment as long as even the slightest motility can be found. Only cases of complete bony ankylosis of the knee joint, which are rarer than is usually believed, are reserved for the bloody operation.

In all deformities of the foot, both paralytic and congenital, I rely exclusively upon my modelling redressment of the foot, and from a thousand-fold experience I can assure you that the results are generally beyond expectation.

In my opinion the wedge-shaped excision of the bones of the foot newly recommended by the French is nothing more than a deplorable mutilation of the foot. The results of the modelling redressment of club foot have been preferred by many others, and I am happy to say that at least in Germany this method is predominant.

On the whole, I daresay that I prefer bloodless operations to the bloody ones as long as any possibility exists of securing the result in this way. According to this principle, I cannot sympathize with the total extirpation of the sterno cleido mastoideus in wryneck. After my experiences the subcutaneous myotomy of this muscle in connection with the modelling redressment of the cervical scoliosis is perfectly sufficient to cure the *caput obstipum* thoroughly and without leaving a scar. In this realm I go even further, as the congenital *caput obstipum* in children can be cured even without tenotomy, only by myorrhesis of the sterno cleido mastoid muscle, and the results obtained by this method are the most perfect ones from a cosmetical standpoint. The ruptured muscle regains its normal length as well as its normal elasticity to such a degree as to allow the head to move freely to the opposite side. Besides this, the ruptured muscle retains a normal prominence with its partner, restoring the normal configuration of the neck, in this way avoiding the known appplanation of the operated side, which usually occurs after open or subcutaneous myotomy.

Following this principle, you will share many advantages with your patient. The latter readily consents to be operated upon as he runs no risk of life, and as for yourself, you will feel quite easy about him.

Another principle which I have always followed is the so-called central correction of deformities, which means that every deformity should be corrected in the vertex of its angle. If you should prefer to correct a deformity in one of the sides of the angle, even near the vertex, the deformity itself would remain, and instead of a correction you would have only a compensation for the deformity. This compensation implies some shortening of the side of the angle, that means of the leg, which shortening should be avoided under all circumstances. This principle is very important with regard to the contractures of the hip joint. It is obvious that subtrochanteric osteotomy contradicts the above mentioned principle. By correcting or compen-

sating the deformity you shorten the leg. Agreeing with the principle of central correction, I always do central—that is, pelvotrochanteric osteotomy. Having performed this operation, correction is very easy without causing any further shortening of the leg. I object even to oblique subtrochanteric osteotomy, although it avoids shortening by a complicated and difficult extension after treatment, by which the patient is confined for some weeks to his bed instead of being able to get up a few days after the operation.

Following the principle of central correction you will also object to supracondylic osteotomy or osteoclasis in correcting the contractures of the knee joint. In preferring central, that is, intra-articular correction, you will avoid shortening the limb. In correcting genu valgum the principle of central—that is to say, intra-articular correction—cannot be thoroughly attended to because—except in cases of young children—a loose knee is to be feared, and besides the treatment takes too much time. In genu valgum supracondylic osteotomy is still the predominant method because of its general reliability; but beyond doubt epiphysiolysis on the lower end of the femur allows better correction of the deformity, being a more central method than the supracondylic osteotomy. Unfortunately the method of epiphysiolysis is available only in children from 5 to 16 years.

Another important principle of modern orthopedic surgery is that of absolutely saving the bones by dividing the soft parts as far as circumstances may demand it. This conservatism toward the bones and this radicalism against the soft parts (just the inversion of a principle of former times) condemns all cuneiform osteotomies and resections en bloc, of the bones, and makes it a rule to correct deformities by simple linear osteotomy, sacrificing the soft parts as far as may be desirable. Indeed, it is very easy to correct every hip deformity of whatever degree by similar linear (pelvotrochanteric) or central osteotomy, after having thoroughly divided the abductors and the subspinal soft parts. It is of no importance whether you divide them in open wound or subcutaneously; you must only divide them thoroughly. The wedge-shaped excisions of bones in correcting knee contractures are likewise to be avoided, or at least to be restrained to a minimum by regardless radicalism against the soft parts in the fossa poplitea. As to the

excisions of bones in the treatment of club foot, I have mentioned above, I abhor them.

The principle to correct deformities only by simple linear osteotomy is even available in those most difficult cases of bowlegs with anterior convexity of the bones. In such cases I apply one of two linear osteotomies to the centre of the deformity, when I add achillotenotomy and sharp screw extension above the ankles until correction is allowed.

Another principle of common interest refers to the treatment of tubercular diseases of the joints in children, and to the treatment of deformed paralytic limbs. I must avoid discussing the question whether operative or conservative treatment should be carried on in these cases. My standpoint on this question is rather one of expectancy. But I do not hesitate to declare that up to now I have never made a resection of a tubercular joint in children, and that the results of conservative treatment seem to me far better than those of operative treatment. Nevertheless, I am far from denying the necessity of operating in some special cases, particularly in common hospital practice. However, the principle of which I will speak refers to the question whether or not mechanical treatment should be carried on in a way to exclude all functional work of the limb during the whole treatment. Observation of nature let alone seems to me to give the answer to this question. If we contemplate a case of hip disease never interfered with by any treatment at all, we learn in many cases that nature unhelped by our mechanical means needs no more time to cure the disease than we do. After some two or three years all may be over. During this time the sick child may have been confined to bed by great pains in the hip joint some months only. During the rest of the time they walk about without the help of crutches as well as they can, using the limb according to the actual state of sensitiveness. After all, the disease heals without any suppuration even, and finally we see these children come to us to get rid of their deformity. We find a contracted limb, but fit for function even under the unfavorable mechanical conditions of the deformity. We find the bones solid and the soft parts not so much wasted as we expected; and last but not least, we find that the growth of the limb has not been much interfered with by the disease. These cases are the best objects for operative treatment because the good state of the legs very soon en-

ables them to profit by the correction of the deformity. If we compare one of these cases of natural healing to the results of our mechanical treatment, which may have begun at the first sign of the disease, we will find that we have scarcely shortened the course of the disease. We accomplish that pains have been loosened or suppressed, and that the limb may be in a tolerably good position. But surely we shall find the leg in a wasted condition, the muscles being slack, the bones lacking solidity, being quite unable to support the weight of the body, although pains have long since disappeared. Probably we shall find besides that the growth of the leg has been much interfered with by the disease. There can be no doubt that this deplorable condition of the limb is due to the fact that both by suspension and fixation by our mechanical means the leg has been totally excluded for many years from every function of movement and weight carrying. From this consideration is derived my principle to exclude the diseased limb no longer from a measured function if severe pains will not forbid it. I never allow any movement of the diseased joint, but I suspend the weight only as long as the pains demand it, always taking proper care to procure slight abduction of the leg. As soon as the pains allow it, I begin to attend to the muscles by massage. Of the movements, only active and passive abductions are made in the later after-treatment to prevent the tendency to abduction.

My final aim is to procure a solid ankylosis of the hip joint combined with good position of the leg, experience having taught me that great mobility and bad function with lack of any endurance are common allies. With greatest enthusiasm I would welcome a method which would procure a true bony ankylosis of the diseased hip joint, bony ankylosis of the hip and good position of the leg being the condition for the best result, both from a cosmetical and functional point of view.

As you may have seen by what I have said, I make little of the permanent extension. I consider extension only a matter of fixation, direct and indirect fixation together naturally give a greater degree of surety. I have said that every articulation attacked by chronic diseases should not be prevented from function any longer than is absolutely necessary. In saying so, I turn against the method of treatment generally used in Germany, which makes the patients

wear their pressure relieving and fixing apparatus so long that they become slaves to them. This same principle I emphasize using in the treatment of paralytic deformities. I am convinced we render no great service to our patients by making them wholly dependent upon their apparatus; the limbs atrophy by exaggerated use of apparatus to such a degree that they become useless for any function. It is my practice to correct thoroughly the paralytic deformities by modelling redressment, in case of need combining the transplantations of the tendons, and to fortify the rest of the muscles by massage and exercises in order to secure the obtained correction. For the rest, the patients must be accustomed to make use of their legs as much as possible without apparatus, or by assistance of the simplest kind. Generally a flannel bandage or laced boot will give the necessary support. In any case I take care to secure the corrected position during the night by means of a simple apparatus. I think that enclosing the leg in a steel support is to be avoided as by so doing the leg will be excluded from any function. On the contrary, I try to make the leg independent of mechanical appliances as far as possible. Only in the treatment of total paralysis, which fortunately occurs rather seldom, the permanent use of mechanical support is indispensable. In the treatment of scoliosis I am wholly against the exclusive application of mechanical supports, especially against those which are worn day and night. I restrict the use of corsets to special cases which evidently want a support. Besides I take special care of the muscles of the back by exercising them and endorse the necessity of forcible anti-scoliotic gymnastics.

Gentlemen, I think it is unnecessary to follow these principles in detail, and I hope you will not object to my endeavoring to solve the problems of orthopedic surgery by operative treatment, and if possible by a bloodless one, and to restrain and simplify orthopedic appliances.

If the surgical task has been thoroughly solved, orthopedic appliances, if necessary, may be of very simple construction so that special mechanical ateliers may be considered superfluous. If orthopedic surgery conceives and carries out its themes in such a way, then it will be possible to indulge in orthopedic surgery at every surgical station, even if great mechanical means may not be at hand. Then orthopedic surgery will not deny its democratic character

which it must have to be able to communicate its progress and improvements to even the poorest children who may be in want of relief."

Dr. V. P. Gibney said that he would like to tell the fellows of the Academy of Medicine just how much he had learned from Prof. Lorenz. He said: All this information given us this evening about bearing weight on the joints, about correcting deformities, about destruction of muscles which produce deformity especially the abductors, has been something of a revelation. Nearly all the medical men and medical students in this city during the past week had the opportunity of witnessing his magnificent demonstrations. At the Hospital for Ruptured and Crippled he gave us his views about the management of hip disease, club foot and wry-neck, and while it seemed to him at first that they were rather antiquated, when Dr. Lorenz began to elaborate them, he felt that they were in the presence of a master. Many years ago we were taught to believe that the function of orthopedic surgery was to correct deformity. That, he observed, was still the English version, as the London orthopedists, whom he had met, had little to say about the prevention of deformity. Dr. Lorenz said at his clinic in Vienna, he allowed the mother to tell the story, and the mother would speak of the pain, the expression of abscess formation distending the tissues about the hip joint. We had been able in our hospital work for many years to predict this abscess formation. We find that in most cases a plaster of Paris bandage absolutely fitted to the hip, knee and malleolus, extending from the free ribs down to the foot does control pain, and the child from having twenty or more cries at night will have few or none. Sometimes we get a case which does not yield, then we apply light and heavy traction in the line of the deformity. Finally we discover a deep abscess. Lorenz tells us only a confirmation of our own views that the pain in hip disease comes in exacerbations. We do not quite agree with him that it is necessary to give up traction. He employs traction sometimes, but simply for fixation. He further claims that we employ traction for too long a period, that we cause atrophy of muscle and destroy functional activity. His idea is to employ traction over short periods; he does not allow deformity to occur at all. We asked him if he aimed to get functional restoration, to which he replied, 'yes, five or ten times in a hundred.'

All orthopedists, I think, will agree that our aim is to get the hip cured so that we will have perfect restoration of function. There is great room for reflection and whether we are all wrong about traction remains to be seen. Those of you who were present at the Cornell clinic say his ability to take a virgin club foot, an extreme case, and within half an hour he and his able assistant, Dr. Mueller, had 'pulpified' the foot, so to speak, had rendered it 'like a wet rag.' Dr. Lorenz says that age is no deterrent in the bloodless correction of club foot, though when the bones cannot be managed by the hand he uses instruments for their manipulation. He spoke of a case of a man aged 42 years where he had reduced an extreme equine varus, with perfect restoration. If he has done no more good than to show what can be done in club foot he is a great benefactor to the profession and to the public."

Dr. Royal Whitman said he had been especially interested in Dr. Lorenz's contention that the anterior displacements—so-called transpositions—that so often followed bloodless operations, were to be classed as incomplete successes, rather than failures, as he had considered them. Recognizing, as he did, that the function in these cases was often greatly improved, he should now be encouraged to persist in maintaining the limb in an attitude of abduction and extension, even when it was evident that anatomical reposition had failed. The result was to be expected in older subjects and Dr. Lorenz even operated with the aim of simply transposing the head of the femur for the purpose of lengthening the limb and improving its functional ability. This treatment, which might be applied in adolescence or even later—seemed to him a very important advance.

Another outcome of this line of work was its application to disabled hip joints in adults, as Lorenz had advocated recently. To illustrate—he had that afternoon seen a patient who had sustained a fracture of the neck of the femur one year ago. There was non-union, two inches of shortening, and the weak limb was used with the aid of crutches in an attitude of abduction and flexion. He had been forced into extreme extension and moderate abduction (thus forcing the upper extremity of the femur forward beneath the anterior superior spine) and were fixed in this attitude by a Lorenz spica he would be able to discard his crutches and that his dis-

comfort and pain would be relieved. He had this confidence because the treatment was based on correct principles and because he had already applied it in a modified form in other cases.

Dr. Reginald Sayre remarked that he voiced the sentiments of all orthopedic surgeons in saying that much had been learned during Dr. Lorenz's visit. After having seen him operate we realized exactly what he did in a way we could not do from reading of his work and methods. He referred to the amount of force which we had seen could be used on the soft parts and thought this could not be realized unless seen. He thought that many who had seen Dr. Lorenz operate realized for the first time that eight to ten months were necessary to retain the parts in position and thought this had a fundamental bearing on Dr. Lorenz's success. The reduction was simply one step in the operation. It was not until he had seen him operate abroad that he understood clearly the amount of strength that should be exerted, and realized that his own failures had been due to insufficient force and too short a period of retention in plaster of Paris.

Dr. Henry Ling Taylor said the visit of Prof. Lorenz had been the most notable as well as the most picturesque event in the history of orthopedists in America. His procedures had been worked out with little regard for conventional practice, but with astonishing simplicity, directness and thoroughness, and he could not help feeling that his demonstrations would have a profound, lasting and happy effect on American practice. Personally he considered it a rare privilege to have known him and to have seen his work.

Dr. Newton M. Shaffer said he thought Dr. Lorenz had done a great deal for orthopedic surgery. Remembering the days of the elder Sayre, Taylor and Knight, and that America might be called the birthplace of orthopedic surgery, yet there had come to us from abroad a great teacher and one who had taught us. He remarked that many had seen him operate and do what was considered almost impossible. He had, at his clinic, presented to Dr. Lorenz a stubborn, resistant case of congenital club foot, expecting to see the doctor refuse to operate; nothing of the kind occurred, Dr. Lorenz corrected the deformity, as a matter of course. He said that the Lorenz clinic in Vienna had become the mecca

for orthopedists and that yearly Americans were flocking over there.

Dr. Weir, President of the Academy, proposed a resolution that a vote of thanks be offered Dr. Lorenz, which was seconded by Dr. Hooper Gibney and unanimously adopted.

The meeting then adjourned and was followed by a reception to Dr. Lorenz.

## Book Notices.

**Text Book on Medical Jurisprudence and Toxicology.** By JOHN J. REESE, M. D., Late Professor of Medical Jurisprudence and Toxicology in University of Pennsylvania, etc. *Sixth Edition.* Revised by HENRY LEFFMANN, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania, etc. Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Small 8vo. Pp. 660. Price, \$3 net.

When it is remembered that with the exception of the casualties of war, poisoning is probably the most frequent of all the causes of violent death, it will be appreciated how important is the subject of toxicology to every practitioner. This *Text Book*, in its revised, up-to-date condition, becomes an invaluable aid to the doctor in his hour of need. The outlines of medical jurisprudence are also up-to-date, and include the principles which should govern the doctor in giving expert or medico-legal testimony. What he should do and what he should not do in legal cases are all well brought out. Very great help is given the doctor in his efforts to discover the causes of violent death, etc. Among the new phases of treatment noted in this book are the employment of alcohol in phenol poisoning; the value of potassium permanganate; the antidotal value of atropin in morphine poisoning is practically abandoned, etc. The work is a standard text book throughout America, and is of interest to doctors and lawyers alike.

**Story of the Living Temple.** By FREDERICK M. ROSSITER, B. S., M. D., and MARY HENRY ROSSITER, A. M. Fleming H. Revell Co., Chicago, New York, Toronto. 1902. Embossed Cloth. 8vo. Pp. 348. \$1.

This is a popularly written "Study of the hu-

man body," which would make a useful Christmas gift to the doctor's young patrons. It is a masterpiece of description of organs and functions—entertaining and instructive from the first to the last page. Special care seems to have been taken to adhere to scientific truth in every particular—omitting no important fact of physiology or hygiene. Throughout, the reading is elevating—making one who cares for himself think more of himself. The living temple is the perfect man, and to understand and appreciate this ideal—made in the likeness of God—each part and purpose is studied from the standpoint of one who wishes to learn himself or herself. While the book is especially adapted to the young, it is interesting and instructive to all. "The wonderful story of the human dwelling is told with a rarely sympathetic charm and power." A few lines book notice does not allow opportunity to describe this volume according to its merits. But we may say that of all the popularly written works we have ever seen for the purpose of thorough instruction for the layman as to the structure and functions of the human body, this is by far the most readable and the best we have any acquaintance with. While the metaphor—"the living temple"—is constantly used, it is not carried to a tiresome extent. The "story" is sufficiently elaborated to give it the fascination of a fairy tale, and withal, its details are facts.

**How to Succeed in the Practice of Medicine.** By JOS. McDOWELL MATHEWS, M. D., LL. D., President of American Medical Association, 1898-'99; Ex-President Mississippi Valley Medical Association; Professor of Surgery Hospital Medical College, etc., Louisville: John P. Morton & Co. 1902. Cloth. 8vo. Pp. 215. Price, \$2.

Such a book by any clever writer will always attract the attention of the doctor. But when we recognize the author to be as he is, a practitioner of vast experiences and a man of eminence in the profession, an added value applies to this book. While ever keeping in view the golden rule of doing unto others as you would be done by them, and pointing out the principles which should actuate the true physician in his dealings with suffering humanity—the poor and the rich—the business side of the doctor's life is also made prominent. Be charitable to the poor, but let him who is able to pay understand that he is expected to pay. "It has been painful to me," says Dr. Mathews, "to see many of my professional friends die and leave their



families in actual want. The reason is plain, that it was either their own fault or the fault of their *clientele*; and how to prevent this happening to others is the main object of this book." So that this volume may be spoken of as "a guide to success." We wish we could persuade the laity to read it. Doctors and their wives will be pleased with the sentiment expressed, and especially the practitioner, who has a rightful conception of his high calling, and who reads it will be encouraged and profited. The "*lights and shadows* of a doctor's life receive equal attention; and to relieve the monotony a jocular vein is interspersed here and there." We have used so much of the preface in this notice because we could not in briefer space give a correct idea of this book, which we regard as one of the very best ever written on such a subject.

**Twentieth Century Practice.** Edited by THOMAS L. STEDMAN, M. D., New York city. In *Twenty-One Volumes*. Vol. XXI. *Supplement*. New York: William Wood & Co. 1903. Cloth. 8vo. Pp. 845. \$5; leather. \$6; half Morocco, \$7.50.

The twenty volumes, completing the *Twentieth Century Practice* represented the science and practice of medicine as it was in the closing years of the Nineteenth Century. Within the period since the issue of the last volume, advances have been made—either in the establishment of truths that were then theories, or in the discovery of new facts of importance, or in the downfall of some cherished opinions as new searchlights were brought into play. Hence it has been deemed best to issue a *Supplement Volume* so as to eliminate the errors contained in that *International Encyclopedia of Modern Medical Science* by leading authorities of Europe and America, and to note what has since been discovered or established as fact. For instance, yellow fever has a new literature to-day as compared with knowledge of the disease only five years ago. Study of dysentery in the Philippines has demonstrated beyond question that what was called dysentery embraces at least two diseases—a bacillary and an amœbic dysentery. Dr. Carl Beck contributes an article on the medical applications of the X-rays in medicine. The diagnostic significance of the variations in number and form of the cell constituents of blood, and the chemical changes incident to antitoxin formation and the production of immunity are subjects of new chapters. Between thirty-five and forty other brief articles have been contributed to the *Supplement*, revising and adding to

the original articles. In short, the object of this *Supplement* is to supply deficiencies and correct errors, and thus place the original work again abreast of the times and to validate anew the title of the *Twentieth Century Practice of Medicine*. This supplementary volume renders unnecessary a revised edition of the entire work.

**The Mattison Method in Morphinism.** By J. B. MATTISON, M. D., Medical Director, Brooklyn Home for Narcotic Inebriates, etc. *Published for the Author*. E. B. Treat & Co., New York. 1902. Cloth. 12mo. Pp. 40. Price, \$1.

On the title page we find that this monograph, which is pleasurable and profitable reading, presents "a modern and humane treatment of the morphine disease"—which is the outcome of thirty years' experience in the study and treatment of morphinism. The method commended by the author is a mean between extremes—"avoiding the painful ordeal of abrupt disuse and the tiresome delay of prolonged decrease"; and is based on the power of certain remedial resources to subdue abnormal reflexion. The desired sedation is secured and the opium quitting period is reached by this new method by *sodium bromide* within about two weeks usually, when the reflex symptoms are met mainly by *codein*. To meet the insomnia sequelling opiate quitting—equaled only by that of the insane—give 20 to 30 grains of trional at 7 P. M.—"aided in three hours, if need be, by an added 10 grains." "These three drugs—sodium bromide, codein, trional—are the main remedies in our method. Rightly used, with a tonic regime, in many cases they fully suffice." Of course, the details of treatment cannot be brought out in a notice of this length—only outlined. The book should be carefully read, and the wonderful successes of the author encourage us to recommend the full trial of his method of curing opium *habitués*.

**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## Editorial.

### Life of Surgeon Walter Reed, U. S. A.—the Discoverer of the Cause of Yellow Fever and the Means of its Prevention.

Biographies have their lessons—especially when they review the finished work of the great benefactors of the human race. When properly read, they stimulate emulation and endeavor to develop some fact or reveal some truth that shall be of lasting value. Such a record as has been made by the life work of the subject of this biography cannot fail to interest and instruct.

“Lives of great men—all remind us,  
We can make our lives sublime;  
And, departing, leave behind us  
Footprints on the sands of time.”

Major Walter Reed, M. D., A. M., LL. D., Surgeon U. S. Army (photograph reproduction of whom is here given), was born in Gloucester



county, Va., September 13, 1851, and was therefore 51 years of age at the time of his death in Washington, D. C., Nov. 23, 1902. He was a son of the late Rev. Lemuel Sutton Reed, of the Virginia Conference of the Methodist Episcopal

Church, South; hence his boyhood was spent in various parts of Virginia according to the system of itinerancy of that Church. His habits were those of a student—ever searching for more light. At an early age, he conceived a love for the study of medicine; and after a tuition of nine months in the medical department of the University of Virginia, he was graduated Doctor of Medicine from that institution during the summer of 1869—when only 18 years of age—one of the very youngest graduates of medicine in the United States. Such close application, however, as was necessary to secure his degree, for a time left its impression upon his health, but in a year he had regained it. Then he went to New York for the clinical advantages of that great city, where he held positions of the highest honor and trust before he was 21 years of age. He again re-entered college life, graduated in medicine from the Bellevue Hospital Medical College in 1872. After two or more years in further perfecting his knowledge of medicine, he passed the required examinations and received his commission as first lieutenant and assistant surgeon U. S. Army, June 26, 1875. Five years later he was made captain and assistant surgeon. In 1890 he was assigned to duty at Baltimore, in order that he might pursue post-graduate studies in pathology and bacteriology at the Johns Hopkins University. He at once distinguished himself because of the excellent quality of his work, and the attractiveness of his personality made him a favorite with his professors and associates in the laboratory. During 1891, while still at Johns Hopkins he completed an experimental study into the causes of hepatic lesions in typhoid fever. After completing his course in Baltimore in 1892, Dr. Reed was assigned to duty at St. Paul, Minn. Then he was selected by the Surgeon-General as bacteriologist in his office, and was appointed Curator of the Army Medical Museum at Washington, in which he organized and developed the pathological and bacteriological laboratories, which have since become departments of the Army Medical School. About this time, December 4, 1893, he was promoted to the rank of major and surgeon. He then devoted himself exclusively to scientific research in conjunction with his duties as Curator of the Museum. During the Spanish-American war he was appointed as one of the

medical officers to investigate matters relating to typhoid fever, and did valuable work for the government in this capacity as a member of this board of medical officers to investigate and report on the prevalence of typhoid fever in home camps, he distinguished himself by recommending to the commission the plan of collecting excreta in galvanized iron tanks and destroying the possibility of existence of germs of disease, which was afterwards successfully carried out at the U. S. General Hospital at Presidio, Cal., and resulted in the cessation of the disease.

Dr. Reed's especial work was in the line of preventive medicine and military hygiene. He was well known for years as one of the foremost pathologists and bacteriologists of the country. Combining in an unusual degree scientific accuracy with calm judgment, he was invaluable in his ability to search out the cause of epidemic diseases and trace their progress.

After some incidental studies on the subject of yellow fever, Surgeon Reed, with Major Carroll, also of the U. S. Army Medical Service, insisted that Professor Sanarelli's supposed discovery of the germ of yellow fever must not be accepted as final. Their controversy with Prof. Sanarelli on the subject appeared in *The Medical News* about three years ago.

After the Spanish-American war, Dr. Reed made several voyages to Cuba. In 1900 he was sent to Havana, and was placed at the head of the commission appointed to determine, if possible, the cause of yellow fever, and the means by which it is spread. Surgeons James Carroll and — Agramonte, of the U. S. Army, were the other members of the commission. Major Wm. C. Gorgas and Dr. Jefferson R. Keen are likewise entitled to especial credit for their share in extraordinary services in ridding Cuba of yellow fever.

Starting from Finlay's theory of the agency of the mosquito in the dissemination of the disease, the commission, by a series of painstaking experiments, demonstrated most conclusively the causal relation of the species of the culex, known as *stegomyia fasciata*, to yellow fever epidemics; and disproved the theory that the disease could be conveyed in formites, or that it was contagious in the ordinary acceptation of the term. The bite or sting of this species of mosquito, inflicted upon the person of non-immunes so as to reach the capillary circulation,

produces the disease. After a series of brilliant experiments, which cost the life of Dr. Jesse W. Lazear, Contract Surgeon U. S. Army, in 1901, the above fact became established.

Dr. Lazear voluntarily permitted himself to be inoculated with the yellow fever germ, in order to furnish a necessary experimental test in the course of the investigation, and died of the disease. His name, as the Secretary of War suggests, "should be written in the list of the martyrs who have died in the cause of humanity. As a slight memorial of his heroism, a battery in the coast defence fortification, at Fort Howard, Baltimore, Md., has been named 'Battery Lazear.'"

Sanitary measures based upon the conclusions of Major Reed's commission have freed Havana from yellow fever, where the disease had existed almost constantly for three centuries. These measures have looked to the destruction of the infectious mosquito, and the screening of persons from their bite or sting. Warfare against the breeding places of the *culex fasciatus*, and the intelligent use of mosquito nets have brought about complete disappearance of yellow fever from Havana and other places in Cuba, and have demonstrated in a startling manner the influence of etiology upon the effectiveness of sanitary methods.

The doctrine that filth and infections floating in the air caused the spread of yellow fever had laid so firm a hold on the mind of the medical profession, and on the minds of the laity as well, that a medical man would have been in danger of being labelled an heretic had he taken any other view. But in the course of his experiments during the winter of 1900-1901, under the auspices of the U. S. Government in Cuba, he proved to an absolute conclusion that neither dirt nor filth, nor sleeping with the fever patients, nor coming directly in contact with the disease in any way would communicate it—except through the intermediate agency of the infected mosquito. Surgeon Reed proved his position so exhaustively and so thoroughly that the facts brought out are now everywhere accepted, and the time is not far distant when yellow fever will be a disease of the past.

So complete a history of this whole matter is given by Dr. George M. Sternberg, Surgeon-General U. S. Army. Retired List, in the 62-page article on *Yellow Fever* in the *Supplemen-*

*tary Volume XXI*, just issued, of the *Twentieth Century Practice of Medicine*, published by William Wood & Co., New York, 1903, in which every credit is given to Surgeon Reed and his commission, and drawings are presented of the yellow fever producing mosquito, etc., that we forbear going further into the details which are so accessible in the volume named. Details, even as to the means of destruction of the yellow fever producing mosquito are given in that article, as also in Circular No. 5, issued by command of Major General Wood, while having the headquarters of the Department of Cuba at Havana, April 27, 1901, which is also published in the *Supplement* just alluded to.

The whole thing is so simple that it is a matter of wonder that some one did not discover the facts before. Yellow fever cannot spread unless one who has not already had the disease is bitten by a mosquito, which, in turn, must, after the proper time—usually from 12 to 18 days—has elapsed bite some one else. There is no other way for it to spread. It cannot be carried in the clothing; it cannot be breathed into the system; it cannot, in short, be communicated in the ordinary course of life in any other way than through the species of mosquito known as the *Culex fasciatus* of the genus *Stegomyia*. Therefore the prophylaxis is all easy—kill the peculiar species of mosquito in yellow fever districts, and you kill the yellow fever.

It is impossible to estimate the value of the scientific work of this able, courageous and self-sacrificing army surgeon. In the hundred years since 1793, there have been over a half million cases of yellow fever alone, from which over 100,000 people have died. Who of the older generation that does not recall the awful epidemic of 1855 that swept over Norfolk and Portsmouth, Va., and the immediately surrounding territory, and claimed over 20,000 victims? It is estimated that the epidemic of 1878 cost the city of New Orleans over \$10,000,000, besides the untold suffering and thousands of lives. In addition, there are authentic records to show that between 1853 and 1900, the city of Havana alone lost nearly 36,000 people through the ravages of this disease—not to refer to the other ports of Cuba, etc. When these facts are recalled, one begins to realize the immense value of the discovery or demonstrations of the late Surgeon Reed—developing facts

which put yellow fever under complete control, and banishes it from the list of dreaded diseases. The result has set the Queen of the Antilles free from its dreaded disease, as an immediate result, and it will in all time to come prevent its ever becoming epidemic again in a civilized country. His work will save more human suffering and prolong more human lives than any discovery of this generation, which has been especially rich in such advancements in hygiene and preventive medicine.

In conferring the degree of Master of Arts upon Surgeon Reed on his return from Cuba, President Eliot, of Harvard University, said that he deserved it because he had given to the world the means to rid itself of the great dread of diseases—yellow fever.

In his annual report to Congress, 1902, Secretary of War Root, referring to the discovery of Dr. Reed, remarked that "the brilliant character of his scientific achievements, its inestimable value to mankind, the saving of thousands of lives, and the deliverance of the Atlantic seacoast from constant apprehension, demand special recognition from the government of the United States. Dr. Reed is the ranking major in the medical department, and within a few months will, by operation of the law, become lieutenant-colonel. I ask that the President be authorized to appoint him Assistant Surgeon-General, with the rank of colonel."

On another occasion, in an address before the Army Medical College, Secretary of War Root said that Surgeon Reed's "discoveries in connection with the propagation and prevention of yellow fever were worth more to the people of the United States than the entire cost of the Spanish-American war."

In a notice of the death of Dr. Reed, the *Philadelphia Medical Journal* says: "Never before in the history of medical science has there been such a demonstration of adequacy to deal with a serious and menacing danger upon the basis of exact knowledge. The relief to Cuba and the promise of similar relief from yellow fever to all infected areas in the Spanish Main are great; but the benefit to our gulf and other Southern States that comes from a secure feeling of immunity from the yellow pest is not to be underestimated. This great result has not been accomplished without strenuous endeavor, and even voluntary sacrifice of human

life. No one will ever know how much of physical expenditure the investigations upon yellow fever cost Dr. Reed. It is not difficult to picture to one's self the doubts and despairs even arising from the experiments upon human beings rendered necessary by the exigencies and the importance of the investigation. And these feelings were now the less acute because the victims volunteered services which might readily cost their lives. \* \* \* While his loss is incomparably great to the army, to the medical profession, to the science of medicine and his family, there is great comfort in the knowledge that, in serving his country and profession to the best of his high abilities, he conferred a boon upon humanity that must come to rank with the discovery of vaccination, of protective inoculation against rabies, of antitoxin for diphtheria, and the mosquito agency in the spread of malaria." Dr. Reed's name will live forever in memory along with those of Jenner, of Crawford W. Long—the discoverer of surgical anaesthesia, and the list of those who have been, in like manner, benefactors of the human race.

Upon his return from Cuba, Dr. Reed was stationed at the Army Medical Museum as curator—a position he had occupied nine years before, and one for which his attainments eminently fitted him. He was also Professor of Bacteriology and Pathology in the Army Medical School, and was also Lecturer on those subjects in the Columbian Medical College of Washington city.

This man of science died believing that his work had just begun. The question with him was whether or not other diseases than yellow fever might be wholly communicated through some similar agency; and it was along these lines that Dr. Reed had planned to devote his life to investigation and to inquiry.

There is good reason to believe that Dr. Reed's health was severely shaken by the anxious experiences he had in investigating the cause and prevention of yellow fever, and he did not regain his former vigor up to the time that he was attacked by that dreaded disease, appendicitis, for which an operation was performed November 17, 1902. He did not rally from the operation, and died November 23d. The funeral services took place from the St. Thomas Episcopal church on Tuesday, November 25th.

Major Reed leaves a widow (whose maiden

name was Miss Emily Lawrence), two daughters, who reside with their mother in Washington, D. C., and a son, Lieutenant Reed, of the Tenth U. S. Infantry, now in the Philippines.

Prof. W. W. Keen, of Philadelphia, who was present at the meeting of the New York Academy of Medicine December 18, 1902, when resolutions of condolence with the family of Surgeon Reed were passed, said that he deserved a tribute of the loftiest character from the medical profession in this country. Prof. Keen suggested that the profession of this country raise a monument to him. The *Medical News* of December 27th, says: "Even more suitable would it be if, under the stimulus of suggestion from the American medical profession, the United States Government, in whose service the best years of his life were passed—his labors as an army medical officer, in Cuba, serving not a little to cause his career to be cut so short—should raise a fitting monument to him at the nation's capital."

This journal most cheerfully lends its support to the suggestion that "the medical societies throughout the country take action on this matter by forwarding resolutions to this effect to the President; and then by using their local influence with Congressmen and Senators, secure that personal interest that will assure the success of the movement." Major Reed "deserves the highest tribute it is in the power of the United States to give him."

In view of the remarkable and valuable discoveries by Dr. Reed, his associates in the army are sparing no efforts to have Congress get a proper conception of their worth and value, in order that it may provide a pension commensurate with his worth to the widow he has left behind. Senator Martin, of Virginia, has offered a bill granting a pension of \$4,000 a year to the widow. While Major Reed was a Virginian by birth and education, he had been a benefactor of mankind to such an enormous extent that the government ought to suitably provide at least for his widow. The Senator said that "Virginia has a right to be proud to have been his native State, and the scene of his boyhood days. The more I look into the matter, the more valuable I think his discoveries are. I shall do everything in my power to have Congress fitly recognize his services."

Medical men have been too modest in the

past in claiming general recognition for the humane work of members of the profession. We trust that Southern doctors especially will lend their untiring effort to the securing of the pension for the widow, as referred to in Senator Martin's bill. Virginia medical societies particularly should take prompt action in this matter in appreciation of the generous proposals of the medical profession in other States of the Union.

### The Virginia Conference of Charities and Corrections.

Will hold a meeting in Richmond, February 10, 11 and 12, 1903. This is an independent organization under the direction of representatives of the various charitable, penal and reformatory institutions, benevolent societies and workers in the fields of charity throughout the State. Its purposes are to educate the public mind to a proper conception of the needs of the indigent, defective and delinquent classes; to encourage a humane and philanthropic spirit; to create and foster a deeper and more general interest in charity and reformatory work; to procure data regarding the condition of the unfortunate classes—viz: the destitute, the homeless and neglected, the feeble-minded, idiots, the insane, epileptics, the criminal, etc., and study the best methods of relief and correction; to discuss and solve the various problems involved in pauperism, degeneracy, vagrancy and criminology; and to impress upon the people the advantages of organization in charitable and correctional efforts. The work proposed to be done is of such a nature that it appeals to the humanitarian spirit in every lover of mankind.

The subjects for addresses, papers, reports and discussions at the approaching meeting are:

*Charitable and Penal Institutions of the Counties.*

*Shall Virginia have a State Board of Charities?*

*State Care of the Feeble-Minded.*

*Juvenile Courts and Reformatories.*

*County Poor Houses.*

Prominent persons connected with charity organizations in other States, will be present to make addresses and to participate in the discussions.

In order to defray the expenses of the Conference,—for stamps, stationery, printing, light-

ing and heating the hall in which the meeting will be held, the annual membership fee has been fixed at \$1.00, which should be paid to the Treasurer at or before the meeting. It is desired that all persons connected with or interested in charitable and reformatory institutions, and all interested in charitable and correctional work become members. Send your name and address to the Secretary, Chairman of Membership Committee or to the Treasurer.

The following are the officers, etc.:

*President*, Robert Gilliam, Petersburg.

*Vice-Presidents*, H. L. Valentine, Richmond; R. D. Hairlip, Staunton; T. L. Tate, Pulaski Co.; Miss Hattie Gundry, Fairfax Co.; W. H. Vincent, Southampton Co.

*Secretary*, George B. Davis, Richmond.

*Treasurer*, William F. Drewry, M. D., Petersburg.

*Executive Council*, W. A. Bowles, Staunton; W. H. Scott Copeland, Richmond; H. W. Henry, Pittsylvania Co.; Mrs. E. C. Minor, Richmond; Rev. J. M. Pilcher, Petersburg.

*Chairmen of the respective committees Charitable and Penal Institutions of the Counties.* Rev. J. M. Pilcher, Petersburg.

*Shall Virginia have a State Board of Charities?* Mrs. E. C. Minor, Richmond.

*State Care of the Feeble-minded.* W. A. Bowles, Staunton.

*Juvenile Courts and Reformatories.* Charles Hutzler, Richmond.

*County Poor Houses.* George B. Davis, Richmond.

*Membership.* Mrs. Joseph Bryan, Richmond.

*Local Arrangements.* John Stuart Bryan, Richmond.

*Publication.* Dr. Wm. F. Drewry, Petersburg.

### Smallpox in Richmond.

Rarely do we read a local newspaper of late but what we find the statement that smallpox is causing something of a stir in such or such a district. Recently the Richmond newspapers have had lengthy notices of two cases found in this city and vicinity. One of these cases was sent to the pesthouse, while the other—a nurse at the City Almshouse—was isolated by permission of the local Board of Health on the top-floor of the institution. We are not told how the

other inmates (mostly an ignorant class who are notably the ones to reject vaccination) were protected by the authorities against the contagion. We believe, however, that the risk of isolating a case of small-pox under the roof of a public poor-house is a serious mistake. The daily newspapers could materially aid in stamping out this dread disease if part of their sensational columns were given to spreading abroad the great good to be accomplished by timely and repeated vaccinations.

### The So-Called "Toy" Pistol.

During the holiday season just closed has caused throughout the country in point of number of the dead and wounded probably many times the loss that was sustained by the United States army at the capture of Santiago. In Virginia the losses have been large, Norfolk doubtless sustaining the greatest number. At this writing, about twenty boys have died of lock-jaw in that city as a result of injuries inflicted by these pistols, while several others, who are similarly affected, are not expected to recover. The police authorities are now taking active steps to prevent the sale or use of these weapons, and it is not thought there will be a repetition of such occurrences.

These are not the old-fashioned paper-cap pistols that have caused all of this trouble, but are instead single barrelled weapons for the use of blank cartridges which can also fire the ordinary 22-calibre and B. B. bullets.

### Tri-State Medical Association of the Carolinas and Virginia.

This exceedingly valuable Association, composed of the representative men of the profession in North Carolina, South Carolina, and Virginia, will hold its annual session at Wright's Hotel, Columbia, S. C., February 25 and 26, 1903. Dr. James A. Burroughs, of Asheville, N. C., is President, and Dr. Rolfe E. Hughes, of Laurens, S. C., is Secretary and Treasurer. Many prominent doctors of the States named, as also some distinguished visitors, have promised their presence and contribution of papers. This Association, instead of interfering with the success of the several State Medical Societies, is a great help to them. It claims no legislative rights, but annually brings together the

best talent of those States named who make valuable contributions to the literature and science of medicine and surgery, as attested by its excellent volume of *Transactions*. The Association is constantly adding to its membership, and the interest manifest in its growth is being daily exhibited. It could not be otherwise when one recalls the line of distinguished men who have been predecessors of the active and able officers who now hold the honors and positions of trust.

### Correction.

In the notice of Dr. Joseph Grindons *Pocket Text-Book of Dermatology*, page 403, December 12, 1902, issue of this journal, it is stated that the illustrations "are mostly drawn from photographs of cases under the author's observation." The author writes us that "all the illustrations are original—those of the rarer as well as the more common diseases. None of them are to be found in any other book. All are from photographs or drawings of my cases or cases of professional friends in St. Louis," where the author is Professor of Clinical Dermatology and Syphilis in the Medical Department of Washington University.

### Dr. Wm. H. Parker, Richmond, Va.,

Who has served for some years as the able assistant of the late Dr. Lewis P. Wheat in the Chair of Genito-Urinary Diseases and Dermatology in the University College of Medicine, Richmond, has been requested by the Faculty to fill out the unexpired term until the vacation in 1903, when permanent arrangements will be made.

### Dr. George W. LeCato, of Accomac Co., Va.

We regret to learn that this distinguished physician of Washapreague, Va., who for several terms has served in the Senate of Virginia from the Eastern Shore of Virginia, has been compelled to leave Richmond on account of failing health. In October of 1902 he suffered a stroke of paralysis, but recovered sufficiently, as he thought, to resume his seat in the Virginia Senate early in December. He found himself, however, unable to attend to legislative duties, and was granted a leave of absence just before

the Christmas holidays. Since his return home he has grown worse, and serious apprehensions are felt. His loss to the Legislature would be keenly felt, and the medical profession would recognize that its truest friend was lost from the General Assembly of Virginia if it should prove that he is unable to return. Dr. LeCato has long been an active Fellow of the Medical Society of Virginia, attending its sessions and taking interest in all that concerns its welfare. As a practitioner, he was sought in consultation widely throughout his district.

#### Dr. Adolf Lorenz

Has returned to his home in Germany. He came to this country about two months ago to attend a child of the Chicago millionaire, Mr. Armour. Exaggerated rumors as to the amount of his fees while in America worried him to such an extent that he told a newspaper reporter to say that he came to attend one case for fee, which he received, and that the rest of his work has been to demonstrate to the doctors of the country, in various clinics, his method of bloodless reduction of congenital dislocations, etc. His visit to America has been a great benefaction, and his successes have removed many a doubt in the minds of those who had heard of his methods, but could scarcely understand from written descriptions his mode of procedure. His demonstrations, however, have revolutionized professional opinion, and many surgeons were taught the *modus operandi* so that they can carry on the good work in their practice and in their teaching. Dr. Lorenz has been thoroughly ethical in all his dealings with the profession of America.

#### Yellow Fever

Is causing some little trouble at the Isthmus of Panama at present. We presume that the discoveries of the late Surgeon Walter Reed as to the methods of stamping out the disease will be speedily adopted there.

#### Physician Wanted on Isthmian Commission.

The American Association for the Advancement of Science has requested President Roosevelt to appoint a physician as a member of the

Isthmian Canal Commission—a request which we trust will be promptly complied with.

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## Obituary Record.

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#### Dr. Lewis P. Wheat, Richmond, Va.,

Died at his home on December 29, 1902. While conscious for some time of cardiac disease, he was confined to his sick chamber only about a day before death claimed him. Possessed of a marked personality, no one ever had his friendship that did not realize it. Brave, generous, fair minded and honorable—his loss to his friends will long be felt. He graduated in medicine from the Medical College of Virginia in 1880. He was for some years one of the assistants of the late Dr. Hunter McGuire, for whom he conceived an affection akin to that of a son for a father. He was one of the prominent leaders in the founding of the University College of Medicine, Richmond, Va., in 1893, in which institution he has ever since been Professor of Genito-Urinary Diseases and Dermatology. And in his specialty, he achieved an enviable prominence, to the extent of being quoted as an authority. He joined the Medical Society of Virginia in 1882, and was always an active, zealous member. He has been a member of the Richmond Academy of Medicine and Surgery ever since its organization, at a called meeting of which, on December 30, 1902, resolutions were adopted expressive of the appreciation in which his memory was held, and sympathy for the bereaved family. During the day of December 30th, the faculty of the University College of Medicine, Richmond, Va., held a called meeting and likewise adopted resolutions expressive of their appreciation of the merits of Dr. Lewis Wheat as a professor in the institution he had helped to found, of their sense of loss to the college, and of sympathy with his widow and family. His remains are laid at rest in Hollywood Cemetery, near Richmond.



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## Original Communications.

### PROVISION FOR THE CRIMINAL INSANE.

By WILLIAM FRANCIS DREWRY, M. D., Petersburg, Va.,

Superintendent of the Central State Hospital, Member of the New York Medico-Legal Society, American Medico-Psychological Association, American Medical Association, Medical Society of Virginia, etc., etc.

What disposition should be made of the criminal insane is a problem the solution of which has for a century or more been studied from every conceivable standpoint by alienists, humanitarians, criminologists, jurists and legislators. The term "criminal insane" will apply, in my remarks in this paper, to those persons who become insane after conviction of crime or while serving sentence in the penitentiary, and those who appear to be sane at the time crime is alleged to have been committed and become insane before trial or conviction. Those who commit crime while insane are not classed in this paper in the category of the criminal insane.

"In capital offences, given the act committed and the irresponsibility shown, what then? Three methods of disposal are open—to keep him, to hang him, to let him go." These were the words of the late eloquent and distinguished Dr. W. W. Godding, superintendent of the Government Hospital for the Insane.

In the light of modern christian civilization, it is presumed that an insane person would, under no circumstances, be put to death or even punished for any offence against the law. That insane persons committing crime of great atrocity have, however, been put to death or imprisoned, even in recent years, through the clamorings of the excited multitude, is a deplorable fact. Our own State is not guiltless. Shame upon our boasted civilization! Said the able and scholarly Judge Somerville, of Alabama: "The modern view of insanity, with its scientific rule, as to the legal culpability of the 'criminal insane' is destined to a sure triumph in the future. It is based on the solid and im-

perishable foundation of truth, whose hand-maid is 'starved-eyed science.' Error may die amid her worshippers. But not so with truth; 'the eternal years of God are hers.'"

For the protection of the community, for the good of the individual afflicted, for the sake of posterity, it is necessary to keep the insane,—criminal and non-criminal as well—apart from the sane population, and under proper supervision. But humane instincts, and a spirit of justice, kindness and sympathy, demand that the greatest possible consideration be shown the insane, that as much personal liberty and comfort be given them as is consistent with their own and the public safety, and that every possible means known to medical science be utilized to effect restoration to normal health.

"Ask," says Hon. S. J. Barrows, of the International Prison Commission, "what a State does with its insane prisoners; ask how it protects society, on the one hand, and fulfills its duty to an irresponsible member, on the other, and we may judge of its advancement in civilization, by the response."

Modern conceptions of insanity have wrought a revolution in the methods of caring for and treating the insane. "Humanitarianism has spread its benevolent mantle over the unfortunate insane" in every civilized country. Magnificent hospital structures, with every possible arrangement for comfort, pleasure, freedom, agreeable occupation, etc., have supplanted the old prisons and bedlams, where the insane were locked in, chained and lashed. The gentle, sympathetic nurse is a familiar figure now where a cruel keeper with brutish instincts formerly held sway; the iron cuff, straight-jacket, dungeon cell, whirling-chair, ducking-stool, etc., have long ago been out of use in our hospitals for the insane. Humane acts, kindness, scientific treatment now characterize the management of those whose reason has been dethroned.

In the modern evolution of the care of the insane, classification and separation of the patients according to their mental and physical condition, viz., the acute, chronic, demented, epileptic, acute sick, consumptives, infirm, etc., have received special and deserved attention. Proper classification secures the greatest good to all concerned, and is essential to the best results. Undoubtedly the greatest good comes from the separation of the criminal insane from the innocent insane. The wisdom and justice of such separation cannot be denied. It has received the sanction of those most competent to judge, and of those conversant with the best and most satisfactory methods of treating the insane, dealing with criminals, and managing hospitals.

Dr. Archibald Church, of Chicago, an alienist and author of great reputation, presented, some years ago, to the Medico-Legal Society of New York, a valuable contribution, entitled "The Proper Disposition of the Criminal Insane," in which he laid down the following propositions, which afford material for thought and reflection:

"1. That in the proper disposition of the criminal insane, criminality alone should be the criterion of classification. 2. That the criminal insane should be cared for in separate institutions. 3. That insane criminals committing capital offences should be sequestered during the period of their natural lives. 4. That insane criminals committing lesser offences should be committed for periods equal to terms of imprisonment for their crimes made and provided, and as much longer as their insanity persists. 5. That the criminal insane may be liberated upon regaining their reason, by the pardon of the Governor, with the consent and recommendation of an advisory board."

The reasons that special accommodations should be provided for the criminal apart from the ordinary insane are numerous enough, and are based on sound common sense and justice. It is grossly unjust to the innocent insane, whose characters are blameless, to be forced to associate with the criminal and convict insane, who are usually vicious and vulgar. Such association is repulsive to many who are refined and whose conduct all through life has been moral and free from crime. Said Dr. E. G. Carpenter, a superintendent who for many years gave his best efforts to the care and treatment of the insane in a great Western hospital: "It certainly must be sufficient misfortune to be

bereft of one's mind, without awakening to find himself surrounded by men who have the habits, conversation, actions and instincts of those to be found only in the jail or penal institution."

Dr. Arthur H. Harrington, medical director of the Massachusetts State Asylum for Insane Criminals, adds his testimony. He says: "Actual experience has demonstrated, both from the material and moral standpoint, the disadvantage and the impropriety of treating under one roof the criminal and non-criminal insane. The comfort and liberty of innocent persons have often to be sacrificed for the sake of security, when there are upon the wards criminals who are still under sentence."

Many of the criminal insane themselves recognize that it is a misfit to be classed with, and to mingle with the innocent insane. Sometimes they are sensitive, and when taunted and irritated, become excited, violent and dangerous. Frequently having criminal instincts, they are dangerous to both the other insane and to those under whose care they are. They are constantly making efforts to escape, and owing to the insecurity of the ordinary hospital for the insane, and to the fact that the principle of non-restraint is carried as far as possible—that being beneficial to the insane—there is little difficulty in any of them getting away. Especially is this true of those in the convalescent stage, who are capable of exercising their mental faculties sufficiently well to plan and effect escape and then to evade the officers of the law.

"It will not do," said Dr. Godding, "to set back the hands of the dial of progress by making the hospital a penitentiary, and because you have there five whose insanity has been associated with crime, refuse to a hundred other insane, on whose lives there rest no blood-stain, the widest liberty and that withdrawal of restraint which their condition permits."

To throw proper safeguards around the criminal insane to prevent escape does an injustice to the innocent insane, causes them to suffer, and be deprived of much needed freedom. The presence of an insane criminal, if he is at all vicious or disposed to escape, disturbs the peace and discipline of the entire institution. Such a person is a source of trouble and annoyance. A more cunning, designing, objectionable set would be difficult to find. Go to the records of any hospital where the criminal insane are kept with the other patients, and you will find recorded instances of escape and of attempt-

ed or accomplished homicide by the former class. In order to effect escape, a stalwart and brutal convict—a murderer—sent to this hospital, threatened to kill the door-keeper on the spot; another secured an old key and shaped it so as to unlock a door that was between him and liberty; another broke open the guard to a window in his room on the third floor, made a rope of bedclothes, and got away during the dead hours of night; an attendant made a narrow escape with his life, and will carry to his grave an ugly scar made by a concealed knife in the hands of a culprit who would add another to his list of victims—he had killed his wife. A patient sent from the penitentiary, where he was serving a sentence for killing a woman, escaped three or four times, killed a fellow patient who was taunting him.

Arguments based on strong grounds in favor of the separation of the criminal from the non-criminal insane, there are plenty; but this last instance is a case where "one fact is worth a thousand arguments." Other instances of violent conduct, ingenious designs, etc., might be mentioned, but these suffice to demonstrate the dangers of having this class associate with the innocent insane in our hospitals.

There are instances of criminals counterfeiting insanity so successfully that they gained admission to the hospital for the insane, from which they soon made their escape, and went at large in some other community to continue their devilment. Designing criminals have too often successfully played that "dodge." I recall three such patients, each of whom, after remaining in the hospital a few days, escaped. Preparations were being made to return them to the authorities who sent them, for the feigning had been detected.

Dr. T. O. Powell, superintendent of the Georgia State Sanitarium, said in a report to the Legislature of his State:

"They (the criminal insane) cannot be securely kept in the hospital for the ordinary insane; a majority of them will ultimately escape, knowing we have no dogs to catch them; hence the injustice to society that this class should be turned loose. The tendency is to encourage the feigning of insanity for the purpose of escape. They constitute the most disturbing, demoralizing element we have, and we have to keep them under constant observation, often confined in their rooms, and taking the time of the attendants

frequently from the care of the ordinary insane."

Dr. P. L. Murphy, superintendent of the State Hospital at Morganton, North Carolina, says in a very valuable paper on the subject: "As to the wisdom of separation of the criminal from the ordinary insane, there is but one opinion among alienists and criminologists on both hemispheres. Is it the behest of humanity that those whom intervening insanity has shielded from the arms of the law shall be forced into companionship of the innocent afflicted ones?"

A century or more ago, the subject was discussed among those in care of the insane in England, and probably elsewhere. Nearly fifty years ago, a committee appointed by the House of Lords to investigate the subject of caring for the criminal and non-criminal insane together, reported in part as follows: "That it is painful and injurious to both parties, that the presence of insane criminals diverts attention and care from other patients which is their due, and imposes upon all a far stricter discipline than is just to the majority, thus continuing the error that an asylum is a prison." The report was mainly instrumental in effecting the establishment of the Broadmoor Asylum for the criminal insane. This move stimulated thought on the subject, and led to the making of special provision, in various quarters of the globe, for the criminal insane.

Abundant testimony favorable to separation and against association of the criminal and non-criminal insane is to be found in the hospital reports throughout the land. In 1873 the "Association of Medical Superintendents of American Institutions for the Insane," now the American Medico-Psychological Association, than which there never assembled an abler body of scientists, after giving mature consideration to the subject, unanimously adopted the following resolutions, offered by the great alienist, Dr. Pliny Earle:

"1. That neither the cells of the penitentiaries and jails nor the wards of ordinary hospitals for the insane are proper places for the custody and treatment of this class of insane.

"2. That when the number of this class in any state (or in any two or more adjoining states that will unite in this project) is sufficient to justify such a course, these cases should be placed in a hospital specially provided for the insane; and that until this can be done, they should be treated in a hospital connected with

some prison, and not in the wards or in separate buildings upon any part of the grounds of an ordinary hospital for the insane."

To-day England, Scotland, France, Spain, Portugal, Belgium, Saxony, Hungary, Baden, Norway, Ontario (Canada), and the following States—viz., North Carolina, Ohio, New York, Massachusetts, Maine, Iowa, Michigan, Illinois and West Virginia has each either a separate special asylum for the criminal insane or separate department in connection with a prison, or perhaps in a distinct department of a hospital for the insane. New York, Massachusetts, Michigan and Illinois has each a hospital for insane criminals entirely apart from the prisons.

The United States Government confines its criminal insane in St. Elizabeth Hospital, Washington, D. C., in a separate building, named "Howard Hall," in honor of the philanthropist who gave his life to prison reform.

Hon. William Pryor Letchworth, of New York, author of "The Insane in Foreign Countries" and "The Care and Treatment of Epileptics," a grand and good man and one of the greatest spirits in recent times in promoting all that is good for mankind, says: "Separate provision should be made by every State for insane criminals. The necessity for this is so apparent, if considered only with reference to the rights of the non-criminal insane, as seemingly to need no argument."

Prior to 1773, the year in which "The Hospital for the reception of idiots, lunatics and persons of insane or disorderly mind" was opened at Williamsburg by act of the House of Burgesses, the prisons and jails were doubtless the receptacles for the insane as well as the criminals of Virginia, and all were placed, perhaps, on equal footing as to care, which was of the crudest nature. I have not been able to find any records showing special legislative acts which had in view the care of the insane of the criminal and convict classes separate and distinct from the innocent or non-criminal insane. In the wards of our State hospitals are brought indiscriminately together all persons who have by due process of law been pronounced mentally diseased, "without regard to their moral status, their antecedents, or their position before the law." As Dr. Harrington, of Massachusetts, truly says: "The injustice as well as the impropriety of this system could not fail to force itself upon the minds of all who have seen upon the wards of our State hospitals those whose

lives have been vicious and criminal, side by side with innocence, with respectability, and with those who have been honored citizens in our midst."

Mr. Clark Bell, of New York, a learned medico-legal jurist and author, says: "This offence against the insane by the States or authorities who commit it, is all the more indefensible because of the utter defenselessness of the insane themselves, even to protest against it. \* \* \* Forcing the innocent insane to consort with convicts is a crime of which the State that suffers it is guilty, and for which legislators should be held responsible."

True, there are never at any time many criminal insane in Virginia to provide for, yet a sufficient number, be it ever so small, to justify separation from the innocent insane. The number is too small to warrant the establishment of a separate independent institution. The choice is between separate departments at the penitentiary and at the State hospitals. In my judgment, the first is infinitely better, and the reasons are obvious. In the words of a great alienist and humanitarian, "it is only a question whether a part of a hospital shall be made a prison, or a part of a prison be converted into a hospital; and there can hardly be a question that the latter is the proper course."

The State clearly owes it to her innocent insane, to her criminal insane, to the public—for the good of all—to provide special accommodations for the class under consideration. The State should no longer be derelict in her duty in this matter. She should follow the example of progressive States. North Carolina has, it seems to me, reached a fair solution of the problem, and Virginia would act wisely to adopt a plan in most respects similar to hers, the main features of which are as follows: A distinct department or hospital is provided at the penitentiary for the accommodation of the following classes: all convicts and persons convicted of crime, becoming insane; all persons who commit crime while insane; and all who, charged with crime, are adjudged to be insane at the time of arraignment; and furthermore, persons accused of certain grave crimes and who have escaped indictment or been acquitted upon trial upon the ground of insanity or insufficient mental capacity to undertake his defence, or to receive sentence after conviction, are, in the discretion of the court, committed to such hospital. Persons

in the said criminal insane department are treated, cared for and maintained like patients in the State hospitals. Their confinement is not regarded as punishment for any offence. Whenever one against whom an indictment for crime is pending, recovers, he is sent back to the court to be dealt with according to law. Persons acquitted of a capital felony on the ground of insanity are discharged from this special hospital by act of the General Assembly. Those acquitted of crime of lesser degree and committed to said department are discharged upon order of the Governor. A person convicted of a crime and upon whom judgment was suspended on account of insanity, is released upon the order of the trial judge. If an insane convict is insane at the expiration of his sentence, he is kept in the department until he recovers or becomes incurable or harmless.

At the penitentiary or at the prison farm there should be erected a building, designed and constructed on the hospital (though made absolutely secure against escape), rather than the prison idea. Due regard, of course, should be had to the separation of the sexes and the races. To this special department should be sent all the criminal insane now in the State hospitals or in the penitentiary, jails, and all those persons who shall hereafter come in the category of the criminal insane as designated in the first part of this paper.

Efforts are now being made to secure the passage by the Legislature of a bill offered in the House by an able young lawyer, which provides: "If any person convicted of crime and sentenced to confinement in the State penitentiary become insane during the term for which he has been convicted and sentenced, he shall be confined and treated in a special ward in the State penitentiary to be set aside and reserved for such insane criminals." This is truly an effort in the right direction, and will doubtless lead to even better things.

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## AID OF THE MICROSCOPE IN DIAGNOSIS OF DISEASES OF THE SKIN.

By C. S. VENABLE, M. D., Charlottesville, Va.

The microscopical diagnosis of skin diseases is, we all know, a matter of more or less conjecture, and in many instances a very difficult problem; but with the aid of the microscope we are enabled to differentiate the lesions with a degree of certainty and at the same time place dermatology on a far more scientific plane. We have all seen and studied the histology of the skin. So I shall pass on with a brief sketch of this to the object which the title of this paper implies.

The first division of the layers of the skin consists of: (1) Epidermis; (2) dermis, corium or cutis vera; (3) subcutaneous connective tissue. These layers are again subdivided for more minute study, as follows: The epidermis, from without inward, into (1) stratum corneum; (2) stratum lucidum; (3) stratum granulosum; (4) stratum mucosum.

The *stratum corneum* consists of superimposed layers of flattened, elongated cells, increasing in flatness from below upward. The stratum mucosum, the deepest layer of the epidermis, consisting in itself of two layers, the deeper of which formed of columnar epithelium, rests on a basement membrane, which separates it from the corium; the more superficial of prickle cells, which are arranged in strata over the former and flattening as they approach the stratum granulosum. It is in the deeper layer of this strata that the pigment of the skin is deposited.

The *stratum granulosum* rests on the prickle cells, and is a continuation of these cells, flattening as they approach the surface. They contain granular substance, consisting of eleiden—a solid substance (Ranvier)—and kiratohyaline, a fluid (Waldeyer). As we approach the stratum corneum these cells lose their granular substance and become more transparent and less refractive, thus merging into the *stratum lucidum*, which, in turn, merges into the *stratum corneum*, losing its nuclei as it does so.

The corium is composed of white fibrous and yellow connective tissue arranged in horizontal bundles above and oblique bundles below. The upper portion forms the papillary layer, which is separated from the columnar cells of the stratum mucosum by the basement membrane. It is these papillae that give the furrowed appearance to the skin, especially marked on the

ends of the fingers, and in them that the tactile corpuscles are located. Deeper in this layer are situated the blood vessels, lymphatics, sudoriporous glands, and here are received hair follicles and sebaceous glands. As we reach the lower or deeper part of the corium, the fibres become less and less closely crowded together, and gradually merge into the underlying connective tissue, which is loose in structure and presents large and small spaces that are filled with adipose tissue. This adipose tissue consists of fat cells collected into groups, forming lobules, which, in many instances, are encapsulated in a connective tissue sheath. These lobules are supplied by an afferent arteriole, an efferent vein, and surrounded by capillary plexus.

After this very superficial resume of the histology of the skin, we may pass on to the microscopical appearances to be found in the pathological conditions. Space does not permit of going into all the various diseases of the skin, but I shall choose three, which are, in many instances, almost impossible to diagnosticate without the aid of the microscope—viz: *eczema*, *psoriasis* and *sypilis*.\*

#### MICROSCOPIC DIAGNOSIS OF ECZEMA.

Starting with *eczema*, I shall describe it as a whole before showing the difference between acute, subacute and chronic forms. The stratum corneum is greatly thickened, and in it may be seen elongated spaces of various sizes and lengths between the cell layers. The cells in this stratum are more firmly attached to one another of the same plane than to those above or below; hence these spaces are a divergence of adjacent cell layers of the stratum. The superficial boundary of these spaces is frequently broken, giving the surface a broken, wavy and ragged appearance. Also in this stratum are found some of the vesicles; but as we pass in deeper we find the location of vesicles, which is so characteristic of *eczema*—it being a true vesicular disease—to be between the strata granulo-

sum and corneum, taking the space previously occupied by the stratum lucidum. These vesicles lie along here at varying intervals, and contain denuded epithelium, coagulated albumen, serum and leucocytes. The vesicles take their origin in the upper layer of the prickle cells (Dockereel). There is a thickening of the stratum mucosum, accompanied by an infiltration of leucocytes. Many spindle cells are seen dispersed throughout this layer, especially in the inter-papillary spaces, which are enlarged and greatly elongated, dipping down into the corium. The papillae are correspondingly enlarged and elongated and infiltrated. There is a general but not excessive infiltration throughout the corium excepting about the vessels where the leucocytes become grouped. The hair follicles are hypertrophied, enlarged by the infiltration, and filled above by a much thickened process of the horny layers, presenting a comedo-like appearance. The sweat follicles are widened and infiltrated.

In the acute form, the horny layer is not so much thickened. The interpapillary processes are not so much elongated nor are the hair or sweat follicles so hypertrophied; but the infiltration is more marked throughout the corium. The vesicles are smaller, more abundant, contain more leucocytes and serum, but less coagulated albumen, and fewer epithelial cells.

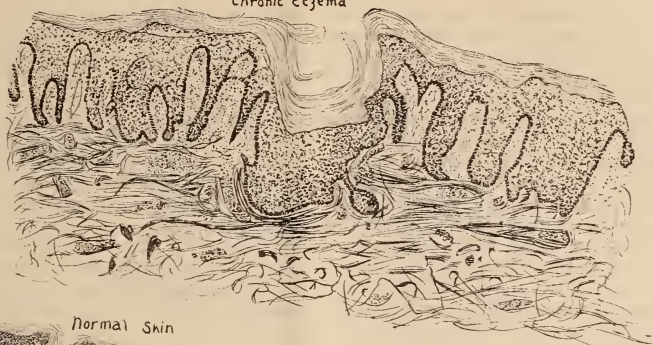
The subacute form is the transition stage between acute and chronic, so we shall pass on to the latter, which presents a greatly thickened and broken stratum corneum, large vesicles containing epithelial debris in greater abundance than in either the acute or subacute forms, besides leucocytes and much coagulated albumen and fibro-serum. The hair and sweat follicles are immensely hypertrophied; the interpapillary processes more elongated and less infiltrated than in the acute. There are more spindle cells, but the general infiltration throughout the corium is less abundant. There is frequently an entire absence of epithelium where a vesicle has worked its way from the stratum mucosum upward.

#### MICROSCOPIC DIAGNOSIS OF PSORIASIS.

Next, we take *psoriasis*, and for sake of convenience will study it only as a whole, as the microscopical appearances of the acute, subacute and chronic are typical, only more pronounced as the disease advances. There is a great thickening of the horny layer through-

\*The facing page of illustrations (which are grouped so that they may be got on one page), show the microscopical characteristics, spoken of in the text, of (a) *the normal skin*; (b) *acute and chronic eczema*; (c) *psoriasis*, and (d) *sypilis*. *Acute eczema* is at the right hand bottom corner of the page, and *chronic*, at the top of the page. The illustration of *psoriasis* is taken from a slide secured from a case of advanced subacute psoriasis. Without further explanation than that contained in the text of the article, we believe each of the cuts is self-explanatory.

Chronic Eczema



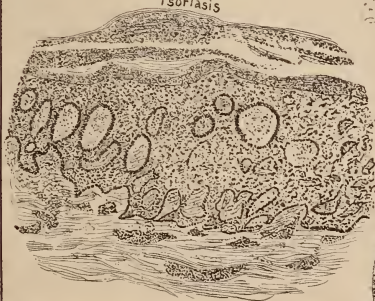
Normal Skin



Syphilis



Psoriasis



Acute Eczema



out which are composed of scattered leucocytes, which in many places are clustered. Spaces are seen between the cell layers of this stratum, running parallel with the surface, and in places separating it from the deeper layer of the epidermis, but there are no vesicles. The other layers of the epidermis share in the hypertrophy and the elongation of the interpapillary processes, which come together at their apices and fuse, thus leaving a space containing few leucocytes, and so on *ad libitum*, until we see, as in this cut, an epidermis several times thicker than normal, and containing many spaces, of all sizes and shapes. In no other disease is there this immense thickening of the epidermis with fusion of the inter-papillary processes and typical spaces.

Both the hair follicles and sebaceous glands become atrophied: hence are rarely seen. The sweat ducts and glands are not affected until late in the disease. The corium we find sclerotic; by that term I mean hypertrophy of connective tissue cells and large lymph spaces and vessels. About the latter there is marked infiltration, which, however, is very scanty throughout the tissues.

#### MICROSCOPIC DIAGNOSIS OF SYPHILIS.

Lastly we have *sypphilis*. Like psoriasis, it presents practically no microscopic differences to the various different forms which it may assume clinically. The section I have chosen is one of a papular sypphilide, it being in the early stages very similar clinically to the primary papule of psoriasis. The disease process begins in the hair follicle, which becomes atrophied, hair falling out, and the remaining empty follicle filled with leucocytes. There is also an immense amount of infiltration about the follicles. The sebaceous glands adjoining lose their granular elements, and also become filled with leucocytes. The infiltration is, then, as we see, most marked in and about the hair follicle, although widely disseminated throughout the corium, becoming less and less as we diverge on either side from the seat of the lesion. About the diseased follicles are many enlarged lymph spaces and blood vessels. In this greatly infiltrated area we also find giant cells frequently present, while on either side of the follicles in the corium we find an infiltration which is marked and pathognomonic of this disease. In the epidermis we have no such picture, there being practically no change from the normal. Of course, just at the

edge of the follicle we have a slightly thickened horny layer; also a slight thickening of the other layers of the epidermis, with a little infiltration; but just beyond this point we find the only change to be an hypertrophy of the columnar cells of the malpighian layer, which characteristic may be followed all around the follicle, regardless of the amount of infiltration. The sweat follicles remain unchanged.

At a glance, we can see there is a difference in all these conditions, and I hope that my brief description, with the aid of the cuts, will enable the general practitioner, as well as the dermatologist, to appreciate the value of the microscope in making a diagnosis, and abet its more universal use.

110 Jefferson street.

#### REMARKS UPON SOME INDICATIONS FOR WEARING GLASSES.\*

By JOHN P. DAVIDSON, M. D., Richmond, Va.,  
Professor of Diseases of Eye, Ear and Throat, Medical College of Virginia, etc.

Having been frequently impressed with the idea which seems to be so generally prevalent that glasses are worn for the single purpose of improving vision, I am prompted to suggest and emphasize some points upon a class of cases which the ophthalmologist considers even more important, if possible, than those who require better vision. I refer to that class who has good vision, as a rule, but, owing to the imperfections of nature, manifests the greatest variations of nervous symptoms. To say that 75 per cent. of all habitual or chronic headaches are either directly traceable to, or influenced by eye-strain is not an extravagant statement, since it is conclusively proven by clinical experience.

How very often we hear the remark: "If you send a patient to an eye doctor the result is that glasses are always prescribed." Now, this is a charge which we must, in a great measure, admit and we have no apologies to offer, for we believe that if we do our work accurately we will lessen the sale of the coal tar products and many headache compounds; and when our work is thus accomplished, our friends, the general prac-

\*Read before Medical Society of Virginia during its Thirty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.



tioners, are greatly aided in the treatment of their cases of functional nervous disorders, neuralgias, indigestion, and even gout, in some cases.

Owing to the multiplicity, the variation and the irregularity of the symptoms manifested by the disordered or abnormal functional action of the eyes, it may be interesting to mention in a simple and brief manner, with the avoidance of technical terms, as far as possible, some of the causes or reasons why such a train of symptoms is produced.

In a word, it may be stated that all of the functional irregularities, inconveniences and torments referable to the eyes, may be traced to two principal causes—viz.:

1st. To the variation in the size and shape of the eyeball; and

2d. To the lack of perfect co-ordinating action of the extra-ocular muscles.

Considering first the size and shape of the globe, would it be reasonable to expect nature to be any more exact in the construction of the eyes than it is with regard to other organs, such as the liver or kidneys, or even the physical frame as a whole? Nature is not controlled by such minute mathematical accuracies as one or two millimetres in the length of an eye or the fraction of a millimetre in the radii of curvature of the refractive surfaces. We must accept, therefore, more or less variation from an approximated normal standard in nearly all eyes.

Now, then, realizing the fact that the lens must focus rays of light upon the retina in order that images be distinctly seen and properly perceived, we can readily understand that when the eyeball is shortened in its antero-posterior diameter an increased strength of lens is required to bring the rays of light to a focus more quickly. The demand for this increased work, so to speak, on the part of the lens is really at the expense of the intrinsic muscles—i. e., accommodative apparatus. The constant use of this muscular tissue, together with the excessive work required of it by the abnormal formation of the globe necessarily results in its hypertrophy. The increased work of this highly organized structure is, of course, accompanied by a corresponding supply of nerve impulses. A still greater task is required of the ciliary muscle when it has to act in one meridian only, as in astigmatic errors, where the radius of curvature in one meridian is greater than that of the

meridian at right angles to it, as this requires uniform action.

The consideration of the incessant work which has to be performed by this exceedingly delicate and highly organized muscular apparatus and the various reflexes which such an abundant nerve supply necessarily entails, must suggest to us some explanation of many of the nervous symptoms which emanates from this source.

The second principal cause for neurotic symptoms which I desire to mention is to be found in the defective action of the extra-ocular muscles.

It may be stated here that the disordered or imperfect action of the extra-ocular muscles in the great majority of cases is due to a pre-existing abnormal formation of the eye-ball—a variation from the normal standard, in other words. The eyes are carried through their relative movements by twelve small delicate muscles, which are controlled by six motor nerve trunks, and the strength varies in different cases and even in the same case from day to day. Realizing these facts, it must be apparent how difficult it is in some cases and how impossible in others to estimate accurately the strength of the extra-ocular muscles.

The principal reason why extra-ocular muscle lesions are secondary to refractive conditions is because of the intimate association between accommodation and convergence. Increased nerve impulses thrown out to bring about accommodation are in part spent in causing convergence.

When we are dealing with visible muscular errors—e. g., squint, with coexisting unequal vision in the two eyes—we are not confronted with nearly so complex a problem as when the two eyes have the same vision and the muscular error is latent and only discoverable by instruments of precision. In this latter instance the two eyes are making continual efforts to work with each other.

The symptoms produced by eye strain are to some extent recognized, but it does seem to me that they increase the intensity of the nervous symptoms in many conditions where they pass unrecognized. Aside from the headache produced by organic and inflammatory conditions, I believe that it is safe to state that it is a factor in practically all cases. It presents no special characteristics. I have long since concluded that

no particular train of symptoms is pathognomonic. There may be pain in the front of the head and in the eyes or in the back of the head or even in the top, which is said to be the least characteristic. Habitual pain in the back of the head sometimes running down the spine is about as constant as any symptom, and it is often mistaken as symptomatic of some other condition.

It is the rule rather than the exception for patients never to suspect that the eyes are at fault so long as they see well, and, in fact, it is oftentimes a difficult task to convince them that such is the case. It is not infrequent for the headache to be accompanied by nausea and vomiting. The headache may be constant, intermittent or vary in intensity; sometimes brought on by use of the eyes for near work, it may not develop until the following day. Frequently the attack is precipitated by riding on the train, looking out of the window at rapidly moving objects, or the endeavor to read. Driving in bright sunlight has a similar effect. It is common for excitement, exhaustion, the menstrual period, hunger, etc., to bring on an attack. It is evident, of course, that eye strain is not the sole factor in these conditions, but it may be the only one of practical importance, because in many cases it alone can be remedied, and its correction will relieve the condition and prevent to a great degree the drain upon the nervous system, allowing it to regain its tone.

The clinical manifestations are influenced by the requirements made of the eyes in the way of close work and the endurance of the nervous system and ocular tissues as determined by the general health. In many cases the struggle between the desire for distinct vision and that for binocular vision engenders nervous symptoms of the most diverse character. The most happy result that can be obtained in these cases is for them to learn to ignore the use of one eye. When binocular vision is obtained it is accompanied by indistinct vision and endless discomfort and pain. Such cases we usually have to class as eye-invalids, and they constitute that class which supplies material for the enthusiast upon muscle-cutting.

Higher degrees of refractive errors, with more or less imperfect vision, produce less nervous symptoms because the retina has less functional activity from not being so highly organized and for the further reason that less efforts to obtain

binocular vision is made. It is scarcely necessary to mention the importance of the elimination of eye-strain in those afflicted by chorea and epilepsy in early life.

Now, it is well understood that there is an intimate relationship between the practice of ocular refraction and physics, but we must not regard the subject from a too mathematical point of view. Even figures must give way to physiological demonstration. We will always succeed so much the better in adapting eyes to what they are destined to accomplish in proportion as we associate more closely perfect knowledge of theory with the most careful clinical observation. That the proper adjustment of glasses will relieve completely a large percentage of the cases which suffer from eye strain is beyond question. A certain percentage of these cases is greatly benefited, and a minority of them are not improved, even though the cause for the symptoms may be located.

In prescribing glasses which do not improve vision, and actually in some cases haze the distant vision, we are confronted with various difficulties. Indeed, it would be impossible in most cases to succeed in persuading the patient to wear the glass if we did not forewarn them that they would encounter such difficulties. Nothing is more important to know about wearing glasses than that the glass which gives the best distant vision is by no means the best glass for the relief of nervous symptoms. On the contrary, the glass which has the most beneficial effect is usually unsatisfactory at first, but the persistent wearing of such a glass will allow of perfect distant vision as soon as the spasm of the accommodative apparatus relaxes.

Another great difficulty is to get patients to wear glasses constantly. Vanity in some cases, in others the intense annoyance produced by irritation of the nose and ear, are contributing causes to this. Again, they are discouraged because the symptoms which we are trying so hard to combat are not always relieved or even improved when the glass is first applied. Indeed, they are occasionally made worse for a few days.

In conclusion I would emphasize the following points:

1. The correction of nervous symptoms is an even more important reason for wearing a glass than the improvement of vision.
2. The glass which accomplishes this is by no

means the one which gives the best distant vision when first worn.

3. Practically all chronic functional nervous symptoms are aggravated by eye strain, and often symptoms attributed to neuralgia, gout, etc., are more properly speaking eye strain.

217 East Grace Street.

## SOME PRACTICAL POINTS ABOUT DISEASES OF THE EYE AND EAR.

By ALBERT A. CANNADAY, M. D., Roanoke, Va.

1. If you are not sure what is the matter with a diseased eye, do not attempt to treat it, but send it to some one who does know.

2. Be sure that you can differentiate between iritis and glaucoma.

3. In iritis, the pupil is contracted and the tension is generally normal, whilst in glaucoma the pupil is dilated and the tension is increased.

4. Do not call every inflamed eye conjunctivitis. You may have an eye suffering with intra-ocular trouble.

5. Do not treat diseases of the eye lightly, unless you know that the trouble is slight.

6. Remember that you dilate the pupil with atropine (4 grains to the ounce of water) in iritis.

7. Remember that you contract the pupil with eserine (3 grains to the ounce of water) in glaucoma.

8. *Remember that about one-half of all school children need glasses. Also remember that the oculist is the one to fit glasses, and not the peddler or the jeweler. The so-called optician is no better. Never send a patient to any one except an oculist.*

9. Try to appreciate the work of the oculist, who has looked into the fundus of the eye with the ophthalmoscope for years, and still sees something new each day.

10. Remember that fully one-half the headaches in young people come from the want of proper glasses. Also that the most cases of sick headache comes from the same cause.

11. As a rule, in injuries to the eye, you had best use atropine.

12. Do not forget that when an eye is blind from almost every cause that it may have to be

removed, as the good eye goes out frequently as a result of sympathetic ophthalmia.

13. Do not "monkey" with an eye.

### EAR.

1. Do not forget to wash the ear out in cases of defective hearing; often the defect is due to hard wax.

2. When there is a swelling behind the ear and other symptoms of mastoid diseases, do not forget to have an aurist examine the ear, as a mastoid operation may be necessary at once.

3. Do not treat slightly a noise in the ear. This is generally due to middle ear catarrh, and may be relieved if properly treated.

4. Partial deafness in children is almost always due to adenoid growths, which should be removed at once, and done thoroughly. This is not always a simple operation.

5. In trying to remove foreign bodies from the ear, do not use any violence. Never push therein, and if you cannot remove them, simply send the case to an aurist, who is perfectly competent to do such work, as he is prepared for this, and it is generally very easy for him to succeed.

6. Remember that little boils in the outer part of the aural canal are no insignificant things, and that they may give rise to a great deal of trouble.

7. Remember that the artificial drums that you see advertised in the lay press are no good, and you had better warn your patient against the purchase of them.

8. Discard all such practice as dropping sweet oil and other oily substances into the ear. Better use a little warm soda water.

9. Do not "monkey" with an ear.

*Terry Building.*

**Knows He Didn't Mean It.**—"I know that my friend, the doctor, is insincere," said Willie Wishington. "How?" "When I told him that I expected to go into business he said he 'wished me well.'"—*Washington Star.*

**Milk of Roses.**—A practical, but so far unworked inquiry: Will the growth of roses in a cow pasture promote the production of milk of roses?—*Ph. Era.*

### Some Cases of Recurrent Intestinal Obstruction Deceptive in Symptomatology and Unique in Causative Agency.\*

By WILLIAM L. ROBINSON, M. D., Danville, Va.,  
Ex-President Medical Society of Virginia, etc.

In offering this short clinical report, I am actuated by a desire to encourage members of this Society to present their unusual cases. Frequent interchange of views with my associates in Danville regarding puzzling cases convinces me of the rich experiences forever buried or never mentioned except by men in their respective localities, and which would be valuable guides to many of us in the future.

I am sure that at these annual meetings I glean more useful information in social talk with the members than from the papers read, because the journals furnish us the current thought of the talking fraternity, much of which is a rehash of what we know, and, again, much which is misleading.

I shall not attempt to go into the discussion of the various causes of intestinal obstruction—so varied as almost to prohibit classification; so deceptive till the opened abdomen reveals the desired information.

The symptoms pointing to obstruction of the bowels, usually force a diagnosis, such as vomiting, pain, intractable constipation, tympany, restlessness, expression, etc. It is difficult, however to determine the exact seat of obstruction, except in the upper or lower bowel. If high up, there is early vomiting of bile, but no fecal matter, no abdominal distension, pain, after sudden collapse, etc. If in extreme lower bowel, the ingested food is longer retained, tympany soon manifests tangible tumor in rectum, or inability to retain enemas, besides the usual symptoms occurring later.

Intestinal incarcerations occur mostly in the lower part of ileum—owing to anatomical conditions of the broad mesentery admitting of greater motility and closer relations to the pelvic organs; but whether the incarceration occurs from peritoneal bands and adhesions between organs or mesenteric fissures, internal hernia, volvulus, ileus, and howsoever varied they may be in their anatomical differences, practically the same effect in the intestine results—viz., constriction and strangulation. Be

it post-operative or otherwise, we realize that cool judgment and well directed efforts diligently pursued are imperative in dealing with so dangerous a condition.

The history of the following cases demonstrates the necessity of prompt intervention even in seemingly incomplete obstruction:

*Case 1.* Mrs. S. H., aged 37; referred to me by Dr. B. October 2, 1891, with the following history: She had been vomiting for ten days; bowels moved in beginning of attack by calomel. On fourth and seventh days of attack, slight movements from high enemas, but no abatement of vomiting resulted—in fact, the nausea was so distressing as to prevent sleep, day or night. There was tenderness on right side from gall bladder region to iliac fossa, and a fixed lump between McBurney point and floating ribs. Kidneys acted freely some days, none other days; tympany prominent, temperature subnormal, pulse 116, expression pinched. I operated promptly, as the doctor had exhausted seemingly all other means of relief, and her condition demanded it. Incision over tumor, and found the kidney anchored by an adherent appendix and other adhesions from mesentery, which not only rendered the kidney immovable, but constricting bands inhibited peristalsis, though not completely occluding the lumen of the bowel. These adhesions were broken up, liberating the bowel, and the appendix removed, the capsule of the kidney split and stripped back, the inside of lumbar region formerly occupied by kidney scraped, and with long needles sutures were passed from within out, fixing the kidney in its normal position. Recovery rapid. I saw her eighteen months ago, and she stated she had been in good health and working ever since operation. I omitted to state that she suffered similar attacks of vomiting and constipation frequently before the time of operation, but was usually relieved in two or three days; was cognizant of floating kidney long before last attack, though did not know what it was.

*Case 2.*—Mrs. A. K., age 40. Called in consultation on July 16, 1898. History, indigestion for many months previous, loss of flesh, occasional vomiting. For three weeks prior to consultation she had retained nothing by mouth except under morphine; the undigested liquids would remain a few hours, then be ejected in condition in which they had been swallowed;

\*Reported at the Thirty-third Annual Session of the Medical Society of Virginia, held at Newport News, September 23-25, 1902.

emaciation furnished a clear demonstration of reverse peristalsis starting just below stomach; line of distention well drawn; abdomen flat. Diagnosis, constriction of bowel by adhesion band. Operation urged, but physician in charge objected, saying patient was not in condition to stand an operation. Seven days was lost in vain efforts to improve physical condition by nutritive enemata, etc. On seventh day from time I first saw her consent was obtained to have Dr. Price in consultation. Preparations for operation ready, and he operated promptly, quickly and skilfully. A single band incarcerated the duodenum three inches below stomach, inhibiting peristalsis, but not discoloring the bowel by constriction. There had been a local peritonitis around gall bladder, which caused formation of this band. The history clearly showed the recurrence of attack from time to time during the progressive stages of formation of the constricting band, evinced by vomiting, pain, and reverse peristalsis. Patient too exhausted to withstand shock of operation, and died within 24 hours after.

*Case 3.*—Mrs. W., from Salisbury, N. C., consulted me February 23, 1902, with the history of suffering with violent pain in region of gall bladder lasting for days, requiring large doses of morphine, sometimes chloroform; vomited from both pain and anodynes, I presume; difficult to move bowels either before or after giving morphine. Usually the attacks came on with constipation, then vomiting and pains. These attacks commenced the August preceding, recurred in six or eight weeks, subsequently in four weeks, then increased in frequency till they came on weekly, when I saw her. I placed her in hospital, applied ice bags, etc., till I narrowed the site of tenderness to the gall bladder absolutely. Pelvic examinations revealed diseased tubes, with extensive pelvic adhesions. I failed to state that she had slight jaundice after some of her attacks. March 1, 1902, operation performed. In order to deal with all the troubles, I made the usual median incision. The pelvic condition was as diagnosed, and dealt with after searching for the offender in the gall bladder region. I found a long appendix attached to the mesentery of the hepatic flexure of the colon puckering the intestine like a purse string, when peristalsis was attempted. The removal of appendix and uterine

appendages resulted in perfect relief and restoration to health.

*Case 4.*—Mrs. S., age 40. On May 27th saw her in hospital with Dr. James. Diagnosis alveolar carcinoma of uterus. Complained of daily pain in pelvis. Vaginal hysterectomy on May 28th. Got along nicely and left hospital in usual time. Saw her no more till December. Dr. James had entered her in hospital again, and gave me following history: About November she had attacks of violent pain, constipation, vomiting, etc., which lasted two or three days. Pains so intense as to require heavy anodynes; bowels difficult to move even with drastic purgatives. Dr. James said the frequency of attacks had increased in severity so great that several times he scarcely expected her to live till his return. He feared appendicitis. When put under chloroform we could detect nothing abnormal by physical examination. Pelvis clear. December 27th median section was done by Dr. Julian Robinson, and immediately we found ileus of bowel, constricted to size of the small finger or one-fourth size of the bowel, corrugated, bloodless—in fact, had much the appearance of a dead oyster—it was hard and resisting. The extent of constriction about 3 inches; 8 to 12 inches below a similar constriction existed. The arteries along the mesentery running up to the constrictions stood out in bold relief, as bright and well marked as if painted in red ink. I could find no adhesions anywhere in pelvis or in abdomen—nothing to account for the constriction. I enveloped the bowels in hot towels and massaged between my fingers and thumb the constricted parts till they were smoothed out to size of the rest of the bowel. It took much time, but I had the satisfaction of seeing the rich hues fade and the dead-looking tissue resume its physiological appearance. The after treatment consisted of atropine in good doses daily, and daily purgative doses of castor oil. Her recovery was uneventful. I saw her within the last week, and she says there has been no return to abdominal pains or constipation.

*Case 5.*—Mrs. E. C., Black Walnut, Halifax county, Va. Young married lady with one child. Had seven attacks of puerperal septicaemia in March, 1901, but had become rosy and well. June 9th was wired by Dr. Belt to bring nurse and prepared to operate for intestinal ob-

struction. Arrived 6 P. M. History as follows: On night of the 3d she ate imprudently of fruits, etc. On Sunday, the 4th, she had quite a cholera morbus attack, and the diarrhœa lasted till Tuesday noon, the 6th. Feeling much better, and bowels having checked, she ate a fairly good dinner, and that night suffered pain, increasing to such an extent as to call the doctor early. On arrival he gave calomel, soda and codein, which soon relieved the pain, but that night the pain recurred, but no action was induced from bowels. On Thursday, the 8th, early morning, Dr. Belt being detained with an obstetrical case, Dr. Clarke responded and gave a like dose of calomel, soda and codein, which afforded temporary relief. Dr. Belt saw her the night of the 8th, and commenced vigorous efforts to move the bowels. A number of high enemas, with a 5-foot tube, failed to have any desired effect; then he gave castor oil by mouth, and from that time till Friday evening, the 9th, if I remember correctly, he gave 8 ounces of castor oil, all of which had been retained—in fact, she had no nausea from the 4th till the night of my visit. Temperature normal, pulse 90, expression good, little or no tympany, no special pain, but a subdued nervousness which kept her from sleep. It was dark, and nothing ready for operating, besides I wasn't clear that it was imperative; so I suggested a high enema of elaterium, ox gall, fld. extract senna, etc., in small amount of menstruum. They were given at 10 P. M. At 1 A. M. I was informed she was restless, and soon after she vomited freely and seemingly stercoraceous matter. She was very nervous and tossing, having slept none for two nights; so codein was given hypodermically and 5iss bromidia by bowel. She slept two hours or more, and at 7 A. M. I was informed that the enema had acted three or four times, and Dr. Belt and myself after examining the stools, which contained castor oil, fecal matter, etc., decided to wait for further developments. Mrs. C.'s expression was bright, and she expressed herself as feeling all right, and wanted breakfast. I remained till 1:30 P. M. Her condition continuing favorable, I left for home, Dr. Belt going back to South Boston. I left my nurse and satchel of instruments. At 9 P. M. Dr. Belt found his patient very nervous and tossing. She spent a horrible night, and I returned early next morning in response

to telegram, taking Dr. Irvin with me. Found patient collapsed, unconscious except when pointedly addressed, pulse scarcely perceptible, and Dr. I. predicted she would not survive the anæsthetic. A quick laparotomy was done, a loop of black, distended intestine showing up under the incision. It proved to be the ileum constricted by a long appendix, the gangrenous end attached to the brim of pelvis. In appearance, it resembled a navel cord drawn tight, and to expel all blood from it. The appendix was severed between hemostats, and hot saline solution kept poured in the abdomen during the whole time from moment of getting in the cavity till abdominal sutures were tied, abdomen left full of salt solution. Technique of appendix as usual, the site of attachment to sacro-iliac surface wiped with gauze. Salt infusion under skin used and in bowel. The incision suppurated and sloughed, due largely to lowered vitality. Her recovery slow, but perfect health was restored, due to Dr. Belt's intelligent and untiring, watchful care.

In this case you can trace the steps of pathological involvement. The appendix formed its attachment during the attack of puerperal septicæmia, a local peritonitis existing. The loop of bowel became engaged under the appendix. Reverse peristalsis temporarily relieved, subsequently becoming strangulated, the pressure shut off the circulation of the appendix, resulting in necrosis of its terminal point.

Case 6.—Mr. McL., 50 years old; weighed 200 pounds; finely developed; led an active life on farm 18 miles from Danville. June 9, 1902, was called by Dr. Harvie to bring nurse, assistants and instruments to operate for intestinal obstruction. The history I copy from his letter: Scott McLaughlin taken on Thursday, the 11th of June, with violent pain in abdomen, radiating from centre focus half way between umbilicus and symphysis pubis. Under saline purgations, enemas, and local applications obtained relief for all pain, bowels moved Friday and Saturday; appetite returned, and he was walking around. On Sunday evening pain, nausea and vomiting returned, which recurred at intervals till 18th. Breath and bile vomited had fecal odor at times, but no stercoraceous particles. Temperature did not exceed  $101\frac{1}{2}^{\circ}$  at any time, pulse from 80 to 100. The enemas always stained well with bowel contents. Little

or no tympany. History of slight attack six months previously. Occasional pains in right side, latterly indigestion.

I found no fever, pulse steady, no pain, little or no tenderness, no tympany on the 19th. His expression indicated serious trouble. Operated promptly and found broad, strong constricted band around ileum, originating from internal inguinal ring; was ruptured on that side and wore truss. Bowel was black and inflamed. Recovery rapid and complete.

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**Information Wanted.**—The *National Drug-gist* says that a member of the St. Louis Drug Clerk's Association desires to know how compound cathartic pills should be treated to make them "bilious." He recently had an order for "bilious compound cathartic pills."

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### Treatment of Influenza and Coughs.

Dr. David E. Bowman, Toledo, Ohio, Professor of Obstetrics, etc., Toledo Medical College, says in the *Toledo Medical Compend*: "The elimination of the toxins is too frequently overlooked in these cases. Formerly, in their efforts to relieve the distressing symptoms, the profession used remedies which produced stom-achic disturbances, arrest of secretions, constipation, etc. I find nothing better to overcome the congested condition, in these cases, than two laxative antikamnia and quinine tablets, given every three hours. If needed, follow with a saline draught the next morning, before break-fast. Heroin hydrochloride has been so largely used for coughs and respiratory affections that it needs little or no recommendation in this class of cases, but the favorable synergetic action of this drug used with antikamnia is, I believe, not sufficiently appreciated. Antikamnia and heroin tablets will be found useful, particularly during the winter and spring months. The antikamnia not only adds potency to the respiratory stimulant and expectorant qualities of the heroin, but it prevents the slight nausea which may at times follow its administration alone."

## Book Notices.

**A Text-Book of Diseases of the Ear.** For Students and Practitioners. By Dr. ADAM POLITZER, Imperial-Royal Professor of Aural Therapeutics in the University of Vienna. Translated and edited by MILTON J. BALLIN, Ph. B., M. D., and CLARENCE C. HELLER, M. D. New (4th) edition, revised and enlarged. In one octavo volume of 896 pages, with 346 original illustrations. Cloth. \$7.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1902.

This volume covers the field of otology in all its ramifications. It is the work of one of the world's foremost authorities and is translated by two of his clinical assistants at Vienna, under his immediate supervision. It is said that Dr. Politzer's book occupies the unique position of being not infrequently unpurchasable. The new edition has been thoroughly revised and considerably enlarged, both in text and engravings, and we believe that everything necessary which properly relates to this branch of medicine will be found between the two covers of the book.

**Recollections of the Old Quarter.** By WM. S. GORDON, M. D. Published by Moore Bros. Co., Lynchburg, Va. 1902. Cloth. 12mo. Pp. 142. \$1.25.

The "old Virginia darkey" will ever remain in memory of those who lived during and before the "war between the States." To the rising generation, however, he is becoming unknown. "Recollections of the Old Quarter," written in prose and rhyme by one of the ablest of Southern authors, seeks to preserve for historians some of the characteristics and dialects of the old Southern negro. They were a happy, contented people in the olden time, with no care for to-morrow, for they knew that "old marster" and "old mistus" would provide for their wants as well as pleasure. The "old mammy" of that day was vested with the duties and privileges of a guardian; and her good influences in the family are matters of pleasurable recollection to this day—nearly forty years since they began to disappear from the home circles of the South. The author's effort to preserve the scenes and rural life of the old days in Eastern Virginia has been well accomplished. An introductory on "the negro dialect" is a chapter worth preserving. The illustrations are true to life—representing the old cabin home or "the old quarter" of the darkey. "Aunt

Dinah" and her "descendants," "Uncle Frank, his helpmate, and grandchild," and a "family circle near Belle Isle," are pictures true to life, as all who lived about the time of the great civil war and before will recall. The illustrations of "Pike Hole in the Chickahominy," "the Long Bridge," "Scimino," "Olivet," "Cedar Grove," "Belle Isle," "Foink," etc., represent old Virginia homes and scenes—reproduced mostly from drawings and photographs. The titles of the chapters are: "Miss Judy and de Doctor," "Gabriel's Epic," "Marse Hubbat's Friend," "Plantation Rambles," "Uncle Jacob's Lament," and "Character Sketches." The book is handsomely issued, and is meeting with deserved rapid introduction into homes of lovers of recollections or reminiscences of the home life of the Southern people as it was forty or more years ago.

**Practical Medical Series of Year Books, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery, Issued Monthly.** Under the General Editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School.

**Volume II—General Surgery.** Edited by John B. MURPHY, M. D., Professor of Surgery, Northwestern University Medical School. November, 1902. Cloth. 12mo. Pp. 553. \$3.

**Volume III—Eye, Ear, Nose and Throat.** Edited by CASEY A. WOOD, C. M., M. D., ALBERT H. ANDREWS, M. D., T. MELVILLE HARDIE, A. M., M. D. December, 1902. Cloth. 12mo. Pp. 321. \$1.50.

This series is published by the Year-Book Publishers, Chicago, Ill. While each volume, if bought separately, has its own price, as named in the titles above given, it would be far more economical for the general practitioner to forward \$7.50 to the publishers and thus receive each of the ten volumes a year. The series is published primarily for the general practitioner, although in some instances the volumes contain more on the specialties than any other year book.

The editor of the *Volume II on General Surgery*, while compelled to omit many articles of high grade, has made an effort to cover the practical subjects treated during the past year. Conspicuous among the achievements in the newer fields relate to surgery of the pancreas, the kidney, the vascular and nervous systems. "The etiologic relation of lesions of the thyroid to alterations in the general metabolism, as well as

to the changes in the osseous system have been well established, both experimentally and clinically." According to the editor, the best results from bullet wounds in the Spanish and South American wars were obtained by immediately sealing the wounds and securing physiologic and physical rest. The great majority of compound fractures from bullets ran an aseptic course as simple fractures. This carries a lesson to the emergency surgeon in civil practice—that "all manipulation, handling, probing, washing and sponging are inimical to the favorable prognoses of wound healing." This volume is an exceedingly valuable one to the general practitioner, who undertakes even minor surgery, as well as to him who limits himself to surgical practice, for it notes pretty thoroughly the advances of the year preceding the October, 1902, and is cheap at \$3.

*Volume III, on the Eye, Ear, Nose and Throat*, gives greater prominence than formerly to contributions intended for the student and general practitioner, at the same time giving the veteran specialist notes of the latest developments. We note that decided advance has been made in the treatment of muscle anomalies of the eye, in the technique of advancement of the orbital muscles, and in the use of many valuable remedies which accomplish their purposes in therapeutics of ocular disorders promptly and painlessly. Advances are likewise noted in the sections on the ear, as also on the nose and throat. This volume, although of special value to the ophthalmologist, the amnist and rhinologist, etc., gives many a useful hint to the general practitioner that he cannot well get from the text books.

**Manual of Dissections and Practical Anatomy. Founded on Gray and Gerrish** By WILLIAM T. ECKLEY, M. D., Professor of Anatomy in the Medical and Dental Departments of the University of Illinois, etc., and CORINNE B. ECKLEY, Demonstrator of Anatomy in the Medical and Dental Departments of Illinois, etc. *Illustrated with 220 Engravings, 116 of which are Colored.* Lea Brothers & Co., Philadelphia and New York. 1903. Large 8vo. Pp. 408. Price, \$3.50 net.

This book fills an important place in the niche of wants of the student and practitioner. It is so full and complete that the book may be called a work on "Regional Anatomy as well as Dissector." It provides the student with a detailed guide for dissection, with particular care as to



sequence; and answers the requirements of practitioners wishing to review the anatomy of any region of the human body. It notes, first, the landmarks, then the integumentary incisions, and then the description and relations of succeeding anatomical entities. Special directions are given for precision in locating every structure—a matter of the utmost importance, especially to the surgeon. While not supplanting either of the standard descriptive anatomies upon which this *manual* is mostly based, it materially assists the study of the anatomical descriptions of these two books. The engravings are generally large enough to have the names of parts printed on them. It is a valuable book.

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## Editorial.

### Commissioner of State Hospitals.

An idea has gone abroad that the intention of this office, called for under the new Constitution of Virginia, is merely a clerical one, equivalent to that of a "travelling auditor," and with a salary in accordance with such an office. It would be difficult to understand the need of such an officer, unless he had more than purely financial interests to look after. Nor does it seem that the Convention for formulating a new State Constitution had such an idea, judging from the letters received from a large number of them. "The position should be one of great responsibility, and the duties should be inspective, supervisory, suggestive, and the Commissioner should advise with the resident officials, and have the power to institute such advances or reforms as should be advisable or necessary." It is surprising and regrettable that any less estimate should be placed upon the position. And it is earnestly hoped that members of the medical profession of the State, at least, will promptly advise with the Committee on Finance and the Committee on Public Institutions of the present Legislature of Virginia, urging upon those committees the responsibilities imposed, the necessity of an educated and experienced physician to occupy the position, and preferably one who has had experience in the medical affairs of State hospitals. How is it possible for the Commis-

sioner "to institute such advances and reforms as should be necessary and advisable" in the provision for and treatment of the insane, the epileptic, etc., unless the Commissioner be an educated and trained physician in such matters? Dr. E. T. Brady, Abingdon, Va., has written "an open letter" on the subject to the Committee on Public Institutions of the General Assembly of Virginia, which presents the facts so forcibly and convincingly that the letter needs only to be read to be persuaded of the true intent of the constitutional provision; and we trust the profession of the State will rise in their might and influence so as to properly inform the legislators of the need of the selection of a competent medical man of wide reputation and marked ability, and the assignment of a satisfactory salary in keeping with such a high trust.

### Differential Diagnosis of Typhoid Fever in its Earliest Stages.

Such is the title of the "Enno Sander Prize Essay," "open to all persons eligible to active or associate membership in the Association of Military Surgeons of the United States." A no more important, practical subject could have been selected. The essayist securing the first place will receive a gold medal of the value of \$100. The essayist securing first honorable mention will receive a life membership in the Association, of the value of \$50. The Board of Award will consist of Dr. Austin Flint, Brigadier-General N. Y. State Militia, Dr. Calvin D. DeWitt, Colonel U. S. Army, and Dr. Victor C. Vaughan, Lieutenant Colonel U. S. Vols. In fixing the precedence of the essays submitted, the Board will take into consideration, primarily, *Originality, Comprehensiveness,* and the *Practicality and Utility* of the opinions advanced; secondarily, the *Literary Character*. Full information concerning the contest may be obtained from Major James Evelyn Pilcher, Carlisle, Pa., Secretary of the Association.

### Hydrophobia in Michigan, etc.

According to a resolution presented January 9, 1903, by Dr. Victor C. Vaughan, of Ann Arbor, to the Michigan State Board of Health, and adopted by that Board, it is stated that hydrophobia is widely disseminated throughout that State, and many people are being bitten by rabid dogs. Therefore "*Resolved*, That the

State Board of Health recommends that municipal and township authorities order the muzzling of all dogs at large, and make and publish regulations to that effect." That this disease is much more widely spread in different States is shown by the number of cases diagnosed and treated by Dr. A. G. Hoen, Director of the Pasteur Laboratories of the University College of Medicine, Richmond, Va. Such cases come from the surrounding States, as well as from Virginia. True, some of the cases submitting themselves for treatment have been cases of fear of the disease; but some have been genuine cases of hydrophobia treated and saved.

### Stop Prating About Insusceptibility to Vaccination.

Chief Medical Inspector of the Chicago Health Department, Dr. Spaulding, forcibly calls attention to the false impression concerning insusceptibility to vaccination held by many persons, and even by some medical men. They argue that because a child has had six or seven attempts at vaccination without its "taking," the child is insusceptible, and often ask permission for such child to go to school without the required certificate. It should be clearly understood that no one is insusceptible to vaccination any more than to small-pox. "One successful vaccination can be secured in every person; to this, there is no exception." Recently, a reputable physician wrote that he and two other physicians had vaccinated his little child seven times without result, and asked the Chicago Health Department for permission to enter the girl at school without certificate, as he believed she was not susceptible. The department advised him to try again with vaccine lymph furnished by the department. He did so, and has since written that child has a typical vaccination, which insures her immunity from small-pox. If this eighth trial had not been made the story would have gone out that it was a case of insusceptibility—a condition that does not exist—and if she had been subsequently attacked with small-pox it would be claimed that she had been vaccinated, and the case cited by the anti-vaccinists as proof of the inutilty of vaccination as a preventive of small-pox.

"A striking and hideous illustration of the evils of teaching insusceptibility to vaccination was furnished during the week in the neighboring town of Hammond, in which a cashier in

the bank was stricken with small-pox in its worst form. He died on the seventh day of the attack with hemorrhagic small-pox. He had had four attempts at vaccination, and because 'it did not take,' was told he was insusceptible to vaccination—a bit of medical advice which cost him his life at the age of 33—an utterly needless loss of a life useful to the community and of priceless value to his family. *Stop prating about insusceptibility to vaccination.*"

### A Request.

Whenever any of our patrons knows of a vacancy or a position to be filled by a reputable doctor, we hope they will let the Editor of this journal know about it. For we can very generally place the parties in communication with competent doctors seeking a suitable place for location. Many of the letters received from doctors not permanently located ask about such positions. Sometimes doctors, like other people, die, leaving good openings for able men. Sometimes doctors retire from active practice because of health or preference to change the nature of their work—leaving communities without the service of a near-by physician. Sometimes prosperous doctors, having more calls than they can attend to satisfactorily, need assistants. Please let us hear about such vacancies or wants, and we can usually supply them. Help the young doctor. Remember, there was a time when you needed such help yourself.

### Quinoliv.

This is proprietary name of Davenport's tasteless sulphate of quinia. It retains all the properties of quinine, with the added virtues of olive oil, and is unobjectionable in administration in doses of about the same size or larger than quinine—the most delicate stomach retaining it well. It may be given as a powder in water, or in capsules, and in combination with any of the usually prescribed medicines that is not an acid, without the taste of quinia being developed. We call special attention to it because quinia is so generally needed in prescriptions, and yet is too often omitted because patients complain of the taste and bad after effects. Quinoliv is the substitute.

### Epileptic Colonies in Virginia.

In noticing the report of the Superintendent of the Western (Va.) State Hospital in our issue of December 12, 1902, which favored the erection of separate buildings on the grounds of the several State Hospitals for the Insane for the segregation of the epileptic class, our remarks seem to have been misunderstood. We were writing under the impression that no better appropriation could be secured for that class of unfortunates. We are assured, however, that a distinct epileptic colony in Virginia would not cost materially more than the erection of buildings on the grounds of the four State Hospitals, and when we are reminded of the statement in the report above referred to that "an entirely new and distinct hospital \* \* \* according to recent years of increase of insanity, will be demanded in a few years," we wish to amend our hastily written notes in the issue of December 12, 1902, by advocating the beginning of the "Colony for Epileptics in Virginia" at once. According to the annual reports of each of the Superintendents of the State Hospitals in Virginia, at least three of them speak of the congested condition of their institutions. Each of the four State Hospitals has a number of epileptics, who should by all means be separated from the wards of other patients. Their convulsions have a very distressing effect on the other inmates of the hospital; and as more frequently than otherwise, the mentally diseased epileptics are possessed of a homicidal mania, the lives of other patients, not epileptics, are endangered by their presence. In a separate ward or building (in a colony, in short), properly constructed, these epileptics could have better care, especially during their convulsions, as they could be constantly kept under the eye of the medical attendants and nurses, and it would be much better for all other patients.

Since the report of the Superintendent of the Western State Hospital was noticed, we have been impressed with the remarks in the annual report of Dr. Robt. J. Preston, Superintendent of the Southwestern State Hospital at Marion, in which he says: "Before closing this report, I desire again to urge the necessity and importance of some provision by the State for caring for the unfortunate epileptic class scattered throughout the State. While providing fully and liberally for the insane, this unfortunate class should also be cared for. Arguments have been made from year to year, and stirring

appeals by the efficient 'Epileptic Commission' appointed by the Legislature; and it is to be hoped that the next (present) Legislature can respond in a liberal Christian spirit to all these needed charities as fully as the State finances will permit. Many other states have established Colonies for Epileptics, and Virginia should never lag behind in this humane, Christian work."

With the assurance that the finances of the State will justify it, and that a new hospital will be demanded in a few years, we see no reason why Virginia should postpone the immediate establishment of the Epileptic Colony, which establishment would greatly relieve the congested condition of the hospitals for the insane, and leave room for the rapid increase of insanity in recent years. A distinct hospital or colony for epileptics, properly officered, etc., would give better opportunities for treating and relieving the disease.

### The Statue of Dr. Hunter McGuire

Has been honored by legislative enactment to a place in the Capitol Square, Richmond, Va., near the statue of "Stonewall" Jackson, on whose staff he served as medical director during the Confederate war. The model that has been on inspection for some weeks in this city has been accepted, and the award has been made for the erection of the monument, which it is expected will be in place during September, 1903. Warriors and statesmen have time and again been given place, in marble, or stone or bronze, to conspicuous sites in National and State grounds or parks. But this is one of the few instances in American history when such an honor has been shown to a distinguished doctor. Georgia has placed the monument to the memory of Crawford W. Long on its capitol grounds, and friendly societies and communities have erected monuments and statues to some of the noted medical men of their States, but it is rare to find them in prominent places in State grounds.

### X-Ray Exhibits, etc.

In the course of Popular Scientific Lectures, etc., given Saturday nights at the University College of Medicine, Richmond, Va., arrangements have been made with Prof. A. L. Gray, of that institution, to give two lectures on the subject of X-ray therapeutics, and to explain the

details of the use of the costly apparatus owned by that institution. This course of lectures is open to the public, and is of special interest to students and professional men and scientists. The subjects of these lectures are on points simply referred to in the didactic course, and attendance upon the lectures is not compulsory—however beneficial they may prove to all who may attend.

### Examinations for Medical Appointments U. S. Army.

Examinations of candidates for appointment in the Medical Corps of the Army will be resumed by the Army Medical Board in Washington, D. C., on April 20th next. Classes will be invited to appear on April 20th, and each Monday thereafter so long as is necessary. Full information as to method of application, nature and scope of examination, etc., will be furnished by this office upon request of those interested. Applicants from civil life are restricted in age to twenty-nine years, and hospital training or professional experience in private practice is expected of all candidates. There are at present thirty-five vacancies to be filled.

### Alabama Medical Legislation.

Among the subjects upon which legislation is needed in Alabama and sought by the Board of Censors of that State are (1) a law making it mandatory upon county commissioners to provide adequate salaries for county health officers; (2) a law to better provide for the suppression of infectious diseases, especially small-pox—a compulsory vaccination law being the chief need under this head; and (3) a law to better provide for the prompt and regular report of infectious diseases. These matters are of vital interest in other States; and we can do no better than to repeat a sentence in the *Mobile Medical and Surgical Journal*, January, 1903, which bears on the subject: "The profession should take hold of these questions, and by persistent effort secure their enactment into law. All health legislation is for the benefit of the people, and redounds to the material prosperity of the State. It is in the line of good citizenship to aid in such a movement, and every doctor should lend whatever of influence he may have in a matter so in harmony with advanced sanitary sentiment." Public influences can be easily secured by the doctor in

his daily house to house professional calls—instructing heads of families as to the demands of the times; so that when the time comes for legislation, the voice of the people popularizes the move.

### Consolidation of The Bulletin and the Journal of Inebriety.

The *Bulletin*, a quarterly medical review, which has been published since 1892 by the American Medical Temperance Association, has been consolidated with the *Journal of Inebriety*. The latter journal, which first appeared in 1876, under the editorial care of Dr. T. D. Crothers, of Hartford, Conn., was the first, and is still the only medical periodical in the world devoted exclusively to the scientific study of the neuroses and psychoses of spirit and drug diseases.

### Dr. George W. LeCato.

We are glad to have the information from reliable sources that Dr. LeCato, of Wachapreague, Va., is improving so decidedly in health as to lead his friends to expect his early resumption of his seat in the Virginia Senate. He has been a useful man to the profession and to the sanitary interests of the State, and his influence with legislators in favor of medical bills proposed by the Medical Society of Virginia, etc., is great.

### Ammonol—A Note of Warning.

Ammonol, which is a stimulating antipyretic and analgesic, and therefore has no tendency to produce heart failure in a patient, has been extensively counterfeited. The counterfeit, we are assured, is a crude coal tar product, without any stimulating or sustaining properties, and is therefore dangerous even to the person in a normal state of health; of course, when administered to a sick person the danger is immeasurably increased. The Ammonol Chemical Co. has its product as a matter of convenience in powder form, but for the use of the careful practitioner it has its specially made 5 grain tablets, and if he notes the peculiarly shaped trade-marked "A" on the tablet, he can then be positive that he is ordering for his patient the genuine article, the one on which he may rely for certainty of effect.

**Health Reports.**

The following cases of small-pox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended January 10, 1903:

**SMALL-POX—UNITED STATES.**

California—Sacramento, Dec. 20-27, 1 case. San Francisco, Dec. 21-28, 12 cases.

Colorado—Denver, Dec. 20-27, 3 cases.

Illinois—Chicago, Dec. 27-Jan. 3, 6 cases.

Indiana—Evansville, Dec. 27-Jan. 3, 1 death.

South Bend, Dec. 27-Jan. 3, 1 case.

Maine—Biddeford, Dec. 27-Jan. 3, 26 cases.

Maryland—Baltimore, Dec. 27-Jan. 3, 1 case.

Massachusetts—Boston, Dec. 27-Jan. 3, 20 cases, 4 deaths. Cambridge, Dec. 27-Jan. 3, 5 deaths. Chelsea, Dec. 26-Jan. 2, 1 death. Fall River, Dec. 27-Jan. 3, 3 cases. Lawrence, Dec. 27-Jan. 3, 1 case.

Michigan—Grand Rapids, Dec. 27-Jan. 3, 7 cases.

Nebraska—Omaha, Dec. 27-Jan. 3, 3 cases.

New Hampshire—Manchester, Dec. 27-Jan. 3, 8 cases. Nashua, Dec. 27-Jan. 3, 2 cases.

New Jersey—Camden, Dec. 27-Jan. 3, 3 cases.

New York—Buffalo, Dec. 27-Jan. 3, 1 case.

New York, Dec. 27-Jan. 3, 4 cases.

North Carolina—Charlotte, Dec. 1-31, 126 cases, 21 deaths.

Ohio—Cincinnati, Dec. 26-Jan. 2, 7 cases, 1 death. Cleveland, Dec. 27-Jan. 3, 7 cases 1 death. Dayton, Dec. 27-Jan. 3, 10 cases.

Pennsylvania—Altoona, Dec. 27-Jan. 3, 3 deaths. Erie, Dec. 27-Jan. 3, 5 deaths. Philadelphia, Dec. 27-Jan. 3, 15 cases, 1 death. Pittsburgh, Dec. 27-Jan. 3, 16 cases, 7 death. Williamsport, Dec. 27-Jan. 3, 1 case.

Rhode Island—Newport, Dec. 27-Jan. 3, 1 case, 1 death. Warwick, Dec. 24-31, 4 cases.

South Carolina—Charleston, Dec. 27-Jan. 3, 4 cases.

Tennessee—Memphis, Dec. 27-Jan. 3, 4 cases.

Wisconsin—Green Bay, Dec. 28-Jan. 4, 2 cases. Milwaukee, Dec. 27, Jan. 3, 4 cases.

**SMALL-POX—FOREIGN.**

Argentina—Buenos Ayres, Oct. 1-31, 12 deaths.

Belgium—Ghent, Nov. 8-15, 1 death. Dec. 6-13, 2 deaths.

Brazil—Bahia, Nov. 29-Dec. 13, 12 cases.

Canada—Quebec, Dec. 20-27, 2 cases.

Ecuador—Guayaquil, Dec. 13-20, 3 deaths.

France—Marseilles, Nov. 1-30, 37 deaths.

Great Britain—Leeds, Dec. 13-20, 11 cases.

Liverpool, Dec. 13-20, 56 cases. London, Dec. 6-13, 1 case. Manchester, Dec. 6-13, 3 cases.

Italy—Palermo, Dec. 6-20, 25 cases.

Mexico—City of Mexico, Dec. 14-26, 4 cases, 1 death.

Russia—Moscow, Nov. 29-Dec. 6, 4 cases. St. Petersburg, Dec. 6-13, 16 cases, 3 deaths.

Turkey—Constantinople, Dec. 7-14, 1 death.

**YELLOW FEVER.**

Colombia—Panama, Dec. 22-29, 4 cases.

Ecuador—Guayaquil, Dec. 13-20, 12 deaths.

Mexico—Tampico, Dec. 20-27, 14 deaths. Vera Cruz, Dec. 20-27, 14 cases, 4 deaths.

**CHOLERA—INSULAR.**

Philippine Islands—Manila, Nov. 2-15, 184 cases, 124 deaths. Provinces, Nov. 1-15, 252 cases, 170 deaths.

**CHOLERA—FOREIGN.**

Egypt—Alexandria, Dec. 1-13, 82 cases, 64 deaths.

**PLAGUE—UNITED STATES.**

California—San Francisco, Dec. 11, 1 case, 1 death.

**PLAGUE—FOREIGN.**

Mexico—Ensenada, Dec. 31, 1902, officially reported. Mazatlan, Dec. 31, 1902, officially reported.

**Lectures on the Neuroses and Psychoses of Spirits and Drug Addictions.**

Dr. Thos. D. Crothers, of Hartford, Conn., than whom there is no more able man in the profession for such a purpose, will deliver a course of lectures on Alcoholism, Morphinism and other drug manias, in the hall of the New York School of Clinical Medicine, 328 West 42d street, between 8th and 9th avenues. These lectures will be given on the first Tuesday of every month, at 11 A. M. and 8 P. M. The profession are cordially invited to attend.

**Law Requiring Osteopaths, etc., in Virginia.**

The committee of the Medical Society of Virginia having this matter in charge have presented the bill in the Virginia Senate, with every prospect of success as to securing the enactment of the proposed law. Let each doctor urge his legislator, in person or by letter, to examine the bill and secure its passage.

## The Report of the Medical Examining Board of Virginia

Is not quite ready for publication. In answer to the numerous letters of inquiry concerning it, we hope to have it in full in our issue of February 13th. Few have an idea of the immense amount of labor expended in preparing the tables after the reports of each of the examiners has been received by the secretary.

## Requirements for License to Practice Medicine, etc., in South Carolina.

While the South Carolina Board of Medical Examiners is a most excellent one as to professional ability, etc., it has been recognized that the law is imperfect, and a new law to regulate the practice of medicine in South Carolina is proposed, a brief of which is here given:

1. No person shall practice medicine or surgery within South Carolina unless 21 years old, and has been authorized to do so under laws in force when license was secured.

2. Any person shall be regarded as practicing medicine who shall treat, operate on, or prescribe for any physical ailment of another; but nothing prohibits services in case of emergency or the domestic administration of family remedies.

3. The State Board of Medical Examiners shall be composed of eight reputable physicians or surgeons—one from each of the seven Congressional districts, and one from the State at large, to be nominated by the State Medical Association and commissioned by the Governor.

4. Said Board shall meet at Columbia, S. C., on the fourth Tuesday of each April, and continue in session until all applicants are duly examined. The Board shall have power to call extra meetings and to make by-laws and rules for its government.

5. The Board shall examine all candidates for license, and pass upon their qualifications and fitness to practice medicine in the State, to give successful applicants certificates to that effect, upon payment of \$5 by each applicant. Such certificate shall entitle the party to be registered as lawful practitioners by the clerk of the county court in which jurisdiction they reside—paying the clerk 25 cents for each registration. Between meetings of the Board its president and secretary may grant *temporary license* until the next regular meeting of the Board upon passing satisfactory oral examina-

tions and paying *temporary license fee*, \$2.50. The holder of such temporary license must appear before the Board in regular meeting for written examination for permanent license. If party fails to pass, his fee is not returned, but he is privileged to come before the Board for examination within two years without extra charge.

6. Persons holding diplomas from medical colleges of established reputation given prior to this act, who present satisfactory certificates of good moral character, and who give evidence of sufficient preliminary education shall be eligible for examination irrespective of their time of attendance upon medical lectures. But no person who graduates after this act shall be eligible for examination unless he has attended four full courses of lectures and has received a diploma of M. D.

7. The curriculum of the Board shall be divided into two sections—the *first* comprising the *junior* or primary branches of medical education; the *second*, comprising the *senior* and clinical portion of medical education. Examinations shall be either in writing or orally, or both, at discretion of Board.

8. Graduates from a reputable four years graded medical college, in or out of the State, who have attained a mark of not less than 75 per cent. on each individual branch, evidenced by the dean of the college, shall be exempted from examination in the junior curriculum, and shall be examined only on those subjects contained in the senior curriculum. All other applicants must pass upon both the junior and the senior curriculum.

9. The Board may endorse, without examination, licenses issued by other State Boards having an equal standard: provided, said other Boards reciprocate the courtesy.

10. Standard of the South Carolina Board shall be an average of 75 per cent. on all branches, and not less than 60 per cent. on any individual branch.

11. The Board shall keep record of all proceedings, and a register of all applicants, with his age, time spent in medical study, and the name of the college granting diploma, etc.

12. The Board shall be paid from State treasury the per diem and mileage allowed members of the Legislature. License fees of applicants shall be turned into State treasury. The secretary of the Board is to receive a salary of \$100 a year, and a contingent fund of \$50 shall be set

aside from the collections of the Board for stationery, stamps, etc.

13. It shall be unlawful to practice medicine in the State by any one who has not complied with the law. For each offence the violator shall be fined not less than \$50 nor more than \$300, or imprisonment for a period of not less than thirty nor more than ninety days, or both, at discretion of the court—one-half of the fine to go to the informer and the other half to the State: *provided*, that dentists and midwives shall not be subject to this section. Nor does this act apply to physicians and surgeons already registered; nor to commissioned medical officers of the U. S. Army or Navy or Marine Hospital Service; nor to doctors residing in other States called in consultation in special cases with physicians, etc., residing in the State.

14. No violator of this act is entitled to receive compensation for services rendered.

15. If Board refuses a license to an applicant, he may appeal to the Governor, who may order a re-examination of the applicant in the presence of the dean of the faculty of any medical college in the State and a committee composed of seven practicing physicians.

16. All acts or parts of acts inconsistent herewith are repealed.

### Proposed Board of Examiners of Trained Nurses in North Carolina.

A bill is before the North Carolina Legislature providing for the establishment of a Board of Examiners for Trained Nurses in that State. The Walker Memorial Hospital, of Wilmington, N. C., asked for an amendment to its charter so that this institution may issue licenses to its graduate nurses. It was agreed that diplomas to the graduate nurses of this Memorial Hospital shall be subject to licenses by the State Board of Examiners of Trained Nurses in North Carolina about to be created, and the bill was then passed to its final reading.

### Presbyterian Eye, Ear and Throat Hospital, Baltimore.

At the annual meeting of the Board of Governors of the Presbyterian Eye, Ear and Throat Charity Hospital, Baltimore, the Medical Executive Committee, which has managed the medical affairs of the institution for the last four years, consisting of Drs. Herbert Harlan,

Hiram Woods and Francis M. Chisolm, was re-appointed for this year, with Dr. Herbert Harlan as surgeon-in-chief. Dr. Julian J. Chisolm, who founded the hospital in 1877, and for twenty-two years was its executive surgeon, retired in 1899. Since his retirement the medical management has been conducted by this Executive Committee.

### Changes in the Medical Corps of the Navy, Week Ending January 10, 1903.

January 3.—Medical Director E. S. Bogert, retired, detached from the Naval Recruiting Station, New York, and to continue duty at Marine Recruiting Station, New York.

Medical Inspector T. Woolverton, retired, ordered to the Naval Recruiting Station, New York. Assistant-Surgeon J. H. Holloway, commissioned Asst. Surgeon from Sept. 26, 1902.

January 5.—P. A. Surgeon J. A. Guthrie, detached from the Yorktown and ordered to the Vicksburg.

Assistant-Surgeon K. Ohnesorg, detached from the Vicksburg and ordered to the Yorktown.

Assistant-Surgeon A. E. Peck, detached from the Annapolis and ordered to the Naval Station, Cavite, P. I.

Assistant-Surgeon U. R. Webb, detached from the Naval Station, Cavite, P. I., and ordered to the Annapolis.

January 7.—Medical Inspector F. B. Stephenson, retired from active service on account of disabilities incurred in the line of duty, January 3, 1903, and to continue on duty at Naval Hospital, Portsmouth, N. H.

Medical Inspector S. H. Dickson, detached from the Iowa, and ordered to the Newark as Fleet Surgeon of the South Atlantic Station.

January 8.—P. A. Surgeon H. H. Haas, detached from the Montgomery and ordered to the Prairie.

P. A. Surgeon J. E. Page, detached from the Newark and ordered to the Montgomery.

### Changes in the Medical Department U. S. Army for Week Ending January 10, 1903.

First Lieut. F. F. Russell, Asst. Surgeon, is granted leave of absence for 14 days.

First Lieut. John J. Reilly, Asst. Surgeon, is arrived in New York from Havana, Cuba, on 30 days leave of absence.

First Lieut. J. R. Devereux, Asst. Surgeon, relieved from duty at Fort Porter, N. Y., and

ordered to proceed to Jackson Barracks, La., for duty.

Capt. Henry C. Fisher, Asst. Surgeon, is relieved from duty at Jackson Barracks, La., and ordered to proceed to Baltimore, Md., for duty as Attending Surgeon and Examiner of Recruits.

First Lieut. William E. Vose, Asst. Surgeon, is relieved from further duty at Columbia Arsenal, Tenn., and ordered to Fort Logan H. Roots, Arkansas, for duty.

Col. J. M. Brown, Asst. Surg. Gen. U. S. Army, leave of absence extended to include February 13, 1903.

First Lieut. James W. Van Dusen, Asst. Surg., leave of absence extended one month.

First Lieut. William J. L. Lyster, Asst. Surg., assignment to duty at Fort Wayne, Mich., is revoked, and instead is assigned to duty at Fort McDowell, Cal.

### Changes for Week Ending January 17, 1903.

Capt. Thomas J. Kirkpatrick, Asst. Surgeon, is granted leave of absence for one month.

First Lieut. H. D. Bloombergh, Asst. Surgeon, is granted leave of absence for one month.

First Lieut. Theodore C. Lyster, Asst. Surgeon, is relieved from duty at Fort Schuyler, N. Y., and will proceed to West Point, N. Y., and report to the commanding officer of that post for duty.

Lieut. Col. Henry S. Turrill, Deputy Surgeon-General, is assigned to permanent duty in charge Medical Supply Depot, New York city, N. Y.

Gaithersburg, Md., are his brothers, and two sisters live in Port Royal, Va. He leaves two sons, Mr. T. C. Amiss, Germantown, Pa., and Dr. E. P. Amiss, of Shenandoah, Va., and three daughters. Dr. John B. Amiss graduated in medicine from the University of Virginia, 1857, and from the University of the City of New York, 1858. On returning to Virginia he commenced the practice of his profession in Page county. He removed later to Harrisonburg, Va., where he has ever since resided. He was a popular and prominent physician, a member of the National Association of Railroad Surgeons, the Medical Society of Virginia, etc. He was the local surgeon of the Baltimore & Ohio Railroad, and at one time was a United States pension examiner. He was born in Rappahannock county, Va., and received his academic education from the Winchester, Va., academy, the L. M. Institute, of Frederick, Md., and William and Mary College, Virginia.

### Resolutions by University College of Medicine, Richmond, Va., Students, Concerning Dr. Lewis Wheat.

Whereas the Omnipotent, in his all-seeing wisdom, has deemed it best to remove from our midst Dr. Lewis Wheat, a staunch friend, wise counsellor and an esteemed professor, we, the students of the fourth class of the University College of Medicine of Richmond, Va., do hereby tender the following resolutions of respect:

*Resolved*, first, That we, without wishing to overburden the already saddened hearts of the bereaved family, desire to extend to them our deepest sympathy.

*Resolved*, second, That we deeply feel his loss to us as a kind and generous friend, ever ready to aid and encourage us in the daily pursuit of our life work.

*Resolved*, third, That we more deeply feel his loss to us as a professor untiring in his efforts to impart to us the knowledge he had gleaned by a lifetime of unceasing and diligent study.

*Resolved*, fourth, That he has set before us the example of a true and able physician, devoted to his profession, benevolent to the poor and conscientious in his dealings with his fellowmen.

*Resolved*, fifth, That a copy of these resolutions be sent to the bereaved family, published in the local papers and recorded by the secretary of this class.

C. D. Kellam, B. H. Gilmer, Hugh R. Thompson, committee.

## Obituary Record.

### Dr. John B. Amiss, Harrisonburg, Va.,

Died suddenly, at the age of 68 years, at his home, January 4, 1903, his death being due to heart disease. The night before he had been out nearly all night on professional duty, and went to bed during the morning of the 4th feeling as well as usual. About 3 P. M. he started to get up, but felt sick, and called in Dr. Olphausen, his stepson, who, realizing the serious condition, hastily summoned other aid, but Dr. Amiss never rallied—dying at 4 P. M. Drs. T. B. Amiss, of Luray, Va., and W. H. Amiss, of



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## Original Communications.

### MORBID PROCESSES COMPARED WITH SANITARY MEASURES.

By J. McFADDEN GASTON, A. B., M. D., Atlanta, Ga.,  
Honorary Fellow Medical Society of Virginia, etc.

The relative advantage of preventive treatment, or prophylactic measures, over curative remedies, is shown in the preference given by surgeons to the aseptic over the antiseptic surgery at the present day. After the effort to cleanse the hands by all available means, it is found that bacteria remain on the hands, and gloves of India rubber are used by operators to prevent the contact of the fingers with the structures involved. The result of this mode of excluding toxic agents inspires us with the truth of the axiom, that "cleanliness is next to godliness" in surgery, and that preventive medicine depends largely for its good results upon the extermination of toxic germs.

It is evident that a large number of disorders arise from special bacteria. It is necessary to destroy these germs to obviate the development of the disease; hence the use of the anti-toxine hypodermatically, not only for the arrest of cases already affected, but for the prophylactic effect in advance of the development of the symptoms. Although some untoward results have been noted in the application of antitoxine hypodermatically for diphtheria, it does not affect the general principle of protection in this case against this and other disorders of the system. The remedial measures against the ravages of the tubercular bacillus have been also combined with the use of the separate cuspidor and destruction of sputa in the prevention of the entrance of bacilli by the means of the air or the food.

The medical profession has been disappointed in the claims of Koch for the prophylactic effects of the tubercle bacillus, and more recently

with the limitation of his former views in regard to the propagation of tuberculosis to the human being from the bovine species. It is thought that it cannot be taken through the bovine tuberculosis.

Antidotal treatment of splenic fever in the lower animals, and of anthrax in the human being, initiated by Pasteur, has been attended with entirely satisfactory results; and the prophylactic treatment of hydrophobia by culture of the virus is giving exemption from the development of rabies in cases exposed to the bites of dogs affected with this heretofore incurable disease. Notwithstanding the incredulity of intelligent observers in regard to the existence of rabies, those who have studied the reports of the cases of so-called hydrophobia are fully impressed with its reality and virulence.

Electricity is claimed by Loeb to be the first and most important life force, leaving heat as only a secondary process from the oxidation of blood. All foods are valuable or worthless, according to this new biology, in proportion to the electricity that can be generated from them.

The inorganic salts are, therefore, just as important as the higher chemical products—viz., the hydrocarbons and proteids. These are again changed in their electrical state by external stimuli or change in the relative position of the elements.

Reflex action is the basis of all living activities, and this consists simply of conduction inward and conduction outward. Nerve action, according to Loeb's theory, is still at the bottom of much of this theory, and a modification of the prevailing theories of physiology doth not appear.

In view of the editorial comments in various medical journals, the production of electricity by chemical action in the body can be admitted, but the idea that it is the essential force supplied by food stuff is doubted.

Electricity enters into the treatment of many

conditions at the present time, to which it was not considered applicable formerly. The discovery of the skiagraph has opened up an entirely new field of practical work, and the X-ray, in connection with Crooke's tube, not only facilitates surgical operations, but renders important aid in preventing the development of new growth revealed by it. There is sufficient proof of the efficacy of the X-ray in the cure of epithelioma, sarcoma, and even carcinoma, to warrant the resort to this mode of treatment in cancer that is not amenable to surgical interference. The only drawback to the employment of X-rays generally is presented by burns superficially and deep-seated, which sometimes follow the use of Crooke's tube. This occurrence does not depend upon the duration of the intensity of the electric current.

We propose to say something as to "nature's sweet restorer," balmy sleep. The condition of rest, both of body and of mind, afforded by sleep, is requisite for health. The counterpart of this, or what is technically styled insomnia, creates a state of irritation throughout the nervous system which demonstrates the great importance of repose at stated intervals, which serve to recuperate the wear and tear caused by active mental exercise.

Reichenbach found in the different individuals who came under his observations marked differences in regard to the position of the body as to the cardinal points of the compass. He demonstrated beyond a doubt that the electrical currents circulating in the body bore a definite relation to the electricity of the earth. He observed that some nerrotic people could only sleep comfortably in certain relations to the poles of the earth. With the head to the north and the feet to the south, they slept more composedly than in any other position. The variation in the position of the body, with the head resting from north to northeast, or with the feet in the opposite position towards the south, gave as a rule comparatively good results in securing rest. Some individuals of an excitable nature could rest in these positions only, and insomnia became developed whenever they attempted to sleep in any other position.

As a natural consequence, those threatened with insomnia, or suffering already with it, were placed in the positions above indicated, and thereby secured sleep. Many persons, independent of the teaching of Reichenbach, have sought relief from restlessness at night by lying in the

position already indicated; and it is recognized generally that lying with the head to the north or east gives comfort to those suffering from insomnia. Thus the position assumed in bed at night becomes a preventive of trouble from wakefulness at night.

There are many persons who have the capacity for sleep by instalments, and lie down with the intention to wake at a fixed time. Such persons may sleep profoundly in these intervals of repose, and awake at a definite hour and even to the minute of the clock. The capability of waking in this way becomes a good qualification for nursing the sick without interfering with the refreshing influence of sleep. It has been the writer's privilege to take charge of sick people without any other assistance, and to awaken at a definite hour to administer medicine and to take cognizance of the patient without interfering with his rest. On these occasions not more than five minutes would be lost from sleep in caring for the patient.

It is not only in the treatment of the sick that this capacity of taking advantage of this lapse of time avails, but in various emergencies an individual may desire to avail himself of a definite hour for waking, and he can calculate with great certainty on waking at the time fixed. This faculty seems remarkable to those who are incapable of putting it into operation, and the individual himself is quite unconscious of the power except as he has occasion to test it. If one were to attempt during the hours of day or night to indicate the lapse of time by calling out hours to the marks, it would be found quite impracticable. Every boy who has been raised in the country, has, no doubt, had opportunities of getting up before day in the morning, contrary to his usual custom, to go forth in search of game, or to look up his traps and snares which have been set before. Such a youth is not conscious of wakefulness during the night in which he anticipates rising before day, but still wakes on the minute of the time previously determined upon.

This shows a remarkable association of ideas on the part of the boy during his waking hours, which he can rely upon to secure his waking at a fixed time during the latter part of the night.

This view of the relation of the waking and sleeping hours has a practical bearing upon the question of insomnia. If the individual who is subject to insomnia during the night can so regulate his mental faculties as to override the

influence which causes insomnia and exert his will power to wake at a certain time, and to sleep until that time, it will greatly assist the action of nerve medications. The anxiety with reference to being able to sleep is probably one of the chief difficulties in getting to sleep. If he makes up his mind that it is a matter of little consequence whether he sleeps or not before the time set for attending to some duty or joining in some pleasure excursion, it will be found that he can unwittingly entrup himself into falling asleep.

In view of the investigations that have been made with regard to the cause of sleep, insomnia is evidently due to the wear and tear on the nervous system during the day.

The habit of retiring at a certain hour has much to do with getting to sleep on going to bed. If an individual is kept awake beyond the usual hour for sleep by pre-occupation of any kind, it is found that it is difficult to obtain rest promptly in the arms of Morpheus, and the waking hours are prolonged so as to leave only a short time for repose.

Although it is a recognized fact that the "wee small" hours of the night are the most refreshing for those who have only a limited time to sleep, it should be noted that Benjamin Franklin claims that one hour of sleep before midnight is worth two hours after midnight. This eminently practical philosopher no doubt intended to convey the idea that "a bird in the hand was worth two in the bush," and that if one hour was lost before midnight it would lead to the loss of two hours afterwards.

The cases of wakefulness which have come under the writer's observation in sickness, or otherwise, have progressed more satisfactorily under the influence of anodynes in the latter hours of the night than in the earlier portion of the night. Doubtless it has been observed by most physicians that the attending physician of General Grant in his last illness laid great stress upon attitude in his efforts to secure sleep without opiates.

There is good ground for the conviction that a considerable number of cases of restlessness are amenable to mental and physical treatment without the use of drugs.

A large proportion of practitioners who rely ordinarily upon opiates for quieting the nerves of their patients are now resorting to so-called suggestions for soothing their patients, and hypnotism is gradually becoming known as a re-

liable remedy in treating neurotic cases. It is not applicable generally to the treatment of the sick, and cannot be substituted for drugs when the nature of the disease demands active medicine to act upon the secretions. But in nervous subjects calling for influence upon the nerve centres, it is found that suggestion avails in connection with other means of treatment. This mode of dealing with the neurotic phase of disease was formerly thought to depend upon the imagination, and it was believed to exert an important influence upon the efficacy of medicine given internally for their action as emetics, purgatives, diaphoretics, tonics, alteratives, etc.

#### NEUROSES.

Among the practical results of deep injection of cocaine are those attending important operation without resorting to general anaesthesia in these cases.

In the neurotic class of cases much has been done by preventive medicine to relieve present derangement of nerves, and the development of central and peripheral nerve changes.

The limits of this paper preclude any details, but a few of the results may be referred to as follows:

Subcutaneous injection of cocaine in the course of the facial nerve with temporary relief in most instances, and permanent cure in a large proportion of the sufferers of *neuralgia*.

Those laboring under attacks of *angina pectoris* have inhaled nitrate of amyl with immediate palliation of the paroxysm, and with permanent benefit subsequently by repetition of the remedy in advance of the attacks.

*Spasmodic cough* may be controlled by inhalation of chloroform in small quantities under the supervision of a competent nurse.

*Cardiac insufficiency* generally yields to the internal use of the combination of Hoffman's anodyne, aromatic spirits of ammonia and camphor water in small doses.

*Cramps of the stomach and diaphragm* are combatted successfully by taking essence of Jamaica ginger with hot water at short intervals.

*Colic* is relieved by asafetida and camphor water with hot stupes of turpentine over the bowels.

*Acute pain in the rectum* has on different occasions disappeared after pressure over the anus with the closed fist or with a large wooden ball for ten minutes, and has not returned for some time when thus arrested.

There are some phases of preventive medicine

which do not exactly meet the requirements of the subject submitted for our consideration in this paper. They are, however, german to it, and come up as corollaries to the main proposition. The practical bearing of these side issues opens to the reader questions of great moment, but admit of little more than the description of their scope, leaving the inquiry to be more fully carried out elsewhere. I refer to certain benign tumors and cysts, which, when removed, are prevented for the future; and there need be no concern about their returning, leaving any trace of their prior existence, or, which is worse, changing into a malignant form of tumor. There are likewise found reservoirs in the form of sacs, which contain secretions, but which become obstructed and require relief by evacuation or removal by excision. The gall bladder is one of the offending sacs which is prone to give trouble, and to require surgical interference for its relief.

*Pain in the common bile duct from the passage of gall-stones* is arrested by hypodermatic injections of morphine and atropia, and by large doses of olive oil internally.

If curative measures are resorted to early after the interruption to the flow of bile, there is good prospect of evacuating the gall bladder. A dilation of the ductus choledochus may permit of the escape of gall-stones to the size of an ordinary plum seed, and the results which have been reported recently under the olive oil treatment commend themselves to the favorable view of the profession at large. The tendency to form biliary concretions being presented, if one calculus is discharged others are proven to take its place after a time, and the local and general embarrassments continue. An obstruction to the gall-duct may result from the actual presence of calculi in the canal, or may ensue from infiltration of its wall, causing occlusion of the passage. When the impediment is simply mechanical in the outset, this by continuance becomes a source of irritation, and subsequently by inflammation in the tissues. Hence, there is never, perhaps, any protracted obstruction to the outlet of the bile without inducing some thickening of the wall of the duct, and, ultimately, agglutination of its adjacent surfaces.

When the obstruction has gone to the point of agglutination by the effusion of coagulable lymph, it will be found impracticable to combat the adhesive inflammation of the tissues, and the canal remains impermeable. When the ordi-

nary channel becomes thus closed, it may occur that an artificial opening will be effected by ulcerated process between the gall bladder and the duodenum of the adjacent portion of the small intestine, thus remedying the difficulty temporarily if not permanently. When the outlet was afforded in this way to the biliary concretion, collections of fluid bile and even seropurulent discharges have taken place through such an ulcerated communication between these parts.

It has been ascertained that the enclosure of the material route of exit of the bile is followed by an inspissation or thickening of this fluid; and that eventually masses of bilious formation exist in the sac without assuming the character of a well-defined solid. Again, in the event of disorganization taking place, there may be an exudation of a vitiated and decomposed fluid from the internal surface, or there may be a purulent collection within its cavity. Such collections lead to the destruction of its wall, and ultimately to their dilation and extension below the margin of the liver, and, after the lapse of time, to the protrusion of the gall bladder downward into the lumbar region of the interior portion of the right side of the abdomen. It presents under the circumstances an oblong, fluctuating tumor, extending down to the level of the umbilicus, or even into the right iliac region, with a breadth of from four to six inches or even larger, according to the quantity of the fluid contained in the sac.

The retention of the bile for any considerable time undergoing decomposition leads to its absorption into the circulation, and its diffusion generally through the system, so that jaundice is one of the ordinary accompaniments of biliary obstruction, but not a necessary or regular sequel of occlusion of the bile duct. Should there be present in the cavity of the sac, in place of bile, some decomposed fluid or regularly formed pus, it is evident that no bile can be taken up by absorbents, and as a natural consequence there would not be jaundice.

Should any one suppose that the analogy of bilious diffusion ought to lead to the dissemination of pus or other exudation, I would call their attention to the general law that holds in all suppurating cavities presenting a barrier in the peculiar modification of their internal surfaces against the absorption of their contents. Were not this pathological principle enforced during the progress of suppuration in all parts of the

body, there could not occur an abscess without purulent absorption, and as a consequence, septicæmia. If decomposed fluid or pus are brought directly in contact with the areolar or cellular tissue, trouble ensues, but if retained in the cavity when formed, there is no contamination of the tissues. It has been noticed as one of the almost invariable elements of bilious diffusion in the system, that itching over the surface develops with the obstruction, and is relieved with its disappearing. They may, perhaps, be considered as pathognomonic to the disorder. As a consequence of the occlusion of the gall-duct, there is a want of bile in the intestinal canal, and the fecal evacuations are lighter colored than natural, and owing to the absence of this stimulus to the peristaltic action of the bile there is a torpid state of the alimentary canal. Even in an acute paroxysm of hepatic colic, when the interruption of the flow of bile is only temporary, there is observed to exist a marked torpidity of the intestines, so that it is difficult to obtain the purgative effect of medicine when administered by the mouth. The use of enemata is more successful generally in such cases in evacuating the bile, as their cathartic influence is brought to bear immediately upon their mucous surface.

The appropriate sphere of the bilious secretion is brought into operation after the gastric digestion is completed. The bile only becomes a proper admixture for the alimentary mass after it passes out of the stomach, and if from any cause there should occur even a limited regurgitation of bile into that organ, it gives rise to disorder in the performance of its office for digestion.

The bilious matter, combined with the pancreatic juices in the duodenum, co-operates with it in modifying the diversified ingredients which enter into the homogeneous mass of the chyme, so as to fit it for restoring the waste elements of the decomposition in the materials subjected to the process of assimilation. After having effected the requisite changes in the alimentary mass, the presence of the refuse bile serves to promote the fecal discharges by exciting the peristaltic movement of the bowels, and thus obviates the evils of constipation.

If it were practicable for physicians to adopt the plan which an Eastern ruler resorted to with his medical attendant for the compensation of his time while free from disease and stopping

his salary whenever sick, it would prove a great incentive to the perfection of hygiene. Not that medical men are indisposed to promote health regulations among the people, yet there is a deep seated element of self-interest that operates upon man in all the relations of life, and when properly directed is really the final cause of our best actions, as the promotion of the welfare of others is the source of greatest enjoyment to an individual. In this point of view it should appeal to our honorable sentiments toward our fellow being, and to our sense of self-respect, to advance the well-being of mankind by eradicating, so far as possible, the seeds of disease from all sources of contamination. Should, however, the pecuniary interest of the medical man be promoted by keeping his client well, instead of receiving his pay for attendance upon them when sick, it is evident that it would stimulate him to greater zeal in the investigation of the sources of disorders of every kind, and to more efficiency in the promotion of hygienic regulation in the phase of society. The extensive ramification of the details which tend to the arrest of physical disorders amongst the different classes of men, women and children opens up a vast field of study, which has thus far received but little consideration even from those whose attention has been directed to general hygiene; and the people need to be educated up to the point which may fit them for profiting by instruction in these matters.

Littre defines hygiene as that part of medicine which treats of the rules according to which a choice is made of the means proper for maintaining the normal action of the organs at different ages, in different constitutions, in the different conditions of life, and in the different avocations and professions. It comprehends really the employment of these things, whether outside of the individual or emanating from the person, and directs their use as may be required for the preservation of life and health.

The most general division of hygiene is into those agencies which operate upon the mental powers and those which affect the physical development, and the means adopted may be public or private, according to the source of regulation.

The proceedings for effecting hygienic modifications in the municipal, commercial, naval and military departments, differ materially from those indicated for social and domestic security, while the precautions for individual

protection fall within the domain of personal consideration—*sana mens in corpore sano*.

Hygiene treats of the preservation of health in all the relations of life, and "embraces a knowledge of healthy man, both in society and individually, as well as of the objects used and employed by him, with their influences on his constitution and organs." Physiological perfection in the human organization is the true expression of the ultimate success of hygiene in all its bearings upon the human race, and is the grandest achievement to be aimed at by man.

228-9 Prudential Building.

## THE CAUSES AND TREATMENT OF HYDRONEPHROSIS.\*

By J. WESLEY BOVEE, M. D., Washington, D. C.,

President Southern Surgical and Gynecological Association, Fellow American Gynecological Society, etc.

Hydronephrosis is a term used to denote over distension of a kidney by repletion of urine from any cause. It is to be distinguished from renal cysts by the latter never having any connection with the pelvis of the kidney, and being located in some part of the kidney not necessarily near the outlet. On the contrary, hydronephrosis practically involves the renal pelvis and usually the ureter to a more or less extent. It may involve one or both kidneys. Martineau, in 1785, called it "hydropsrenis," and Johnson, in 1816, "hydronephrosal distension"; Rayer, in 1841, used the term "hydronephrosis," which ever since has been the accepted term.

Sometimes the degree of distension is extreme, a large abdominal tumor being present, and in many cases the pressure has been so great that the parenchymatous portion of the kidney is entirely atrophied. The pelvis of the kidney partakes of this extreme distension and becomes a very thin walled portion of the cyst. Usually a quite considerable portion of the ureter below the renal pelvis is involved in the sac wall. Strictly speaking, the pelvis of the kidney is a portion of the ureter. From whatever cause, the obstruction to the flow of urine can never be both complete and permanent. Various experimenters, from Guyon down,

have absolutely proven that permanent, complete obstruction invariably ends in renal pressure atrophy. This result is verified in surgery of the human body by the large number of cases reported of ligation of the ureter, accidentally and otherwise, that were followed a few days later by a small tumor in the region of the kidney, accompanied by some pain and tenderness, and which gradually disappeared. It has also been determined that the kidney may resume its functions unimpaired after such obstruction has existed six weeks. Therefore the obstruction, if permanent and complete, destroys the kidney function and structure. It may, however, be permanent if incomplete. It is not uncommon to see cases that have existed for years with but little impairment of the renal function of the affected organ. The condition is not an uncommon one. Even in cases found at autopsy the number is fairly large. Henry Morris found in the records of 2,610 autopsies, during the years 1873 to 1883, in the Middlesex Hospital, 142 cases of marked hydronephrosis, showing as an abdominal tumor, and a number in which the condition was slight.

### CAUSES.

The causes of hydronephrosis may be considered under two principal heads—viz., *congenital*, which, according to Henry Morris, embraces one-third of all cases, and *acquired*. Another variety of great importance is the *intermittent type*. These classes may be conveniently considered according to the structures involved in the obstruction itself. In some cases no cause can be found. The congenital variety embraces all those forms in which the conditions leading to the backing up of the urine were congenital, and it must not be understood that the hydronephrosis was necessarily present at birth, as in many cases it has not appeared until adult life. In this paper only those cases that develop after birth are considered.

The congenital variety includes conditions of the prepuce, urethra, bladder, ureter, renal pelvis, kidney, renal artery, and even congenital abnormalities of structures adjacent to these. In Morris' work on *Surgical Diseases of the Kidney and Ureter*, 1801, Vol. I, page 402, appears an illustration of a specimen in St. Bartholomew's Hospital Museum. It is one of double hydronephrosis and dilatation and torsion of the ureters in a child with a very small preputial aperture. Congenital abnormalities of the urethra may cause such obstruction to the

\* Paper read at the meeting of the Medical and Surgical Society of the District of Columbia, January 8, 1903.

flow of urine that it distends the bladder and later the ureters and kidneys. Abnormal ureteral mouths may often produce a reflux of urine. If the uretero-vesical junction be so imperfect as to have an unusually large opening, such reflux may easily occur, but worse than that is one that is too much constricted. Marked thickening of this portion of the duct has been noted in some cases as the cause of the constriction. Cases have been mentioned in which the ureter, instead of ending in the bladder, passed to the vagina, the urethra, the wall of the urethra, nearly to the external meatus urinarius, and even into the vulva. In such cases the opening may be subjected to unusual pressure at any time, which will prevent a free exit for the contents of the duct, such cases having been recorded.

As the ureter courses through the loose areolar tissue any of its various curves may be changed into an angle so marked that obstruction to the flow of urine is imminent, and reduplications and folds in the mucosa are noted as the cause of some cases of hydronephrosis. If the ureter leave the pelvis of the kidney at a very acute angle, frequently an obstruction at that point results, with accumulation of urine above it. According to Morris, Walter discovered the case of a man, aged thirty years, who had two ureters and two pelves to each kidney. The upper part of the right kidney was converted into a cyst. The right upper ureter was dilated, and opened into the bladder close to the prostate and passed down in front of the right lower ureter, which opened almost into the median line of the bladder. The lower ureter and lower half of the right kidney were not distended. Morris also mentions a case of double ureter, the lower end of which opened into the bladder near the vesical orifice. It was sacculated, and the lower part of the kidney was distended with pus. The upper part of the kidney, which was drained by a ureter opening normally into the bladder, contained a calculus fixed near its upper end. The corresponding part of the kidney was markedly distended by urine. In double ureter the upper one is nearly always the one having the abnormal termination. Congenital diverticula of the kidney itself has been noted as a cause of urinary stasis in the kidney, and in a few cases a branch of the renal artery has been found crossing the upper portion of the ureter and compressing it to the extent of producing obstruction.

Occasionally the obstruction is double, and from two different causes. Roberts reports such a case in which double hydronephrosis was due to a contracted and too oblique ureter on the left side, and on the right to compression from a branch of the renal artery crossing the ureter. Cases have been reported where distension of one side of the double uterus has pressed upon a ureter and caused hydronephrosis.

*Of the acquired variety* I cannot expect in a paper of this character to fully discuss its extremely numerous causes, but I will invite attention to the most important ones. Many different conditions located at various points along the urinary tract below the kidney may cause hydronephrosis of this species. Enlargement and other forms of prostatic trouble have been noted as producing hydronephrosis. The late Dr. D. W. Prentiss, of this city, in 1882, reported a case of dilated bladder, ureter and kidneys from this cause. Buhl and others report nearly similar ones. Flamin and numerous other observers report cases in which such distension has resulted from torsion of the penis. In short, any condition of the urethra causing obstruction to urinary flow is likely to produce double hydronephrosis. R. T. Edes, formerly of this city, has a splendid monograph on hydronephrosis resulting from functional disturbances of micturition. Morris refers to this cause and quotes Alexander's case of frequent micturition due to phimosis, which resulted in hydronephrosis.

In the bladder many conditions may cause sufficient obstruction to cause kidney dilatation, either by backing up of urine in the bladder or by pressure on one or both ureters, the result being double in the former and unilateral or bilateral in the latter. Cancers and other tumors of the bladder wall act similarly. Morris refers to Elstein's case of abscess in the fundus of the bladder following lithotomy that occluded both ureters, causing double hydronephrosis. Chalot reports a case of double hydronephrosis from four calculi in the bladder.

Various conditions of the ureter are found that produce temporary or partial occlusion of it. Strictures of various diameters and numbers, cysts of the mucosa, tumors of various kinds, and valve-like constriction in some portion may produce backing up of urine and hydronephrosis. This has been the cause in a few cases under my observation. Kinking of the ureter is occasionally observed. Traumatism

of this duct from violence may so injure it as to cause stoppage of urine at the time, and a later stoppage may be induced by ureteritis incident to traumatism. Hemorrhages into the ureter may so occlude it as to produce the condition under consideration. As a rule, the position of the ureter is such that it is well protected from traumatic injury.

A very common cause of hydronephrosis is ureteral calculi, and in many cases this condition is recorded. Tuberculosis, syphilis, and cancer may so involve the wall of the ureter as to markedly distend its caliber. It should be remembered that in this and congenital forms both ureters may have independent pathological conditions, causing double accumulation of urine in the kidneys and renal pelvis.

Various conditions of the kidney may lead to this distension by urine. Drew reports a case of villous cancer of the kidney pelvis, the ureter and bladder that produced enormous distension of the kidney. Probably the most frequent renal condition that produces hydronephrosis is displaced kidney, and unless it is fixed, a very rare condition, the distension is intermittent in character. The kidney drops down, causing marked angulation of the ureter, and obstruction at that point results.

Besides these conditions of the urinary tract causing hydronephrosis many outside influences are found at work. Allison reports a case in which the cause was pressure on the ureter by an enlarged and prolapsed leukemic spleen. Billroth, Dumreicher and others report cases in which the cause was compression of the ureter by ovarian cysts. Others mention pressure from uterine tumors, inflammation of connective tissue, enlarged lymphatic glands, gummata, tubercular involvements, and inflammatory deposits occurring at various points along the course of the ureter, as producing obstruction.

As to the autopsy study of hydronephrosis, the following tables are significant, but probably a small percentage of the cases of hydronephrosis come to autopsy. In the 142 cases Morris selects from the Middlesex Hospital autopsy reports, cancer of the pelvic organs—uterus, vagina, rectum or bladder—was present in 116 cases. Of these 93 were double, 16 on the right and 7 on the left side only. There was cancer of one ovary in one case, and of both in another. Of the other 24 cases, 4 were from unknown causes, 3 from cystitis, 3 from vesical calculi, 1 from villous growth of the bladder, 3

from enlarged prostate, 4 from ovarian cysts, 3 from ureteral constriction, and 3 from pressure on the ureter from cancer of abdominal organs. Of the 24 remaining cases 12 were double, 9 were of the right, and 3 of the left ureter. The double cases were due to cystitis in 3, enlarged prostate in 3, vesical calculi in 3, and ovarian cysts in 3. Of the 12 unilateral cases the cause was unknown in 4, constriction of one ureter was found in 3, S-shaped twist in ureter of 1, cancerous tumor of the abdomen in 3, and ovarian cyst in 1.

From the further analysis of 3,926 cases from the autopsy reports of the same hospital between 1884 and 1897 there were 239 cases, most of them being due to pressure on the ureters by malignant diseases in the pelvis. Of these 179 were bilateral and 69 unilateral. Five other cases of unilateral hydronephrosis were found to be due to renal or ureteral calculus. As a rule, however, unilateral hydronephrosis is much more common than the double-sided variety.

These statements show how frequently cancer of the female pelvic organs produce hydronephrosis. I am sure all of us have seen examples of this relation between the conditions mentioned. I have in mind at this moment a case of villous cancer of the bladder compressing a ureter and hydronephrosis resulting, with a later renal infection and death. It is easily understood how any of these conditions may obstruct the current of urine to the bladder and produce renal distension.

The intermittent form of hydronephrosis is very interesting indeed, not alone as to its cause and treatment, but as well in its symptomatology, which will have to be omitted from this paper. Movable kidney is the most frequent cause, and its *modus operandi* has already been mentioned. Kinks, volvuli, torsion of the ureter, restless urinary calculi in the pelvis of the kidney, the ureter, bladder, or even the urethra, and pedunculated tumors of the renal pelvis or ureter, may intermittently act as ball-valves, producing intermittent hydronephrosis. Pressure from neighboring organs, such as the spleen, ovary, uterus, colon, sigmoid, or rectum, with or without tumors, may act similarly; and, according to the organ involved, will be the variation in the symptom complex and intermittency.

#### TREATMENT.

As the causes of hydronephrosis have been



shown to be very many and widely differing in character, it is evident the treatment of it covers a wide range in surgery. No one would suggest any other kind of treatment. I find it impracticable to enter deeply into the subject, but the treatment of some of the conditions require special mention. Conditions of the penis and urethra acting as a cause, such as phimosis, strictures, and enlarged prostate, will require appropriate treatment.

In the bladder the conditions are of some importance. Benign tumors and many of the malignant ones may be removed. These conditions are of greater importance than is the resulting hydronephrosis. When the tumor involves a ureteral orifice, it may be necessary to remove the lower end of the duct and reimplant it, although such procedure is to be avoided if possible, as the anastomosis thus formed is incomparable to the natural one. By very careful work this procedure may often be avoided. In malignant growths, which are prone to spring from the trigonum, the same plan may be tried very early in the disease. Unfortunately, they are frequently undiagnosed until a more radical procedure, if anything, is indicated. When the disease is apparently yet confined to the bladder, but involving it in nearly its entirety, nothing but cystectomy is indicated. This operation is not a severe one, but disposal of the free ends of the ureters requires great judgment. This operation has been done three times—by Reynolds of Boston, Smith of Montreal, and Mayo Robson of England—since the reading of my paper in 1901 (*Trans. Am. Gyn. Soc.*, 1901, XXVI, 199), in which a table of 100 cases was given. It is not practicable in this paper to enter into the details of cystectomy, information concerning which may be secured from various monographs on the subject. Cystitis, vesical calculi, and various other conditions of the bladder must receive their appropriate treatment.

The various conditions of the ureter mentioned are extremely interesting. The surgery of this duct is receiving keen interest from the surgical world. A constriction of the intravesical portion of it may be dilated by ureteral bougies, and if more is needed amputation, with regrafting at another point, may be done. If it be in an aberrant ureter, then vesical anastomosis will be indicated. In the rare condition of prolapse of the ureters into the bladder we have an opportunity for a highly differentiated

ureteroplasty. Ureteritis will require irrigation and strictures dilation, unless the number be large and the character very resisting. Sometimes Fenger's operation will be needed. It consists of making a longitudinal incision through the stricture and converting it into a transverse one by the method of suturing. Resection may be needed in very stubborn cases, although I am not aware of this operation having ever been done in this indication. Torsions must be remedied by forming new adhesions to the involved portion, or possibly resection of some other plastic operation. Valve-like constrictions will often need plastic operation. Kuster's case furnishes an excellent model, and consisted of making a resection, which corrected the angulation. Gossett's plan of lateral anastomosis may be very desirable in certain cases. Ureteral calculus is treated by longitudinal incision and removal of the stone. Sutures may or may not be employed, as such wounds in the ureter heal kindly. Kelly removed a calculus from a vesical portion by dilating the orifice and extraction. Not all calculi are solid, some being tubular in form and producing complete stoppage at various angles in the ureter, or by the formation of blood clots within the lumen. Tumors of this duct especially call for extirpation. When the junction of the ureter with the renal pelvis is so situated that the tendency is to closure, then such an operation as Kuster's is indicated, though Fenger's may be better. French surgeons prefer Kuster's operation. In cases of double ureter it may be found that the involved duct may be excised or grafted into the other. Syphilitic deposits, as well as tubercular changes, require careful attention, but not necessarily surgical treatment addressed to this duct.

Conditions of the kidney calling for relief are malignant and benign tumors, movable kidney, diverticula, calculi, aberrant branches of the renal artery, hemorrhages from injuries, etc. Malignant tumors of this organ are rapid in development, and, as a rule, discovered too late for eradication. If a portion were so involved as to produce urinary distension by pressure upon the outlet, the cystic tumor would probably be detected so late in the disease that eradication would be impossible, though even distress incident to urinary distension might necessitate such an attempt. In early stages of such condition, of course, the treatment would be nephrectomy, other things permitting. In benign tumors of this organ the enucleation may be

done, though even these usually involve the kidney to such an extent that nephrectomy becomes imperative. Movable kidney is one of the most frequent causes of simple hydronephrosis, and the success of nephrorrhaphy in the treatment is highly gratifying. How it succeeds so well is easily understood when we consider the angulation and occlusion of the ureter in movable kidney, and how in remedying the renal displacement the ureter is straightened and the angulation removed.

The treatment of renal diverticula is by no means easy. Often the most satisfactory method will be a kidney resection, removing the diverticulum. This often means a portion of the urinary excreting tissue, a matter always demanding serious consideration. It may be possible in some cases to so drain the renal diverticulum that danger of distension is removed. Of course, if the parenchymatous tissue of such diverticulum is destroyed from long continued pressure, then its removal is advisable, because if left it may act as an auxiliary renal pelvis, and from its position fail to drain freely. That renal calculi should be removed goes without saying. Here is great opportunity for care in surgical technique to prevent infection of the kidney in its crippled condition. The treatment of aberrant branches of the renal artery requires great judgment, as the pressure upon the ureter by such vessels may be increased by such treatment.

In proper cases such vessels may be ligated and severed, but even this may result in permanent interruption of the blood circulation in the parts supplied by the vessels so treated. The circulation of the kidney is unlike that of other organs as a rule. At least some portions of it are supplied by individual vessels. There is practically no anastomosis between the two lateral halves of it. It may be possible to so revolve the organ upon its longitudinal axis that the ureter may be freed from such pressure. If so, then an attempt to so fasten the revolved organ should be made. It is conceivable that in special cases severing of the ureter with reunion of the cut ends may be required to free it from entanglement with compressing blood vessels. Hemorrhages from injuries of the kidney and renal pelvis may produce obstructing coagula that give rise to accumulation of urine in the kidney. In such cases the ureteral bougie may be sufficient to dislodge it with the result of causing its expulsion into the bladder or even

through the urethra. Cases have arisen, however, in which it failed and exploration by the loin required.

Of the various conditions outside the urinary tract the treatment should be appropriate to each. The prolapsed or leukemic spleen, the ovarian, uterine and other tumors should be removed. Late cancer of the pelvic organs, of course, has never been successfully combated. Enlarged glands or bands of tissue compressing the duct should be removed, and antisyphilitic treatment applied to syphilitic deposits along the urinary tract.

In some cases no condition will be found that will seem to be a logical cause, and then simple lumbar incision and drainage of the duct will be best. This procedure will be advisable in a large proportion of cases from nearly any cause. Even in hopeless stages of pelvic malignant disease this procedure may prolong life and ameliorate suffering. Nephrectomy in hydronephrosis should never be done except when positive evidence of permanent loss of function of the kidney is at hand.

1404 H Street.

#### DISCUSSION.

*Dr. J. Taber Johnson* said many cases are double; many cases die from other causes, no symptoms being noted during life. In the great majority of cases, the cause is due either to malignant disease or calculi. Kidney substance is as a rule destroyed when only small amount of fluid is detected. Not much aid is derived by urinary examination. Hydronephrosis does not remain as such, but soon becomes a pyonephrosis.

Related a case of disappearance of tumor due to displacement of calculus.

*Surgeon-General Wm. A. Forward, U. S. Army*, says: If his skill in operating is equal to his beautiful scientific presenting of his paper, his success in this line of work is assured.

*Dr. Bovee*, in closing, dwelt on the necessity of a correct diagnosis, and claimed there should be but little chance of error if all possible means were taken as catheterization of ureter, etc. He never removed the kidney unless it was absolutely necessary.

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A shoemaker has a card in his window reading: "Any respectable man, woman or child can have a fit in this store."

## Proceedings of Societies, Etc.

### VIRGINIA STATE BOARD OF MEDICAL EXAMINERS.

The Medical Examining Board of Virginia met in Richmond at Murphy's Hotel, December 15th, 9 P. M., 1902, Dr. R. W. Martin, Lynchburg, Va., President, presiding, and Dr. R. S. Martin, Stuart, Va., Secretary and Treasurer, recorded.

On roll-call, the following other members were found to be present: Drs. W. L. Robinson, Danville; O. C. Wright, Jarratts; C. W. Rodgers, Staunton; Samuel Lile, Lynchburg; Herbert M. Nash, Norfolk; E. T. Brady, Abingdon; Robert Randolph, Boyce; R. M. Slaughter, Theological Seminary; E. C. Williams, Hot Springs; A. S. Priddy, Marion; J. E. Warriner, Brook Hill; W. B. Robinson, Tappahannock.

Minutes of the last meeting of the Board were read and adopted.

The plan suggested by the committee, appointed at last meeting of the Board to formulate the mode for conducting oral examinations was read and adopted.

Dr. R. S. Martin introduced the following resolution, which was adopted:

It appearing to the Board that a number of non-graduates did at the last examination held by the Board take branches on which they had not passed at college, which is contrary to the law; therefore be it

*Resolved*, That all undergraduates who shall hereafter stand this Board, and take branches on which they have not passed at college, shall forfeit the whole examination by so doing.

Questions on Anatomy, Physiology, Surgery, Materia Medica and Therapeutics, Practice, Hygiene and Medical Jurisprudence, Histology, Pathology and Bacteriology, Obstetrics and Gynecology, and Chemistry were read and adopted.

Only half the number of questions were put up for the written examination, as an oral examination was given each applicant in addition to the written.

Dr. W. L. Robinson moved that the next regular session of the Medical Examining Board of Virginia shall meet in Richmond, Va., June 22, 23, 24, 25, 1903. Adopted.

Board, on motion, adjourned, subject to call of the President this week.

The Board, pursuant to the call of the President, met in the faculty room of the Medical College of Virginia, 3:30 P. M., December 17, 1902. Dr. R. W. Martin, President, presiding, and Dr. R. S. Martin, Secretary, recorded. Present: Drs. O. C. Wright, H. M. Nash, A. S. Priddy, J. E. Warriner, S. Lile, R. M. Slaughter, Robert Randolph, E. T. Brady, W. B. Robinson, and C. W. Rodgers.

Dr. Slaughter introduced the following resolution, which was adopted:

*Resolved*, That the thanks of the Board be, and hereby are, extended to the Faculty of the Medical College of Virginia for the use of their building and other courtesies, and that the Secretary be required to send a copy of this resolution to the dean.

After much discussion as to continuing the oral examinations, it was decided to continue the oral examinations, and the following resolution in regard to them by Dr. S. Lile was read and adopted:

*Resolved*, That each member of the Board of Examiners shall formulate a plan to facilitate that part of the examination given orally; that these several plans be forwarded to the President not later than April 1, 1903; and that the President and Secretary be a committee to formulate such plans, with the suggestions, etc., from the other members as will best answer the purpose.

There being no further business for consideration, the Board adjourned.

R. W. MARTIN, M. D., President.

R. S. MARTIN, M. D., Secretary and Treas.

## The Written Examination Questions

OF THE

### Virginia State Board of Medical Examiners.\*

Held at Richmond, Va., December 16-18, 1902.

#### SECTION ON HYGIENE AND MEDICAL JURISPRUDENCE.

Dr. A. S. Priddy, Marion, Va., Examiner.

#### *Questions on Hygiene.*

1. What hygienic defects should be guarded against in the construction of a school building?

\*In answers by the applicant to any of the questions of any of the sections, it is distinctly understood that each applicant pledges his or her honor that he or she has neither given nor received information improperly during the examinations. Furthermore, each applicant, when he finishes the papers of any section, must sign them by his registered number and not his name.

2. What infectious diseases may be conveyed through the medium of air, water, food? Give as far as you know the causative germ for each disease mentioned.

3. What are the possible results of the use of tobacco by growing boys in regard to (a) circulation, (b) vision, (c) air passages?

Select and answer any two only of the above questions.

*Questions on Medical Jurisprudence.*

1. In the case of a body over which a train had passed, and it was suspected that death had occurred previously, what indications would point to this fact?

2. In what does the character of the evidence of a medical expert differ from that of an ordinary witness?

3. What is criminal "malpractice"? What is civil malpractice?

Select and answer any two only of the above questions.

SECTION ON ANATOMY.

Dr. C. W. Rodgers, Staunton, Va., Examiner.

*Questions on Anatomy.*

1. Describe the pharynx; shape, length, attachments, openings, structure and relations.

2. Give a description of the kidney, including size, shape, location, relations and general structure. Minute anatomy not wanted.

3. Name the muscles of the abdominal region, and give origin and insertion of the external and internal oblique.

4. Describe the optic nerve, including origin, arrangement of fibres at the commissure, and distribution.

SECTION ON PRACTICE.

Dr. E. T. Brady, Abingdon, Va., Regular and Chairman; Dr. E. C. Williams, Hot Springs, Va., Homeopathic.

1. Give causes, symptoms and treatment of acute articular rheumatism. State most frequent complication; how it is best met, and what symptoms indicate its approach?

2. In what troubles are nausea and vomiting most frequently found? What are the characteristic differences between vomiting of cerebral and of gastric origin?

3. What are the varieties, and treatment of jaundice?

4. Differentiate phthisis and asthma?

Answer any three questions, and only three.

Sign pledge. Put your number and name of branch on outside of paper.

SECTION ON HISTOLOGY, PATHOLOGY, AND BACTERIOLOGY.

Dr. R. M. Slaughter, Theological Seminary, Va., Examiner.

*Answer Three Questions.*

1. (a) Give the normal histology of the Fallopian tubes.

(b) Define degeneration and give its varieties.

(c) Name six micro-organisms pathogenic in man; give the morphological characteristics of each and name the disease each is associated with.

2. (a) Give the normal histology of the pancreas.

(b) Describe the changes which take place in the arterial walls in arterio-sclerosis.

(c) Name the bacteria that may cause pyosalpinx.

3. (a) Define diabetes mellitus.

(b) Describe the character of the urine in this disease as regards color, odor, quantity and specific gravity.

(c) Give pathological nature of lupus, rodent ulcer, and tinea circinata and scabies.

4. (a) What is scirrhus carcinoma?

(b) In what organ does it occur so frequently?

(c) Describe the difference (histological) between carcinoma and sarcoma.

SECTION ON SURGERY.

Dr. Samuel Lile, Lynchburg, Va., Examiner.

1. (a) Name (3) three dislocations of hip joint, and give diagnosis of each.

(b) Give diagnosis of stone in the bladder and of gall stone.

(c) Tell what Buck's extension is, how applied, and when indicated.

2. (a) Diagnose and treat a fracture of the clavicle in its middle third.

(b) Describe fully the method of procedure in amputating at the tarso-metatarsal articulation.

3. (a) Differentiate strangulated and incarcerated hernia.

(b) What is stricture of the urethra, and what balanitis?

(c) Give diagnosis of syphilis and varicocele, and describe operation for the latter by open method.

## SECTION ON THERAPEUTICS.

Dr. J. E. Warriner, Brook Hill, Va., Examiner.

*I. Block of Questions.*

(a) Describe the parts of a prescription and give a typical example.

(b) Write a prescription for a patient in the first stage of croupous pneumonia.

(c) Give the physiological action of digitalis and state in what lesions and conditions it should be used.

(d) What is meant by coal tar derivatives and what is their action in general?

(e) Name two local and two general anesthetics, and state what precautions should be taken in their use.

*II. Block of Questions.*

(a) How do you prepare patients for the administration of anesthetics?

(b) How do you administer ether, and under what circumstances is chloroform preferred to ether?

(c) How should a case of poisoning by chloroform be treated?

(d) What is the source of ichthyol, and what are its uses in medicine?

(e) What is the differential diagnosis between alcoholic narcosis and uremic unconsciousness?

## SECTION ON MATERIA MEDICA.

Dr. W. B. Robinson, Tappahannock, Va., Examiner.

*I. Block of Questions.*

(a) Name the principal alkaloids, and give the physiologic effects of cinchona.

(b) Give the physiologic effects of opium in moderate, full and toxic doses, and name the principal alkaloids, with the dose of each.

(c) In what manner is the system affected by an overdose of chloral hydrate?

*II. Block of Questions.*

(a) Name the official salts of arsenic, with dose of each preparation; and give symptoms of chronic arsenical poisoning.

(b) Name the mineral acids, and state physiological peculiarities.

(c) Compare the physiological action of anti-pyrin and acetanilid.

## SECTION ON PHYSIOLOGY.

Dr. Robert C. Randolph, Boyce, Va., Examiner.

*I. Block of Questions.*

(a) What are carbohydrates?

(b) Name three (3).

(c) Name the most important inorganic constituents of the body.

*II. Block of Questions.*

(a) What are the chief modes of heat production in the human body, and in what special tissues is heat leargely produced?

(b) Define metabolism.

(c) Name the three (3) most important organic substances found in the human body.

*III. Block of Questions.*

(a) Locate cortical centre of the first cranial nerve.

(b) What bodies give fibers to form the optic tract?

(c) What nerve supplies the posterior one-third of the tongue with taste and sensation?

## SECTION ON CHEMISTRY.

Dr. O. C. Wright, Jarratts, Va., Examiner.

*I. Block of Questions.*

(a) Define matter, force and energy.

(b) Define gravitation, weight and specific weight.

(c) What are elements and what are compounds?

*II. Block of Questions.*

(a) Give characteristic properties of acids, basic and neutral substances.

(b) What are monobasic, dibasic and tribasic acids?

(c) Define a normal salt, an acid salt and basic salt.

*III. Block of Questions.*

(a) Mention the chemical and physical properties of phosphorus.

(b) For what is phosphorus principally used, how manufactured, and what are its antidotes?

(c) Name the six metals of the iron group.

*IV. Block of Questions.*

(a) Give chemical and physical properties of urine, stating average quantity passed in 24 hours by adult male, and what per cent. is solids?

(b) A patient voiding 3 to 6 quarts urine in 24 hours having a specific gravity of 1040—what disease would you suspect?

(c) Give a reliable test for pus in the urine.

*Answer only three of the above blocks.*

## SECTION ON GYNECOLOGY.

Dr. W. L. Robinson, Danville, Va., Examiner.

1. Describe the physical appearance of complete laceration of the perineum. What are the local inconveniences and changed relations of pelvic organs that frequently result?

2. What are the reflex symptoms in laceration of the cervix uteri; the remote dangers if not repaired; and describe the technique of operation?

3. Give causes, symptoms and treatment of prolapsed ovary.

## SECTION ON OBSTETRICS.

Dr. Herbert M. Nash (Chairman), Norfolk, Va., Examiner.

1. What are the predisposing causes of abortion, both maternal and foetal?

2. What factors determine the rotation of the foetal head in labor?

3. How is the labor affected, should the occiput rotate to the rear? Describe its prevention, and the further management of the case, should efforts to prevent such a termination fail?

*Answer any two of the three questions.*

ALPHABETICALLY ARRANGED LIST OF APPLICANTS FOR LICENSE TO PRACTICE MEDICINE, SURGERY, ETC., WHO PASSED SATISFACTORY EXAMINATIONS BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA DURING ITS SESSION DECEMBER 15-18, 1902, HELD AT RICHMOND, VA.

Andrews, Chas. J., Norfolk, Va., Med. Col. of Virginia, 1902.

Brown, Jas. A., Petersburg, Va., Leonard Med. Col., 1902.

Brown, Clarence S., Portsmouth, Va., Leonard Med. Col., 1901.

Cowan, C. M., Bristol, Tenn.-Va., Tenn. Med. Col., 1902.

Elliott, S. T., Danville, Va., Med. Col. of S. C., 1900.

Ferebee, C. G., Richmond, Va., Med. Col. of Va., 1902.

Griffith, Morgan F., Pottsville, Pa., Ky. School of Med., 1902.

Guerrant, J. D., Danville, Va., Hos. Col. of Med., Ky., 1901.

Harwood, Ashton, Binns Hall, Va., Med. Col. of Va., 1902.

Halsey, W. M., Jr., Portsmouth, Va., Syracuse Med. Col., N. Y., 1902.

Hutchins, B. H., Portsmouth, Va., Leonard Med. Col., 1902.

Hart, E. R., Suffolk, Va., Univ. Col. of Med., 1901.

Jones, J. J., Hampton, Va., Leonard Med. Col., 1902.

Jamieson, J. S., Alexandria, Va., Ky. School of Med., 1891.

Keene, Walter P., Brentsville, Va., Georgetown Univ., 1900.

Kennicott, Phillip A., Palmyra, Va., Phys. and Surg., Chicago, Ill., 1889.

McMurdo, Percy F., Univ. of Va., Univ. of Va., 1902.

Moore, W. C., Berryville, Va., Univ. of Va., 1902.

Mendelsohn, L., Norfolk, Va., Univ. of Berlin, 1898.

Nelson, Alexander T., Staunton, Va., Columbian Univ., 1902.

Owen, C. C., Chase City, Va., Univ. of Va., 1896.

Rodgers, J. D., Washington, D. C., Columbian Univ., 1902.

Smith, J. Weldon, Cashmere, W. Va., Med. Col. of Va., 1898.

Teeter, W. H., Wallace, Va., Phys. and Surg., St. Louis, 1899.

Wilson, Allen B., Portsmouth, Va., Leonard Med. Col., 1902.

Weaver, Z. Leonid s. Sterling, Va., Med. Col. of Va., 1900.

INSTITUTIONS REPRESENTED BY APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, FALL SESSION AT RICHMOND, VA., DECEMBER 15-18, 1902.

	Total Number of Applicants from each College.	Total Number of Applicants Licensed from each College.	Total Number of Applicants Rejected from each College.	Partial Examination.
Medical College of Virginia .....	6	5	1	
University of Virginia .....	4	3	1	
University College of Medicine, Richmond, Va. ....	1		1	
University of Maryland .....	2	1	1	
Baltimore University .....	1		1	
Baltimore Medical College .....	1		1	
Maryland Medical College .....	1		1	
Physicians and Surgeons, St. Louis .....	1	1		
College of Physicians and Surgeons, Chicago .....	1	1		
University of the South .....	1		1	
Leonard Medical College .....	5	5		
Medical College of South Carolina .....	1	1		
Georgetown University .....	1	1		
Syracuse University .....	1	1		
Kentucky School of Medicine .....	2		2	
University of Berlin .....	1	1		
Tennessee Medical College .....	1		1	
University of Illinois .....	1		1	
Columbian University, D. C. ....	2	2		
Hospital College of Medicine, Kentucky .....	1	1		
Hahneman Medical College .....	1		1	
* Kentucky School of Medicine .....	1		1	
Non-graduates taking partial examination .....	35			35
Total .....	73	26	11	25

\* D. an of College says he is not a graduate of his school. Applicant has since admitted to the Dean that the diploma presented was the property of another.

Nos. of examina- tion papers.	LIST OF INSTITUTIONS Whose Graduates were Rejected by the Medical Examining Board of Va., at its Regular Fall Meeting, December 15-18, 1902, With Percentage Marks of each.	COLLEGE OF GRADUATION.											Average Percentage
		Hygiene and Med. Jurisprudence.	Chemistry.	Anatomy.	Physiology.	Histology, Pathol- ogy, Bacteriology.	Gynecology.	Obstetrics and Gynecology.	Maternal Medicine and Therapeutics.	Practice.	Surgery.	Total.	
20	University College of Medicine.....	95	80	76	65	70	74	67½	73	68	665½	73+	
33	Baltimore Medical College .....	78	75	65	41	53	77½	59½	70	70	603½	67+	
41	Baltimore University .....	78	58	54	40	50	68½	49½	48	50	516	57+	
43	Medical College of Virginia.....	84	80	71	60	75	82	73	74	60	659	73+	
45	Maryland Medical College.....	90	75	70	45	50	66¾	75	50	55	576¾	64+	
46	University of Illinois.....	65	45	76	91¾	75	73	80½	63	68	607	67+	
62	University of Maryland.....	82	78	78	69	73	74	48¾	72	62	638¾	70+	
65	University of the South.....	75	75	70	75	75	79½	73	80	60	664½	73+	
66	University of Virginia.....	82	75	72	60	90	67½	70½	75	70	662	73+	
68	*Claimed to be a graduate from Kentucky School of Medi- cine.....	90	65	10	30	18	42¾	40	15	25	24½	26+	
70	Hahnemann Medical College .....	60	60	75	60	75	81½	88	75	60	664½	73+	

\* Dean of College says he is not a graduate of his school. Applicant has since admitted to the Dean that the diploma presented was the property of another.

INSTITUTIONS REPRESENTED BY THE APPLICANTS BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, FROM THE ORGANIZATION OF THE BOARD, JANUARY 1, 1885, TO DECEMBER 15 18, 1902.	Total Number from each Institution.	Total Number Licensed First Examination.	Total Number Rejected First Examination.	Licensed on Second Examination.		Licensed on Third Examination.		Licensed on Fourth Examination.		Licensed on Fifth Examination.		Incomplete or Withdrawn.	Partial examination.
				Rejected Second Examination.	Rejected Third Examination.	Rejected Fourth Examination.	Rejected Fifth Examination.						
Total number before Board from organization to June 25-28, 1900.	1641	1157	426	85	60	18	21	2	21	1	30	13	
Medical College of Virginia .....	50	24	6	18	1	3	3	..	..	..	..	..	
University of Virginia .....	38	24	2	10	1	1	1	..	..	..	..	..	
University College of Medicine, Richmond, Va.....	52	37	9	13	2	1	..	..	..	..	..	..	
College of Physicians and Surgeons, Baltimore .....	4	4	..	..	..	1	..	..	..	..	..	..	
College of Physicians and Surgeons, New York .....	4	4	..	..	..	..	..	..	..	..	..	..	
College of Physicians and Surgeons, Atlanta, Ga. ....	4	1	2	2	..	..	..	..	..	..	..	..	
University of Maryland .....	18	13	2	2	..	..	..	..	..	..	1	..	
Baltimore University .....	6	2	4	2	..	..	..	..	..	..	..	..	
Maryland Medical College .....	9	2	4	2	..	..	..	..	..	..	..	..	
Woman's Medical College of Philadelphia .....	1	1	..	..	..	..	..	..	..	..	..	..	
Woman's Medical College of Baltimore .....	1	1	..	..	..	..	..	..	..	..	..	..	
Jefferson Medical College .....	5	4	1	1	..	..	..	..	..	..	..	..	
University of the South .....	11	5	10	7	2	2	..	..	..	..	..	..	
Leonard Medical College .....	13	7	7	1	2	..	..	..	..	..	..	..	
Howard Medical College .....	8	5	3	..	..	..	..	..	..	..	..	..	
Medical College of the State of South Carolina .....	3	1	1	1	..	..	..	..	..	..	..	..	
Tennessee Medical College .....	2	2	0	..	..	..	..	..	..	..	..	..	
Vanderbilt University .....	1	1	1	..	1	1	..	..	..	..	..	..	
Baltimore Medical College .....	5	2	4	..	..	..	..	..	..	..	..	..	
Georgetown College, Washington, D. C. ....	2	2	..	..	..	..	..	..	..	..	..	..	
Columbian University, District of Columbia .....	3	3	..	..	..	..	..	..	..	..	..	..	
Hospital College of Medicine, Louisville .....	2	2	..	..	..	..	..	..	..	..	..	..	
University of Louisville, Medical Department .....	1	1	..	..	..	..	..	..	..	..	..	..	
Howard University, Medical Department, District of Columbia .....	2	2	..	..	..	..	..	..	..	..	..	..	
University of New York .....	2	2	..	..	..	..	..	..	..	..	..	..	
University of Georgia .....	2	1	1	..	..	1	..	..	..	..	..	..	
University of Pennsylvania .....	2	2	..	..	..	..	..	..	..	..	..	..	
Louisville Medical College .....	1	1	..	..	..	..	..	..	..	..	..	..	
Johns Hopkins University .....	2	1	1	1	..	..	..	..	..	..	..	..	
Medical College of Ohio .....	1	1	1	1	..	..	..	..	..	..	..	..	
Sh w University .....	1	1	..	..	..	..	..	..	..	..	..	..	
Bufo University .....	1	1	..	..	..	..	..	..	..	..	..	..	
Long Island Medical College .....	1	1	..	..	..	..	..	..	..	..	..	..	
University of Texas .....	1	1	..	..	..	..	..	..	..	..	..	..	
College of Physicians and Surgeons, St. Louis.....	2	2	..	..	..	..	..	..	..	..	..	..	
Hahnemann Medical College .....	1	..	1	..	..	..	..	..	..	..	..	..	
College of Physicians and Surgeons, Illinois.....	1	1	..	..	..	..	..	..	..	..	..	..	
Kentucky School of Medicine .....	2	2	..	..	..	..	..	..	..	..	..	..	
University of Berlin .....	1	1	..	..	..	..	..	..	..	..	..	..	
Syracuse University .....	1	1	..	..	..	..	..	..	..	..	..	..	
* Kentucky School of Medicine .....	1	..	1	..	..	..	..	..	..	..	..	..	
College unknown .....	1	1	..	..	..	..	..	..	..	..	..	..	
Non-Graduates taking partial examination .....	187	..	..	..	..	..	..	..	..	..	1	186	
Totals.....	2112	1324	490	150	68	29	25	2	21	1	32	199	

\* Dean of this college says he is not a graduate of his school. Applicant has since admitted to the Dean that the diploma presented was the property of another.

## Analyses, Selections, Etc.

### Cyodiagnosis.

Dr. Eleanor Fairman Preston, member of the Medical Society of Virginia, formerly of Marion, Va., but now interne in the Children's Hospital, San Francisco, Cal., contributes a paper on this subject (*Occidental Med. Times*, Dec., 1902), which is specially important as noting, for the first time in medical history, the finding of the colon bacillus in the fluid of the spinal canal. Her extremely creditable work leads us to give the article almost *in extenso*.

Cyodiagnosis is the term applied to the method by which Widal and his assistant, Ravaut, determine the etiology of pleurisy, meningitis and other inflammatory processes occurring in serous cavities. Dr. Harry M. Sherman, San Francisco, has been interested in its practical application. Cytologic examinations have been made in a number of his cases, tubercular and non-tubercular. The majority of Ravaut's observations were made upon pleural effusions, but his conclusions apply equally to the secretions of all serous membranes.

Widal says: "It is clear that if all purely serous effusions presented the same cellular formula, whatever their nature, cyodiagnosis would not exist. The method which I have proposed with M. Ravaut for the study of serous effusions is based upon the fact that the cellular formula varies according to the nature of a sero-fibrinous pleurisy."

Sero-fibrinous fluids of the pleura contain red, white and endothelial cells in varying proportions. In making cytologic examinations, the purpose has been to determine whether the histologic formula of a pleurisy varies according to its nature. Since the cytologic character of an effusion depends directly upon the anatomic lesion of the serous membrane, the cytosopic study of the fluid ought to be the most available method of diagnosis. Nor are these researches limited to the pleura; the examinations made upon cerebro-spinal fluid, articular fluid, hydroceles, etc., show the general bearing of cyodiagnosis.

Ravaut reviews and condemns as inexact the older methods of investigation—cultures, inoculation, estimation of fibrin, comparative estimation of chlorides, injection of tuberculin, and tests of permeability of the pleura. Anatomical and pathological examinations alone could

in all cases establish positively the presence or absence of pleural tuberculosis. But the cytologic appearance of a pleurisy corresponds to the pleural lesion. Hence the nature of the effusion, the anatomical lesion, and the cytologic formula seem to be intimately connected and dependent upon one another.

An autopsy made upon one of Widal's patients, who died in the course of a right-sided primary pleuro-tuberculosis, corresponded with the results of the cytologic examination. The fluid was purely lymphocytic, and produced tuberculosis in two guinea pigs, which were inoculated. The parietal and visceral pleura were adherent at the level of the apex and at the level of the diaphragm; elsewhere the adhesions were less firm, and towards the middle of the lung were marked only by filaments of fibrin. The fibrinous exudate was not yet organized. When the lung was exposed, it appeared to be covered by a soft, villous deposit, four millimeters thick, which enveloped it like a sac. On section, it was easy to distinguish with the naked eye: (1) The slightly thickened visceral pleura, as a mottled white line; (2) a grayish membrane two millimeters thick covered with a cushion of fibrin. The parietal pleura presented the same appearance. Tubercles could not be seen with the naked eye. Histologically the classical lesions were found, and the layers revealed by macroscopic examination could be seen still more clearly. The neomembrane was formed of vascular-connective tissue, and contained many giant cells. The pseudo-membrane consisted of fibrinous layers. Peron found the bacilli of Koch in the pseudo-membrane, but Ravaut and Widal have found them neither in this layer nor in the giant cells of the neomembrane. Another more common form is the pleural tuberculosis of consumptives, secondary to the pulmonary lesion.

These two forms differ cytologically and anatomically. In the second type the fibrinous coat does not exist. There is a thin vascular-connective neomembrane, with caseous centres, sometimes visible to the naked eye, and are rich in bacilli and giant cells. A step further, the accentuation of its fibro-caseous character, and thickening of the neomembrane, the accentuation of its fibro-caseous character, and we have tubercular empyema. There is, then, an anatomical bond between the apparently sero-fibrinous pleurisy of the consumptive and tubercular empyema. This is also cytologically true.



Polynuclears are found in both, and by their increase determine the change from the sero-fibrinous to the purulent type.

In pleurisies which occur in heart disease, Bright's disease, etc., the neomembrane is never found. The pleura is thin and transparent. Histologically it appears normal, except at some points, which are slightly thickened, and which correspond to old fibrinous deposits.

In septic pleurisies, due to pneumococcus or streptococcus infection, the pleura is scarcely altered. Above the hepatized regions are fibrinous deposits, easily detached. Everywhere else the pleura appears normal. But if these pleurisies become purulent, the fibrinous deposits spread, organize, and form a pyogenic neomembrane, whose thickness varies with the duration of the pleurisy. Ravaut thus recognizes tubercular pleurisy, which has a neomembrane and non-tubercular pleurisy, which has none.

Comparing cytologic and anatomical examinations, effusions occurring in pleurisies which have a neomembrane never contain endothelium, while the liquid is rich in endothelial cells when the neomembrane is not present. As soon as the neomembrane is formed, it hinders endothelial desquamation. In effusions without a neomembrane, the fluid alters the endothelium, which desquamates more easily. By the presence or absence of endothelial cells, a diagnosis may be formed which is as valuable as an anatomical examination. In primary pleuro-tuberculosis there are found only mononuclear elements. Endothelial cells and lymphocytes characterize the pleurisy of Bright's disease. In pneumococic pleurisies there are polynuclears in the beginning, but the endothelial cells are of more importance.

To establish the significance of lymphocytes and polynuclears, consider the pleura as a great lymph space. The smallest serous exudate in its cavity will contain lymphocytes. They, with the endothelial cells, remain the only elements in the liquid, until some infectious or toxic cause compels the presence of other elements endowed with phagocytic powers. Under these conditions, polynuclears appear by diapedesis. Here, as elsewhere, the polynuclear is an active element, in contrast with the lymphocyte, which may be considered as a passive element. The exudation of liquid and of lymphocytes is a mode of pleural reaction when the irritation is not so acute as to necessitate the presence of

polynuclears. These facts form a general law, which is applicable to all serous membranes. The lymphocyte corresponds to a subacute or even chronic irritation; the polynuclear to an irritation which is acute.

*Technique.*—Almost all these effusions are fibrinous. The fibrin coagulates quickly and entangles the cells. Hence the first step is defibrination. The cellular elements must be concentrated, and only as much liquid retained as is necessary for the making of cover-glass preparations. If there is too much liquid, the albumen, abundant in these effusions, will coagulate, forming upon the slide a mass which will spoil the staining and make the examination almost impossible. The ideal is to have the greatest number of cells with the least liquid in the smallest space possible. This is accomplished by centrifugation and decantation. The fluid is taken aseptically, drawn with an aspirator or trocar, by exploratory or evacuating puncture, directly into the debrinating flask or into any clean receptacle. It should be done quickly, to forestall coagulation. The quantity required is 15 to 20 c. c., on an average, but an examination can be made with 1 to 2 c. c.

*Defibrination.*—This may be done immediately, or the liquid may be collected and kept in a test tube.

*Immediate Defibrination.*—If there is enough liquid, it is shaken in a flask with glass beads as large as peas. But if there are only one or two c. c., a test tube is used with smaller beads. Large beads are preferable, because small ones may be lost in the coagulum. If the effusion is very fibrinous, a coagulum appears in a few minutes. It increases until it forms a true clot. Sometimes, instead of a homogeneous mass, many little coagula float in the liquid. The time necessary for defibrination varies from fifteen minutes to an hour or more.

*Delayed Defibrination.*—When the fluid is kept in a test tube for twenty-four to forty-eight hours, the coagulum forms spontaneously, and includes most of the cells. The liquid and coagulum are emptied into a flask with beads, and shaken for ten minutes. The clot is broken up and the cells liberated. The examination should not be made after forty-eight hours, because the elements alter quickly. This is emphasized when the fluid has not been taken aseptically, for it then becomes a good culture medium, and the cells disintegrate. In both immediate and delayed defibrination the fibrin is

to be removed, leaving the liquid which holds the cells in suspension.

*Centrifugation and Decantation.*—Centrifugation is complete when a drop of the liquid examined on a slide contains no cellular elements. A clot has then formed at the bottom of the tube. The liquid is poured off, or decanted with a pipette. By means of a platinum wire or closed pipette, the clot is diluted in the liquid, which remains, until the mixture has almost the fluidity of blood. It is only by experiment that one learns the quantity of fluid that one should keep; there is always a tendency to dilute too much.

*Spreading upon the Slide.*—Upon a series of very clean slides, small drops of the dilution are placed. The drop is not spread upon the slide, as blood is spread, with cover slips. With a platinum wire or the end of a closed pipette, it is rubbed on the glass in larger and larger circles. If the spreading has been well done, the preparation, though a little thicker, will resemble a preparation of blood. The clot thus spread dries quickly. An examination of a drop under the microscope, before drying, will often reveal details which cannot be brought out by staining.

*Fixing and Staining.*—The same fixations and stains are used as in blood preparations. Alcohol and ether are employed in fixing preparations for hæmatein and eosin; heat for Ehrlich's triacid. The elements found are those which are seen in blood, normal and pathological. But in addition there is a special element of importance, the endothelial cell. Usually these cells are united two by two or in sheets. They come from the endothelial desquamation, which occurs at the beginning of almost all pleurisy. These cells persist during the course of the pleurisy, or they separate and disintegrate.

Ravant classifies pleural effusions as:

A. Tubercular pleurisy.

B. Non-tubercular pleurisy.

1. Aseptic (occurring in heart disease, Bright's disease, and associated with neighboring lesions).

2. Septic (due to streptococcus infection, pneumococcus, etc.)

C. Pleural eosinophilia.

#### *Cytologic Formule.*

##### A. TUBERCULAR PLEURISIES.

Sero-fibrinous pleurisy of tubercular origin present two different types, primary and second-

ary. They have the same nature, and are distinguished only by different reactions. In primary pleurisy the organism responds to an apparently primary infection by bringing all its defensive resources into play. The pleural fluid exercises its germicidal power, the new pleural formations try to arrest and circumscribe the microbial infection, and the fibrin entangles the bacilli in its meshes. The lesions are repaired and cicatrize, uniting the parietal and visceral pleura. But in secondary pleurisy the infection seems to be continued either by communication with pulmonary lesions or by the opening of subpleural tubercles into the pleura. The organism has neither opportunity nor strength to react. The neo-membrane is thin. The liquid, which is without fibrin, is filled with virulent bacilli, and the cells contained in it quickly die.

1. *Primary Pleuro-Tuberculosis* is characterized by the almost exclusive presence of lymphocytes. They are always mixed, however, with some red cells. This extreme lymphocytosis enables us to make an etiologic diagnosis at once. Sometimes there are occasional mononuclear cells, always altered, and staining badly. They soon disappear, and are of no significance. If the effusion is examined as early as the sixth to tenth day of the pleurisy, a few polynuclears may be seen, never exceeding 10 per cent. In some of these cases, staphylococci have been found. They disappeared quickly, and with them the polynuclears, so that a double infection is to be inferred. Sheets of endothelial cells have never been found in any stage of the effusion.

2. In *Secondary Pleuro-Tuberculosis*, the fluid contains comparatively few cells. They are altered, irregular, and filled with vacuoles and refractive granules, which turn black in the presence of osmic acid. In stained preparations one recognizes with some difficulty a few red cells and amorphous masses which stain uniformly with nuclear reagents, and which represent altered leucocytes, especially polynuclears. Many of these can be determined only by the neutrophilic granules stained with Ehrlich's triacid. There are occasional mononuclear elements, but endothelial cells have never been found. The cytologic formula at the beginning of the secondary tubercular pleurisy is not the same as in the later stages. In the one case where Ravant made an early examination, there were many polynuclears, some lymphocytes, and

a few isolated mononuclear cells. A re-examination ten days later showed that the effusion was almost purely lymphocytic, comparable to that of primary pleuro-tuberculosis. It is probable that all cases of secondary pleuro-tuberculosis show this formula in the early stages. The microbial infection, resulting from the rupture of a subpleural tubercle, or from the opening of a pulmonary lesion into the pleura, may be more intense than in primary pleuro-tuberculosis, and determines the presence of polynuclears. If the organic reaction is not sufficient to combat the infection, the polynuclears alter and disappear.

#### B. NON-TUBERCULAR PLEURISIES.

##### I. Pleurisy Apparently Aseptic.

a. *Pleurisies of Bright Disease and Heart Disease.*—Whether we consider these pleurisy as being of toxic origin, of congestive origin, or of mechanical origin analogous to a pleural edema, we always find in the effusion the same characteristic elements—endothelial cells. They form sheets composed sometimes of eight to ten cells. The nuclei are distinct, but the outlines cannot be traced. If the cells are not in sheets, they are united two by two. There is a sort of constriction at their point of union, or the second cell seems to be only a budding of the first. The eosin-hæmateine stain shows best the character of the cells: The homogeneous protoplasm becomes rose-colored, the nucleus violet, but both stain badly. When the effusion is in the earliest stages, and corresponds to the purest type of hydrothorax, the endothelial sheets are so numerous that they cover almost the whole field of the microscope. Later they diminish in number, and are mixed with lymphocytes. The cells become dropsical, wither and die. The presence of endothelial cells, even when reduced to two or three cells, is an important diagnostic sign. They have never been found in tubercular pleurisy, though single cells have been seen. In an effusion occurring in heart disease or Bright's disease, even though it is rich in lymphocytes or polynuclears, the presence of endothelial sheets shows that the condition is not tubercular.

b. *Pleurisies Associated with Malignant Tumors of the Lung.*

Case 1. The pleural fluid contained endothelial sheets, lymphocytes, some polynuclears, and many red cells. Autopsy showed a generalized carcinoma of ovarian origin.

Case 2. Effusion slightly hemorrhagic and very fibrinous; contained endothelial sheets, lymphocytes, red cells, and large cells filled with refractive granules and vacuoles. These characteristic elements were larger than endothelial cells. In some the nucleus showed the figures of karyokinesis; in others it seemed to be formed of tangled threads. These cells at once suggested the neoplastic nature of the effusion. They probably fell into the pleural fluid only after rupture of the gorged lymphatics.

##### II. Septic Pleurisy.

The term septic should be applied to non-tubercular sero-fibrinous pleurisy only when the presence of pathogenic microbes has been established by means of slides or cultures. If pleurisy remains sero-fibrinous, the microbes lose their virulence and disappear, and the effusion is absorbed. But if the organic reaction is insufficient, the pleurisy quickly becomes purulent.

a. *Pneumococcal Pleurisy.*—The effusion contains polynuclear neutrophils, their number being in proportion to the number and virulence of the bacilli. In the beginning of infection there are also endothelial sheets and scattered endothelial cells. These alter quickly, separate and disintegrate. Some of them, more resistant, play the role of macrophagi. There is, moreover, a phagocytosis exercised by the polynuclears upon the bacteria. The pleurisy may develop in two ways. If it progresses towards a cure, microbes disappear, polynuclears become few, and are replaced by lymphocytes. But if bacilli multiply, polynuclears increase to the point of purulence. Other elements are seen which are hard to identify, but are only degenerated polynuclears. The nucleus alters and breaks up, passing through the phases of karyokinesis. One often sees a protoplasmic mass, having in its centre one, two, three, or more little globules representing the nucleus. If the protoplasm is retracted, it is easy to confound these altered polynuclears with lymphocytes. But Ehrlich's triacid will reveal numerous neutrophilic granules around the globule or globules. It is necessary to be forewarned of these transformations in order not to mistake polynuclears for lymphocytes or neutrophilic mononuclear myelocytes. These facts represent the results of observations by Ravaut upon fourteen cases of pneumococcal pleurisy.

b. *Streptococcal Pleurisy.*—Pleural effu-

sions of three cases were examined. Two contained only polynuclear leucocytes; the third contained polynuclears and isolated endothelial cells.

c. *Typhoid Pleurisies*.—In typhoid, the effusion is partly hemorrhagic, partly serous. If hemorrhagic, fluid contains fifty to eighty of neutrophilic polynuclear, with lymphocytes, scattered endothelial cells, and many red cells. If serous, it contains many polynuclears and endothelial cells, which are scattered or in sheets.

d. *Pleural Eosinophilia*.—Ravaut had seen four cases:

Case 1. Pleural eosinophilia in an effusion occurring in the second stage of syphilis: Endothelial cells, 35; lymphocytes, 22; large mononuclear eosinophiles, 37; large mononuclear neutrophiles, 6.

Case 2. Pleural eosinophilia in typhoid fever: Polynuclear eosinophiles, 23; lymphocytes, 66.6; mononuclear and endothelial cells, 10.4.

Case 3. Pleural eosinophilia in pulmonary tuberculosis: Polynuclear eosinophiles, 54; polynuclear neutrophiles, 6; lymphocytes, 46.

Case 4. Pleural eosinophilia where no diagnosis was made. Liver enlarged, as were inguinal and axillary glands, but cultures were negative: Polynuclear eosinophiles, 14; lymphocytes, 86.

Significance of pleural eosinophilia as a symptom has not yet been determined. It is of interest that the pleural eosinophilia does not seem to correspond with an eosinophilia of the blood. In all these cases it seems to be a special localization. The facts supplied by cytology have shown that cellular elements are evidences of pleural reaction. They may be examined at any stage of the disease, and they furnish indications whose interpretation may not be easy, but whose application is of immediate clinical significance. Thus regarded, cytodiagnosis should interest the histologist and biologist as much as it assists the clinician.

*Illustrative Case*. Marguerite W., aged six months, admitted January 6, 1902; died March 28, 1902. The case was one of spina bifida and internal hydrocephalus. Tumor at the level of fourth lumbar vertebra, and measured about 15 cm. long by 10 cm. broad. Cranial enlargement noticeable at the end of January, and increased until February 20th, but at last measurement, March 18th, head had slightly in-

creased in size. The measurements were as follows:

	Occipito-Frontal Circumference.	Occipito- Mental.	Sub-occipito- Bregmatic.
Jan. 23.	44.5 cm.	46.7 cm.	41.5 cm.
Jan. 28.	45.3 cm.	47.5 cm.	4.5 cm.
Jan. 30.	45.3 cm.	.....	4.5 cm.
Feb. 1.	45.5 cm.	.....	41.5 cm.
Feb. 6.	48.3 cm.	.....	42 cm.
Feb. 13.	48.5 cm.	.....	42.5 cm.
Feb. 20.	48.2 cm.	49.5 cm.	44.5 cm.
Mar. 18.	46.7 cm.	48.5 cm.	42.5 cm.

Child's face was eczematous, as were external aspects of the legs; digestive processes were irregular, with tendency to constipation. Weight decreased from 12½ pounds, January 28th, to 10¾ pounds, March 27th. There was an intermittent conjunctivitis and a chronic nasal discharge. Tumor began to show superficial ulceration few days before death. Three spinal punctures were made, and the cerebro-spinal fluid drawn from tumor, quantity aspirated being 30 c. c., 16 c. c., and 8 c. c., respectively. After aspiration, 16 c. c. of Morton's fluid (potassium iodid, 2 grams; iodin, 0.65; glycerin 29.57 c. c.) were injected into the sac. Tumor became flaccid, but there was no sign of consolidation. After each puncture, cytologic examination was made, and a fourth examination was made of the fluid obtained by aspiration two hours after death. As a rule, temperature and pulse were regular and normal, but there occurred several times a rise of temperature and increase in pulse rate, of interest in connection with the cytologic examination, and for which no cause was clinically apparent. February 9th and 10th temperature rose to 39° C., pulse 160, and irregular. No puncture made at this time. March 5th, temperature 41.8° C.; reduced to normal by alcohol sponge and ice cap. When first puncture was made, March 8th, temperature was normal, but next day rose to 40° C. Temperature 37.8° C. March 15th, at the time of the second puncture. Last puncture was made March 27th, when temperature had risen to 39.4° C. It continued to rise until it reached 42° C., at 10 P. M., March 27th, where it stayed until child died, at noon the next day. Pulse was irregular and faint, and could not be counted. Fluid for last cytologic examination was drawn two hours after death.

No autopsy, but tumor removed and examined. Spinal column was deficient below level of the fourth lumbar vertebra. Contrary to rule, the whole spinal cord did not enter into formation of the sac. Anterior columns seem-

ed to follow their usual course down anterior wall of sac, while posterior columns diverged from them and spread out over the posterior wall. About 40 c. c. of fluid were aspirated from the tumor before its removal.

First cytologic examination March 8th. Temperature normal, but had been 41.8° C. March 5th, and there had been a rise of temperature February 9th to 39° C. Examination incomplete—no differential leucocyte count being made. But leucocytes and endothelial cells were numerous, latter appearing singly and two by two, not in sheets. A few red blood-cells and blood-plates were present. But the point of greatest interest was that the stained preparations showed a few diplococci, and the cultures proved to be pure pneumococci. At the second puncture, March 15th, the temperature was normal. Leucocytes were few, much less numerous than in the first specimen, some endothelial cells were still present; but no bacteria appeared either on the slides or in the cultures. Differential count showed polynuclear leucocytes 62 per cent. and lymphocytes 35 per cent. No large mononuclears nor eosinophiles were found. On March 27th, when the last puncture was made, the temperature had again risen to 39.4° C., and continued to rise until death. In this specimen small white coagula formed at once, and floated in the fluid. The previous specimens had been clear. Endothelial cells were few. Leucocytes were exceedingly numerous, more so than at any former examination, and consisted of lymphocytes 74 per cent. and disintegrated polynuclears 25 per cent. The latter were at first thought to be large mononuclears, but neutrophilic granules were seen around the nucleus, which was sometimes broken up into two or three or more. Much debris was present, representing the last stage of polynuclear degeneration.

A cytologic examination was made upon the fluid which was withdrawn two hours after death. It was milky, and filled with floating coagula. The field was crowded with leucocytes, and endothelial cells were more numerous than before. A few pneumococci were seen, and many large, thick bacilli, staining irregularly. Cultures showed pneumococci, staphylococci, and the same large, irregular bacilli, which could not be differentiated from the bacillus coli communis. These could not have been other than migrated colon bacilli. While the presence of the colon bacillus has not been established in the cerebro-spinal fluid, there is no reason

why it should be found there within two hours after death. The cerebro-spinal canal is a great, open lymph space, and not a closed sac, as is the lymph-sac of the frog. Since the colon bacillus is known to migrate into other tissues even before death, there is no reason why it should not appear in the cerebro-spinal fluid as well. The writer is convinced that this is what actually happened. Differential count gave 76 per cent. of lymphocytes and 24 per cent. disintegrated polynuclears. If the abundant debris represented polynuclears, the percentage would be changed.

The cytology points to a pneumococcal infection. According to Ravaut, the fluid in the earlier stages of such an infection should contain endothelial cells and polynuclears, which corresponds with the first examination made; that, later, lymphocytes may appear, if the infection becomes less virulent; and that both polynuclears and endothelial cells disintegrate in the course of the diseases, until, from the broken nuclei and retracted protoplasm, they are readily mistaken for large or small mononuclear lymphocytes. In this case no macrophagi were detected, and no karyokinesis was seen. The great increase in the number of leucocytes during the last days indicates an approach to purulence. This was coincident with the appearance of pus in the stools and the last febrile movement.

Points of interest in this case are:

1. The cytologic formula corresponds with Ravaut's finding in pneumococcus infections.
2. Appearance of pneumococci in the cerebro-spinal fluid coincident with a rise in temperature and increase in leucocytes.
3. Appearance of bacillus coli communis in the cerebro-spinal fluid two hours after death. This is believed to be the first recorded instance of this observation.

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**Celerina**, it is said, restores the tired and jaded nervous system to its normal condition, and brings about a feeling of buoyancy pleasing alike to physician and patient. A fair trial will confirm the verdict of the medical profession as to its virtues. It is put up in palatable form, and is always uniform in strength.

## Book Notices.

**Gynecology, Obstetrics, Menopause.** *Being a Revised and Enlarged Reissue of Three Serial Articles Appearing in "The Medical Council."* By A. H. P. LEUF, M. D., Associate Editor of "The Medical Council," etc. The Medical Council: Philadelphia. 1902. 8vo. Pp. 326. Cloth. Price (not stated).

This book is not a theoretical disquisition, but is the record of results and experiences of years of actual practice, and on that account embodies very largely the personality of the author. It is divided into three parts—one on *The General Practitioner His Own Gynecologist*, about 143 pages; the next on *Common Sense in Obstetrics*, about 122 pages; and the third on the *Change of Life in Woman*, about 47 pages. The book is not a systematic treatise, although methodically arranged. It is a book that records the trials and the successes and failures of various plans suggested by authors gone before, and points out the stumbling blocks and falsities of practice as well as the things that stand the test of experience. It is brought well up-to-date in its teachings, and the reader is impressed, as he follows each page, that it is a work of great practical value as a guide to the practitioner, the older and the younger doctor alike. It is a matter of regret that the overlimit of space does not permit us to quote some of the excellent paragraphs in this work. *Authorities* are not underrated, but let the practitioner first learn who is an authority.

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## Editorial.

### Fraudulent Diploma Applicant Before the Virginia Medical Examining Board.

There was a something about an applicant for examination before the recent session of the Medical Examining Board of Virginia, which led that body to question the authenticity of his diploma, and to correspond with the college from which the party claimed to be a graduate. While the shameful ignorance of this man, as evidenced by his marks, would not have permitted him to pass, it was found out that the party had perjured himself—that he had never gradu-

ated from that institution. He afterwards confessed, after the facts had been found out, to have used the diploma of another doctor. We are disposed to the opinion that the name and whereabouts of such a man ought to be exposed by the Board so as to caution communities and the profession generally and the Boards of other States against further attempts at fraud upon them by this individual.

### Payment of Physicians Attending County Poor, etc.

Last summer Drs. Bramblett and Painter entered suit against Pulaski county, Va., for important medical services to a number of indigent parties, citizens of Pulaski magisterial district. For some of such services there was the direct authorization of the local member of the Board of Supervisors. For much the larger portion of such services, he was approached after the doctors had undertaken the cases and no positive contract was made, but he expressed the opinion that the county ought to assist in paying for same, and promised to report the matter to the board and see what it would do.

The whole bill, after making deductions used in cases where medical services are rendered to the poor, amounted to \$307. The greater portion of this bill was for attendance upon a number of typhoid fever patients when that disease was almost epidemic in the town. Six fever patients in one family to whom such services were rendered were in such dire straits that they had to be supported by charity. Other items in the bill were for services to parties needy and sick and similarly situated.

This bill was presented to the Board of Supervisors, and the latter, at its meeting, disallowed it *in toto*. Thereupon an appeal was taken to the County Court.

The jury thought the case very equitable, and would have agreed on a verdict for at least \$250 but for the instruction of the court. This instruction was to the effect that under the statute, with reference to assistance of the poor, as amended by the acts of 1897-'98, the county could not be made chargeable for medical services to indigent citizens unless the same were rendered pursuant to an order duly made and entered by the Board of Supervisors at a regular meeting or called meeting thereof, with the exception that the emergency fund of \$50 al-

lowed by said act to each district might be made chargeable for such services upon the order of the member of the Board of Supervisors, or of the overseer of the poor of such district, but not to an amount to exceed said sum of \$50.

There was testimony by the chairman of the board that, after looking over the account, they had been willing to agree upon an allowance of \$35 thereon; and thereupon the jury brought in a verdict in favor of the plaintiffs for \$85, evidently intending to allow the \$50 emergency fund, and \$35 additional as having been agreed upon by the board.

But the court ruled that the verdict would be set aside unless the plaintiff agreed to remit \$35 thereof, so as to reduce it to \$50, it being the opinion of the court that there could be no recovery for medical services rendered to indigent citizens over and above the amount of the emergency fund unless upon an order regularly made and entered by the board.

This decision is of vital importance both to physicians and to poor persons who need medical attention. For if the emergency fund of the district be exhausted, then, though an indigent citizen be in the very throes of death, yet any physician who may be called to attend him cannot do so with any assurance of being paid for his services until the Board of Supervisors meets and duly authorizes the services. What the stricken citizen is to do in the mean time is left to conjecture.

It was contended by counsel for plaintiffs that the statute was intended to apply only to furnishing subsistence, fuel, and the like to such of the needy poor as were not at the poor house, and did not contemplate the case of medical services, but the court refused to entertain this view.

The ruling of the court wholly changes the procedure that has hitherto been in vogue in presenting such amounts, and a poor person who is stricken while the board is not in session will, when the emergency fund of his district is exhausted, be wholly without relief. Indigent parties will in that case have to so time their physical afflictions as to coincide with the meetings of the Board of Supervisors.

Now, that the Legislature of Virginia is in session, can there not be found a champion for the medical profession? As the profession has so little protection against charlatans, and so little recourse on those who impose upon its services, it is important that practitioners of medi-

cine should know the technicalities and quibbles of the law, by which we are so often forced to give up valuable services and time for no possible remuneration.

### Tri-State Medical Association of the Carolinas and Virginia.

The fifth annual session will be held at Columbia, S. C., February 25-26, 1903, beginning at 10 A. M., Wednesday. Railroads will grant one and a third fare for trip. The Seaboard Air Line is the best route for Virginians and for those who reside in Washington, D. C., to take. Wright's Hotel will be headquarters for the Association, and the Hall of the House of Representatives will be the place of meeting. Dr. James A. Burroughs, Asheville, N. C., is President, and Dr. Rolfe E. Hughes, Laurens, S. C., is Secretary and Treasurer. Aside from the social feature, this promises to be a most interesting and profitable meeting. The address of welcome by Governor D. C. Heyward will be responded to by Dr. Stuart McGuire, Richmond, Va. After discussion of the special subject, *Puerperal Septicemia*, papers will be presented. The following have announced the titles of their papers: Dr. Jacob Michaux, Richmond, Va., *Original Method of Preserving the Epigastric Artery in Operations involving that Portion of the Abdomen*; Dr. H. A. Royster, Raleigh, N. C., *Some Anomalous Cases of Appendicitis*; Dr. George S. Huntington, New York city, *Chronic Hereditary or Huntington's Chorea*; Dr. John H. Williams, Asheville, N. C., *Surgical Aspect of Tuberculosis*; Dr. B. M. Ricketts, Cincinnati, O., *Surgery of the Lungs and Heart (Experimental)*, Illustrated by 100 Lantern Slides; Dr. Southgate Leigh, Norfolk, Va., *New Method of Treating Depressed Fractures of the Zygomatic Arch*; Dr. W. H. Wakefield, Charlotte, N. C., *Some Eye, Ear, Nose and Throat Cases*; Dr. W. J. McAnally, Charlotte, N. C., *Surgery of the Hand*; Dr. Augustin H. Goelet, New York city, *How May We Cure Posterior Displacements of the Uterus?* Dr. J. H. Marsh, Fayetteville, N. C., *Appendicitis*; Dr. W. O. Spencer, Winston, N. C., *Prompt and Thorough Action in Wounds of the Abdomen*; Dr. Stuart McGuire, Richmond, Va., *Cornual Pregnancy*; Dr. D. A. Stanton, High Point, N. C., *Management of Injuries to Fingers and Hands*; Dr. J. Wilkinson Jervey, Greenville, S. C., *The Passing of the Negro—A Thesis on the Application of the Principles of Natural*

*Evolution to the Solution of the Negro Problem*; Dr. W. H. Prioleau, Asheville, N. C., *The Economic and Philanthropic Need of State Sanatoria for Tuberculosis*; Dr. J. N. Upshur, Richmond, Va., *Causes and Complications of Gout*; Dr. Wm. R. Kirk, Hendersonville, N. C., *Tuberculosis from the Standpoint of Biological Chemistry*; Dr. Stephen Harnsberger, Catlett, Va., *Preventive Treatment of Puerperal Fever*; Dr. W. S. Davidson, Newton, N. C., *Six Cases of Excision of the Gall Bladder for Impacted Stones*; Dr. L. Lankford, Berkley, Va., *Cases of Gunshot Wound of Stomach*; Dr. R. Tunstall Taylor, Baltimore, Md., *Present Improved Method in Orthopedic Surgery*; Dr. John Randolph, Arvonnia, Va., *Hystero-Asthma—Report of an Illustrative Case, Cured by Tinct. Stramonium*; Dr. Carl V. Reynolds, Asheville, N. C., *Treatment of Tuberculosis*; Dr. Julian H. Allen, Spartanburg, S. C., *Remarks on Hernia of the Diaphragm, with Report of a Case*; Dr. Wm. L. Robinson, Danville, Va., *Plastic Surgery, with Interesting Cases*; Dr. J. Allison Hodges, Richmond, Va., *Exercise Treatment of Locomotor Ataxia*.

The following have promised papers, but have not announced titles of the same: Drs. Charles M. Reas, Charleston, S. C.; Edward McGuire, Richmond, Va.; Joseph A. White, Richmond, Va.; W. P. Timmerman, Batesburg, S. C.; R. S. Martin, Stuart, Va.; J. C. Walton, Chase City, Va.; H. K. Aiken Laurens, S. C.; Le-Grand Guerry, Columbia, S. C.; W. R. Lowman, Orangeburg, S. C.; J. H. Teague, Laurens, S. C.; T. W. L. Butler, Edgefield, S. C.

With a program so rich in valuable, practical subjects to be discussed, and with a list of such able authors of papers, whose titles are announced and unannounced, we have a right to expect a meeting which will result in great good.

### **Rockefeller's \$7,000,000 Prize Offer for a Cure of Consumption.**

The Chicago papers announce that Mr. John D. Rockefeller will spend \$7,000,000 to find a cure for consumption. A great research hospital is to be erected on the midway campus of the annexed University of Chicago and Rush Medical College. In order to find a serum or other treatment that will cure tuberculosis, Mr. Rockefeller makes the offer of millions for original research in this direction. Exactly how this amount is to be expended has not yet been made

known; but the liberality of the offer will justify the most extended experimental research, which we trust may result in good to the human race.

### **Dr. J. C. Walton,**

Formerly of Reidsville, N. C., has been selected as the physician to "The Mecklenburg," recently built and equipped as one of the best of sanatorium hotels in the country. His post-office hereafter will be at the hotel, Chase City, Va. The Chase City Mineral Springs Company is fortunate in securing the services of a physician so able and so eminent.

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## Obituary Record.

### **Lewis Wheat, M. D.—Resolutions Adopted.**

The Faculty and Adjunct Faculty of the University College of Medicine, Richmond, Va., at a specially called meeting, December 30, 1902, to take action on the death of Dr. Lewis Wheat, which occurred December 29, one of the founders of the institution, and for many years an active member of its teaching body, paid feeling tribute to the memory of their deceased colleague, declaring that he was a man of marked personality, of strong intellect, and of unimpeachable integrity; a surgeon—aggressive, resourceful, and ambitious—whose advice and assistance were ever at the command of his associates, and whose professional services were rendered as readily to the poor as to the rich; a friend—loyal, faithful, and devoted—and never inspired by an ungenerous motive. His congratulations were sincere in prosperity, and his fidelity unchanged in adversity.

It was resolved that the faculties attend Dr. Wheat's funeral in a body, thus evincing its sympathy with his family and acknowledging its obligation and appreciation of his services.

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**Hush Money.**—"I call that hush money," said the happy father to the chemist, as he placed twenty-five cents on the counter for a bottle of soothing syrup.



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## Original Communications.

1. *Circoid Aneurism of Scalp, Treated by Ligation of Both Common Carotid Arteries.*
2. *Chronic Posterior Urethritis, Treated by External Perineal Urethrotomy and Drainage.*
3. *Lupus, Treated by the X-Ray.*

### A CLINICAL LECTURE.\*

By STUART MCGUIRE, M. D., Richmond, Va.,

Professor Principles of Surgery and Clinical Surgery, University College of Medicine; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital; Consulting Surgeon Home for Incurables, etc.

*Circoid Aneurism.*—Among the most interesting exhibition cases of the clinic to-day is a patient with circoid aneurism of the scalp, whose symptoms have been relieved and whose life has been saved by ligation of both common carotid arteries. Some years ago the woman came to my father, Dr. Hunter McGuire, and gave a history of rapid growth of the angioma, attended by protrusion of the eyeballs, intense throbbing pain in the head, constant ringing noise in the ears, and inability to eat, sleep or think. Her mental and physical powers were both rapidly failing. Upon examination her forehead and scalp were found to be filled with a pulsating mass of vessels, which gave her a Medusa-like appearance.

It was plainly impossible to dissect out the varix, and hence it was decided to ligate one of the carotids, hoping that the diminution of blood supply would give relief.

Five years ago my father ligated the patient's right common carotid in this clinic, and many of the old students have spoken to me of his graphic lecture on the operations and the condition for which it was performed. As

\*Portion of a clinical lecture stenographically reported, and corrected by the author delivered in amphitheatre of Virginia Hospital, January 31, 1903, to the students of the University College of Medicine, Richmond, Va.

soon as the ligature was tightened the pulsations in the aneurism became almost imperceptible. The woman made a rapid recovery, and in two weeks was dismissed greatly improved.

One year ago the patient visited my office and stated that her trouble had slowly returned, and that she suffered more than at the time she first consulted my father. The aneurism was full and tense, pulsation strong, and the bruit audible even at a distance. Evidently the unligated arteries had established a collateral circulation sufficient to give symptoms and entail danger. After studying her case and reviewing the anatomy of the blood supply to the head I advised ligation of the remaining carotid.

I believed that the anastomosis of the vertebral arteries would convey sufficient blood to the brain, and that the anastomosis of the inferior thyroid with the superior thyroid, and of the superficial and deep cervical with the arteria princeps cervicis would supply sufficient blood to the extra-cranial tissues.

One year ago, in the presence of many of the students who are now before me, I ligated the left common carotid. The operation was simple and uncomplicated; recovery prompt and uninterrupted; and the patient was discharged in ten days' time completely relieved of all symptoms. I exhibit her case to-day to show that she remains well after the expiration of twelve months, and also to illustrate the fact that a patient can live and lead an active life after ligation of both common carotid arteries.

*Chronic Posterior Urethritis.*—The next case is that of a man who is a sexual neurasthenic owing to the existence of chronic inflammation in the deep urethra and adjacent structures. Four or five years ago he contracted gonorrhoea, which was treated and maltreated until the disease abandoned the battle in the anterior urethra, and took a more impregnable position in the posterior urethra, where it has up to this

time defied all efforts at dislodgment. This man is a type of a large number of cases, as egotistical, analytical, hysterical and as difficult to cure as the proverbial woman with "the female complaint."

Some medical men, after treating a number of such cases and failing to accomplish any good, claim that the trouble is with the patient's mind and not his body, but after an unfortunately large experience I am convinced that the symptoms, while often exaggerated, have always some material basis. Some cases are met with that cannot be cured, but the fault is lack of knowledge on the part of the profession, not perversity on the part of the patient. Some cases that have for years resisted treatment can be cured by conscientious and long continued efforts, and in no class of sufferers are more appreciative and remunerative patients found.

The case before you is a man from the middle walks of life, of scant vocabulary and little imaginative power. For the past two months I have had the satisfaction of eating my breakfast with the knowledge that he was waiting for me in my office, and that he would tell me, when I asked him how he felt, that he still had an indescribable diseased sensation at the neck of his bladder. To the question, "Have you any discharge from the penis?" he would answer "No." "Have you any pain or difficulty when you urinate?" "No." "Do you have to get up at night to empty your bladder?" "No." "Do you have any trouble with your bowels?" "No. But, doctor," with a sudden burst of renewed confidence, "I have an indescribable diseased sensation at the neck of my bladder."

The examination of the patient's urine was negative; the passage of a large steel sound failed to demonstrate a stricture, but the insertion of a finger in the rectum proved the prostate to be slightly enlarged and tender, and inspection of the deep urethra by means of an electric endoscope showed the mucosa to be congested and swollen—in fact, to have the appearance of a chronically inflamed throat.

The first local treatment tried was the daily insertion of a cold steel sound, the size being progressively increased until the maximum caliber of the urethra was reached. No improvement.

Next the urethra was irrigated by means of Valentine's apparatus with solutions of permanganate of potassium, protargol, hydrate of chloral, bichloride of mercury and various other drugs. No improvement.

Next instillations of solutions of nitrate of silver, of various strengths at varying intervals, were made to the deep urethra by means of Bangs' syring sound. No improvement.

Next, direct applications of antiseptics and astringents were employed to the disease area by means of an applicator inserted through an endoscopic tube. No improvement.

Next, the irrigation of the rectum by means of a special instrument with very hot and very cold water. No improvement.

Next, the massage of the prostate and stripping of the seminal vesicles by a finger inserted in the rectum. No improvement.

The patient was then sent to a distinguished specialist of New York, who wrote a sympathetic letter advising me to do what had already been done. In desperation the patient was sent home, but now he has come back.

I have exhausted my moral, hygienic and therapeutic resources, and to-day I am going to try surgery. I have determined to do an operation which I have done twice before in similar cases with good results—namely, to open the posterior urethra by an incision through the perineum, thus giving it complete and long continued drainage.

The operation is easily performed and perfectly free from danger. The patient is put in the lithotomy position and the urethra and bladder irrigated with Thiersch's solution. A steel sound is passed until its point reaches the perineum, when by rotating the handle it can be felt projecting towards the skin. An incision is then made directly upon it, and the urethra opened. The divided edges of the urethra are caught with artery forceps and sutured to the skin. The sound is withdrawn and a catheter passed through the button-hole opening into the bladder. It is secured in place and the operation is completed. The drain will be kept in the urethra for three or four weeks. It will then be taken out and the wound allowed to close. A sound will be used later to prevent the formation of stricture.

The treatment, while apparently heroic, has certainly a logical basis. It fulfills the two most important indications—namely, gives rest and provides drainage. If it is found to cure chronic posterior urethritis it will be a blessing, not only to wretched sufferers, but to harassed practitioners.

*Lupus*.—The next patient has lupus, or tuberculosis of the skin. Despite the extensive surface of the skin and the frequency with which

it is exposed to infection, the disease is rare and I am glad of an opportunity to show you such an interesting case.

Lupus was supposed to be a form of tuberculosis long before the proof of its microbial cause, as it almost invariably developed on the face or hands, portions of the body not protected from infection by hair or clothing, and it was found to be associated with other recognized forms of tuberculosis in 50 per cent. of all cases. Koch established the fact that lupus was due to infection with the specific bacillus of tuberculosis by cultivating the germ from patients suffering with the disease and by producing general military tuberculosis in animals by inoculating them with fragments of the infected tissue.

The man I show you was well and healthy until the development of his present trouble. Five or six months ago he infected a small abrasion on his face by rubbing it with his fingers. The germs gaining entrance, effected localization, underwent proliferation, with the formation of toxins and the production of characteristic chronic inflammation. Soon tubercles formed and the pressure to the overlying skin caused ulceration. Secondary infection with pyogenic organisms followed, with the result you see before you. The disease is well called lupus, or wolf, for in the present case it has eaten its way from the cheek to the eyelids and is pursuing a relentless course, which, if unchecked, will destroy the entire face.

The diagnosis of lupus in this case is absolute, as the bacillus of tuberculosis has been demonstrated in granulation tissue removed for examination. But for this fact it might be mistaken for tertiary syphilis or epithelioma. Differentiation from the first could be made by noting the result of the administration of iodide of potassium; from the second by examining the margins of the skin, for tuberculosis begins deep and becomes superficial, while epithelioma begins superficially and only later infiltrates the deeper structures of the skin.

In the treatment of lupus the best results follow the radical removal of the diseased tissue with the knife, the bare surface being covered with skin grafts to hasten healing. As in the case of malignant growths, the extirpation must be complete or recurrence will follow. In this special instance, however, the eyelids are involved and an operation would prove useless.

What other recognized agents have we to

combat the disease? There are three. The internal administration of arsenic, the hypodermic injection of Koch's lymph, and the exposure of the infected area to the X-Ray.

Arsenic is best administered in gradually increasing doses. Beginning with two or three drops of Fowler's solution the amount is gradually increased. There is an acquired tolerance to the drug and cases are on record where as much as a drachm of the solution has been given three times a day.

Koch's new T-R tuberculin has been used with considerable success in the treatment of lupus. In moderate doses it causes local reaction or hyperemia of the diseased area; in larger doses it causes in addition a constitutional reaction, marked by fever and attending general symptoms. The preparation should be used at first in small doses and the amount gradually increased, the object being to secure local changes, but to avoid constitutional disturbances. Should there be a rise of temperature the injections should be temporarily discontinued. In all cases in which this treatment has been tried there has been marked improvement, although as yet no permanent cures have been reported.

The latest remedial agent for this intractable disease is the X-Ray. For a time the light was used only for diagnostic purposes, but it was accidentally discovered to have therapeutic power. Its ability to penetrate opaque bodies was so miraculous that nothing with regard to it was deemed incredible, and numerous experimentors began to test its effect on various conditions. One of the first diseases for which it was tried was lupus, and to-day reports of cases successfully treated are found in the pages of almost every medical journal published. The application of the treatment is simple. A sheet of tinfoil with a central opening is applied to the patient so as to expose the diseased area and at the same time protect the adjacent healthy skin. A Crookes tube is then focused at a distance of from 12 to 20 inches, and is excited by a current either from a coil or a static machine. The exposure lasts from five to fifteen minutes and is repeated daily or at longer intervals.

The patient now before you will be treated with the X-Ray by Dr. A. L. Gray, who has charge of the apparatus of the Virginia Hospital. The case will be exhibited at regular intervals in order that you may note the effects.

I tell you in advance you cannot hope for too much, neither can you expect too little. I bought one of the first X-Ray machines ever sold in the South, and for over six years I have used it constantly in my practice. I have done good with it, and I have done harm with it, but I have never succeeded in getting as positive results as some men report who have had much less experience with it. It will undoubtedly cure small superficial skin cancers, but they can be dealt with as effectually and much more quickly with the knife. The power of the X-Ray in deeply seated malignant growths is as yet undetermined. The result in a number of inoperable cases in my hands has proven unsatisfactory. Let us trust that its position will soon be determined. If it is a cure, it is a blessing; but if it is a delusion, it is a curse. If, in its present form or in any modification, it proves successful it should be employed to the exclusion of all other methods; but if it proves a failure the quicker it is relegated to the numerous fads that have preceded it the better for humanity.

Strange as it may seem, penetrating wounds of the lung were not treated directly during the civil war, when such great opportunities were presented for treatment, there being no recorded case during that event.

At the same time a greater number were expected to recover from injuries of the lung than from injuries to the intestines.

This fact of itself should have offered greater encouragement in dealing directly with wounds of the lung.

There are many difficulties to be overcome so that surgical technique for pulmonary and cardiac surgery can be established on a firmer basis; and it is only by experiments upon animals that this knowledge may be obtained. Why anybody should condemn or deny one from such privileges is difficult to understand. That men prominent in our profession should teach that one cannot reason from animal to man is still more difficult to understand. For without the privilege to sacrifice animal life the glorious achievements of our modern surgery would never have been realized.

The surgeon is not only expected and held responsible for obtaining these glorious results, but he is condemned and censured if they are not obtained. Fortunately, however, the impetus has been so great that no one man or class of men can check its onward course. The medical profession of the United States should exert every influence with our legislators in protecting and advancing experimental research. Not until they are thoroughly organized can they go before the parent government, demand and secure that which every scientific man realizes to be true and good.

Surgery of the lung may be divided into Pneumonotomy, Pneumonectomy, Pneumopexy, Pneumonorrhaphy.

*Pneumonotomy* consists in cutting the lung tissue for abscess, cysts, gangrene, removal of tumors and foreign bodies in the lung and bronchus, whether they have formed within or have entered from without.

This operation has been done more frequently for abscess, cysts, and gangrene than otherwise. The removal of tumors and foreign bodies has been done but to a limited degree.

Drainage or the resection of a portion or all of a lobe for tuberculosis has now become an established surgical procedure, and should be recommended in a large number of tubercular-abscess cases. If necessary, opening of the bony

## SURGERY OF PENETRATING WOUNDS OF LUNGS AND HEART. (EXPERIMENTAL)\*

By BENJ. MERRILL RICKETTS, Ph. B., M. D., Cincinnati, O.

*Penetrating Wounds of the Lungs and Heart*, while common, have never been, and are not at the present time, treated as they should be, except by a comparative few.

For several centuries it has been known that portions of the lung could be successfully removed, in cases of hernia especially, and while there is no evidence to show that abscess and gangrene of the lung were treated surgically so early as hernia, a comparatively few were operated upon, showing that it could be done successfully.

Not until the last twenty years did surgery of the lung receive any very great impetus, and not until 1896 did gunshot and stab-wounds of the lung receive any attention, so far as direct surgical treatment of injury of the lung itself was concerned.

All treatments of lung injuries previous to this time were directed exclusively to the chest and were so classified.

\*Read before the Carolinas and Virginia Tri-State Medical Society, Columbia, S. C., February 25, 1903.

chest should be resorted to in many cases to locate the abscess.

Many cases of hydatid cysts of the lung have been opened and drained successfully.

A trocar for exploring the lung should never be employed until after the chest has been opened.

The lung can be as easily palpated with the finger as can any other organ.

Acute non-tubercular abscesses of the lung are most favorable: about 66 per cent. of those operated upon have recovered.

It is not necessary to wait until the lung becomes adherent to the chest wall to open abscess of the lung: free drainage of the pleural cavity being all that is necessary.

Abscesses of the posterior surface of the lung are the most inaccessible, but they should be found and freely drained.

*Gangrene* of the lung is most frequently found upon the posterior aspect of the upper portion of the lower lobe.

This, indeed, is fortunate, as it is more accessible, and drainage more easily accomplished. Its course is usually downward.

About 60 per cent. of the cases operated upon have recovered, and about 90 per cent. without operation succumb to exhaustion.

The mortality is higher in multiple cavities from lung gangrene or abscess.

Posterior drainage should be made, if possible, with local anaesthesia.

*Foreign bodies* may be discovered with the X-ray, but the position is greatly changed when the lung retracts upon itself after the chest has been opened.

The introduction of a small needle, however, into the lung after it has retracted upon itself will locate a foreign body, abscess or cyst in the lung or bronchus.

Foreign bodies are more frequently found in the right lung, as the septum bronchi is to the left of the median line.

The location of the foreign body once determined, its extraction is but a simple matter through an opening in the lung, preferably made with the finger.

The hemorrhage is less when the lung is contracted than when it is expanded.

It is best to apply a tobacco-pouch suture of silk in such a wound of the lung.

If hemorrhage is troublesome after this has been applied the pleural cavity may be packed with gauze, which may be allowed to remain

twenty-four hours. Upon its removal at the end of this time, there being no bleeding, the chest wall may be closed with or without drainage.

The lung will not be injured by having been kept contracted this length of time. It will resume its shape and function. (There seems to be some doubt as to the length of time the lung can be compressed and then functionate.)

The same principle may be applied to polyp of the bronchi.

*Benign tumors*.—There are no recorded cases in which lymphoma, chondroma or osteoma have been removed from the lung, but there is no reason why they should not be removed successfully. The great difficulty has been in recognizing their presence before they became large enough to produce serious trouble. Either one may be extirpated, especially when involving the margin of the lobe.

*Dermoid cysts* have been successfully removed. They may be incised and drained. The dissection of the tumor capsule is not necessary.

*Lymphomata* should be dealt with as radically as sarcomata.

*Chondromata* are most difficult, owing to their position at the base of the lung.

*Osteomata* are usually multiple, small and offer but little in the way of surgical relief.

*Malignant Growths*.—The removal of malignant neoplasms of the lung has been accomplished in but one or two cases.

The removal of sarcomata probably offers more in the way of relief than carcinomata, especially if early detected.

*Actinomyces*, *echinococci* and *paragonimus* *Westermani* have been treated more or less successfully by surgical methods.

*Pneumonectomy* consists in the removal of a part or all of one or more lobes of the lung for hernia, gangrene, laceration, or in cases of severe hemorrhage which cannot be controlled in any other way. This was done for hernia earlier than for other conditions.

Not until recently did gangrene, laceration and severe hemorrhage of the lung, from any cause, receive direct surgical treatment.

*Hernia* of the lung has been treated by amputation for several centuries, such a case being reported by Rolandus, 1499. One or more lobes of the lung may protrude through any part of the chest wall with or without fracture of the ribs.

*Hernia* of the lung when sudden is associated with adhesions which necessitate amputation of the lung, because it is not in a pleural sac.

The possibilities are greater for strangulated portions becoming gangrenous.

*Hernia* coming on gradually is surrounded by a pleural sac. It may or may not be adherent; usually not. It may or may not be returned to the pleural cavity after amputation. This form of *hernia* may be returned to the pleural cavity with or without resection of one or more ribs; seldom requiring amputation.

The disposition of the stump depends upon whether or not it is gangrenous. If gangrenous it should not be returned to the pleural cavity; if not gangrenous it may or may not be returned to the pleural cavity.

If not gangrenous and reduction is advisable it is usually necessary to resect one or more ribs; this should, however, be avoided, if possible.

Gangrene of the lung should be provided with drainage after the removal of all necrotic tissue.

It is difficult in this class of cases to apply ligature; it is best to apply forceps to the bleeding vessels, and allow the forceps to protrude through the chest.

If the hemorrhage is slight and slow it may be controlled by gauze packing assisted by the contraction of the lung with an open chest.

The excision of ribs can be quickly accomplished, and when possible should be done with local anæsthesia.

General anæsthesia should be avoided, especially when pneumonia is present or has been the cause of gangrene.

Drainage should be with reference to gravity.

Lacerated portions of the lung with but a small pedicle should be ligated and removed.

It is possible to remove the entire lung of animals without causing death, and there is no reason why such could not be done in the human being.

*Pneumonopexy* consists in anchoring the lung to the chest wall in cases of amputation for *hernia* or otherwise, drainage of cysts, and the removal of foreign bodies.

In many such cases this is the safest, quickest way in dealing with them.

In most cases necessitating amputation, the stump of lung tissue should be brought into the chest opening and firmly secured by sutures. In

a few, the soft structures, including the skin, may be sutured over it without drainage.

There are, however, certain cases of amputation that can be returned to the pleural cavity.

However, the rule is for the stump or lacerated surfaces of the lung to become attached to the parietal pleura at the point of approximation at the time of greatest distention of the lung.

Drainage of cysts, abscesses and the removal of gangrenous portions in many cases may be accomplished by suturing the wall of the cyst to the parietal pleura and adjacent soft tissues.

But a few days' time is required to secure firm adhesions.

In a few cases of laceration and the removal of foreign bodies where there is doubt in securing the bleeding vessels, the injured portion of the lung, when possible, should be brought into the chest wall and firmly secured.

Rupture of the lung will sometimes require fixation of the lung to the chest wall that hemorrhage may be controlled and drainage provided for.

Gun-shot and lacerated wounds will occasionally require fixation of the lung to the chest wall.

*Pneumonorrhaphy* consists of suturing the lung in cases of laceration, punctured or incised wounds for any purpose.

There are a few cases of laceration of the wound from any cause which will not require suturing or any surgical operation whatever. This is especially true in slight lacerations with but little, if any, hemorrhage.

It is also true of punctured and incised wounds with but little hemorrhage.

There are, however, many wounds of the lung which will require ligation of the bleeding vessels and suture of the divided tissues.

Silk is the most desirable material for this, and it should be used with a round pointed needle without cutting edges.

The sutures for lacerations should not be made too close to the border; they should be made deep, extending through, if possible, the entire thickness of the lobe when the lobe is entirely divided.

In cases of punctured or incised wounds of the lung where there is but little hemorrhage, no suture need be applied, but where the hemorrhage is severe from punctured or incised wound a tobacco-pouch suture will be all that is necessary in many of them.

If the bleeding continues it may be necessary to enlarge the wound and ligate the bleeding vessels; apply forceps or pack the cavity with gauze.

In many cases where the lobe has been entirely divided it is best to use the tug-stitch of the saddler on each of the cut surfaces of the lobe. In this way the bleeding is controlled, and the bronchi closed, so that when the lung expands with a closed chest the sutures will not tear out, a condition which sometimes results, and which must be provided for in certain cases.

Silk will become encysted in the lung and remain harmless, as will other non-absorbable material.

It is necessary in excision of one or more lobes of the lung not to incorporate too great an amount of lung tissue into any one ligature.

The vessels alone should be included in one ligature; the bronchus in another, and the lung tissue itself in another; otherwise the ligature may become detached as a result of atrophy of the tissue incorporated in it, or the sudden inhalation of air, or both.

### Cardiac Surgery.

Injuries of the heart having been classified as anomalies (or curiosities), and not surgical possibilities, until 1895, is evidence of most fallacious teachings.

In this, as in all other branches of surgery, experimental surgery has been the basis for all future work; without it progress would indeed be slow, and while experimentors themselves may have but few opportunities in being the first to apply the principles devolved from such work, those who have not indulged in experimentation are the more ready and willing to take advantage of its teachings.

The successful removal of a needle from the living human heart by Callender in 1871 signalled events twenty-five years later of the greatest importance and influence in overthrowing dogmatic teachings so long and frequently indulged in—viz., the only treatment for wounds of the heart was "the formation of clots and to induce them by the administration of opium."

The teachings of the physiologist were that needle puncture of one or more cardiac ganglia would result in instant death.

So prevalent was this belief that many would be suicides resorted to such means, hoping to

destroy their lives, with an occasional success, not, however, by puncturing the gangliæ, but by more severe trauma to the heart.

They also taught that ligation of a portion or all of a coronary artery would cause death. Even this is untrue, as shown by actual demonstration upon both animals and man.

Roswell Park, 1877, appears as the first and probably the only one at this time to evacuate a pus cavity in the myocardium by aspirator or otherwise.

This was, however, accidental, as he thought that he was removing pus from the pericardial cavity.

Death resulted several hours after the operation, and autopsy revealed the presence of the abscess.

There have now been fifty-five cases of injuries of the heart treated by suture with twenty recoveries.

The application of the modern principles of surgery to this class of injuries is no longer speculative.

Exploration of the pericardium and its contents is as rational, justifiable and attended by results as brilliant as in any other class of surgery. This principle being so well established by the work already done will be the cardinal principle involved in doing surgical operations upon the heart for pathologic conditions, such as the removal of neoplasms, cysts, cardioliths and foreign bodies.

Fine silk with a correspondingly fine needle is the material with which wounds of the heart should be sutured, and gauze the means of securing perfect drainage.

*Fourth and Broadway.*

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## THE MECHANICS OF MERCURY IN SYPHILIS.\*

By THOMAS W. MURRELL, M. D., Richmond, Va..

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Mercury as used in the treatment of syphilis is one of the most ancient of remedies. It was first used by the Chinese as a therapeutic measure in syphilis, and down through the ages up to this time it is the only drug that has answered

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the requirements as a means of treatment of this very ancient disease. Indeed, mercury has been classified as the one of the two known specifics; and he is either a charlatan or an ignoramus who would dispute its pre-eminence in the therapy of syphilis. But, though this be admitted, there is a wide difference in the methods of treatment and the choice of the form of the drug to be used; and as to the last of these two—viz., the form of the drug to be used in this paper—we will try and see by logical conclusions which is the best form to administer, and our reasons for doing so.

First, let us look at the pathology of the disease. As in most things truly great, it is exceedingly simple, and consists solely of an active proliferation of the normal germinal cells of the part. When the virus of syphilis is introduced into the body, there is on its development a stimulating effect produced on all the cells of the economy, some parts being affected more than others, and they begin to proliferate with exceeding rapidity. The lymph glands are attacked first, and there is the familiar symptom of their general enlargement. As the source of inoculation is usually about the genitals, the inguinal glands are the ones, of course, usually first affected, but if the inoculation is elsewhere, the glands nearest the site of entry of the virus are the first to show enlargement. Then after the poison gets into the lymph channels, it travels onward through the thoracic duct and into the subclavian vein, where it is absorbed and finally affects all the tissues of the body. Yet let it be thoroughly understood there is no inflammation in the pathology of syphilis, and the enlargement of the glands presents no sign of inflammation—the swelling being due to the increased number of cells in the gland, and not to the swelling of the cells alone. This explains why the glands are not so much enlarged as they are hard and dense, and why the induration may remain after the initial lesion, the chancre, has disappeared, also the same pathology applies to the eruption which is not due to the excretion of the poison through the glands of the skin, as is the common belief among the laity, but is due to the proliferation of the epithelial cells, and this produces the shot like feel that the eruption possesses in so many cases.

The lymphatics are affected, and the proliferating cells blocking up their channels their function as sewers of the body is abolished, but the proliferation goes on elsewhere in the body, and

the masses of cells not being carried off make their appearance as gumma in the tertiary stage. This is a result of syphilis, and not a manifestation of the disease *per se*.

Now that we have looked into the pathology of this condition, I lay down a dictum somewhat surprising to the ordinary practitioner—to wit: Syphilis is as much a self-limited disease as measles, and that mercury has no antitoxic action upon the syphilitic virus. What, then, is its action? How are the results produced? Solely by mechanical means. We have seen that by the proliferation of these cells in the lymph channels, there is a blocking up of these sewers, these garbage carts of the body. Potassium iodide has a stimulating effect upon them, and since they are already stimulated to the limit by the virus of syphilis, this drug as a therapeutic measure in the active stage of the disease not only does no good, but is capable of harm; you would be simply adding fuel to the fire. What you do desire is the patency of these lymph channels, something that will so keep them open that their function may go on uninterrupted.

If a gutter pipe extending from the roof of this house to the ground were clogged up with filth so that the rain water could not pass through, and you took a leaden ball about the size of the pipe and dropped it in it, by its own weight it would clean out the pipe, and by opening up its channel restore its function. So in syphilis, the globules of mercury in their passage through the lymph channels carry out the detritus before them, and the function of the channel is preserved. If mercury is given in the crude form by mouth, it passes through the intestinal tract unchanged, but if subdivided it is absorbed and has its effect; the finer the subdivision the quicker is its action made manifest and the more thorough the results. This is frequently practiced when in prescribing calomel you direct that it be triturated with white sugar, the fine subdivision of the calomel being the principle you are acting upon.

As a concrete drug mercury reflects all light and appears as silver to the eye; divided finer it appears white, finer still it takes on a grayish tinge, and fine as it can be divided it reflects all light and appears black to the eye. Give the crude drug, and, as we said, no results are produced, but give a coarse trituration to one person and a fine trituration to another for some length of time. If under autopsy a microscopi-



cal examination is made many more globules will be found in the glandular tissues of the person who took the fine subdivision than in the one to whom the coarse preparation was given; the drug always appearing as globules under the microscope crowding each other through the finest channels. This teaches that the finely divided forms of the drug are the ones to use because more is absorbed, and quantity of absorption is the end to be attained.

The forms of mercury most used are the protoiodide or the biniodide, the bichloride, calomel, blue ointment and hydrarg. cum creta or mercury with chalk. We will take them up separately.

The protoiodide is the most used, and at once the most useless. It is given in the mistaken idea that iodine does good, whereas we have seen that by stimulating the cells that are already overstimulated by the virus of syphilis that in the active stage it does harm. Dr. J. M. Julien, one of the French authorities, in the *Journal de Maladies Cutanées et Syphilitiques*, published lately, characterized the protoiodide as the "father of stomatitis," and I have seen in a clinic an iodine eruption in a person who was taking the protoiodide under a mistaken diagnosis of syphilis that stimulated the syphilitic eruption in appearance and symmetry. Its action is uncertain, and as it was once a fad among the leading syphilographers, so now a reaction has set in, and it is beginning to be looked upon with suspicion.

At present the bichloride is being highly extolled for the injection treatment, but per orem it has not proved satisfactory, being too severe a form of the drug. The blue ointment from its fine subdivision when used by inunction is perhaps the best, but the inunction treatment is not always feasible or desirable. This leaves us to the mild chloride and the mercury with chalk. Of these two forms more mercury can be given than in any other form by the mouth, and we have seen that quantity of absorption is the goal toward which we are striving.

In giving these the usual tonic treatment is carried out; increasing the dose to impending salivation, and then cutting down to one-half for the regular dose to be taken from two to three years. At the end of this time syphilis being worn out and dead, potassium iodide is indicated to stimulate the lymphatics and carry away the results of the disease, as the lymph

channels you have kept open can be physiologically active.

It is unfortunate, I think, that mercury in any form does some good, because thereby we are deceived; but careful clinical observation has proven that in its milder forms, the drug finely subdivided gives the best results.

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#### DISCUSSION.

Dr. Stuart McGuire did not agree with the theory of Dr. Murrell, nor with the mechanics of mercury in syphilis, as described by him. He believed mercury to be a germicide, and syphilis a germ disease. He relied largely upon the protoiodide, the salt that Dr. Murrell condemned.

Dr. Greer Baughman said regarding the pathology of syphilis, that he had never found a globule of mercury in the tissues. He had examined the kidneys of syphilitic persons, and found that the inflammation resembled that of nephritis. The most characteristic pathologic lesion of the disease was thickening and hardening of the arterial walls. The lesions of syphilis and tuberculosis were in many points so similar that a differential diagnosis could with difficulty be made; but the pathology of syphilis was still largely unknown. He had obtained good results in the treatment of the disease from the use of the protoiodide of mercury, which was his standby.

Dr. D. Meade Mann emphasized the existence of contraction and hardening of the arteries in syphilis, and therefore gave the nitrites in conjunction with mixed treatment in brain troubles due to syphilis. He did not think it proper to fix a definite time for beginning mixed treatment, being guided by the symptoms. He thought the quickest way to get the symptoms under control in severe cases was by inunction; in some cases, fumigation acted well. He saw no objection to the use of the protoiodide.

Dr. Murrell, in closing the discussion, said that the views he had presented were not original with him; and that the late Dr. Lewis Wheat had agreed with them. Dr. Murrell remarked

that the syphilis of to-day was attenuated, and that in the sixteenth century the secondary and tertiary stages were coincident; but even so, iodide of potassium was indicated only for the latter, and never for the former. Admitting that the pathology of syphilis was unknown, it must be admitted that gumma formed and was carried off by the lymphatics. If the arteries thickened, why not the lymph channels? The latter became clogged up. The latter should be kept open with mercury that they might do their work and keep gumma from forming. The use of the protoiodide was no defence of it.

### HYSTERO-ASTHMA; REPORT OF AN ILLUSTRATIVE CASE, CURED BY TINCTURE OF STRAMONIUM.\*

By JOHN RANDOLPH, M. D., Arvonia, Va.

Although the title of this paper may lead you to suppose that I will read an article on asthma in its various forms, and of hysteria in the varieties of clinical phenomena in which it may present itself, yet it is intended only to elucidate a case in which the two diseases existed at the same time.

Several years ago a young lady sent hurriedly for me, and the messenger stated that she had some serious lung trouble, and that it was very likely that she would be dead before my arrival. On my arrival, after a full statement of her previous history, which I obtained from her mother, and a thorough examination of the patient, at the same time being informed that she had gotten an unfavorable letter from her lover, I thought that I had a genuine case of hysteria, though in an entirely different form from any I had ever witnessed in my practice.

The symptoms were as follows: Very rapid superficial breathing and inordinate action of the diaphragm; the number of respirations per minute I did not note. Her pulse was about 80, sometimes 90, occasionally increasing to 100 beats per minute; her tongue was very much furrowed; bowels were constipated, and breath offensive.

Previous to this attack, she had had several, which were treated by physicians who had moved

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from the neighborhood. One of the attacks was brought on by the death of one of her former lovers, showing her decided hysterical tendency.

The treatment of the case was so remarkable and different from any that I had previously used in such cases, and the cure effected by a medicine scarcely ever used, that I will give succinctly the management of the patient:

In the first place, I tried the inhalation of chloroform and ether, and administered the bromides very freely without any effect whatever. Chloral, belladonna, morphia, Hoffman's anodyne, and blistering were all tried in vain. The bowels were thoroughly opened, and still the monster hysteria held full possession of the fort. I also tried cocaine, codein, hydrocyanic acid and the old tried and true remedy asafœtida, but was still balked in all of my efforts and endeavors.

I thought once of trying galvanism, when, upon a glance at my materia medica, I concluded to try the tincture of stramonium. I gave the tincture in thirteen drop doses in two teaspoonfuls of water every two hours, until the constitutional effects of the drug were well marked; then I ordered the same dose every three hours, and finally lengthened the time to three times a day, the dose remaining the same. The effects of the stramonium were just magical, for in three doses she was very much better—in fact, nearly entirely relieved. Her improvement was so rapid under the stramonium administered in the way I have just indicated, that on the third day of its administration I discontinued my visits altogether, and in a few days the patient was up and walking about the house; and in a week after leaving her bed was performing her accustomed household duties. Several times thereafter she was threatened with the same trouble, and one or two doses of the tincture of stramonium always brought the desired relief.

I somehow imagine that there must have been an asthmatic ancestry somewhere in the family of the patient, though I could get no information to substantiate my belief. Stramonium in "ye olden time" being the sheet anchor in asthmatic troubles, I am convinced that my diagnosis was entirely correct, and the treatment of the case sustains my view of it. An hysterical asthmatic trouble would not, therefore, be a misnomer.

Thus, you see, nearly every old and new remedy had been tried and was futile, when an

obsolete, and, I may say, an almost forgotten drug, acted like a charm, and was a specific in the above case, if we ever have any true specifics. And now let me say a word to the profession, of which I am but an humble member, that sometimes these old remedies that we have ignored and abused may yet be the "blessings in disguise" that bring relief to the patient and reputation to the physician. The same remedy I have used with like good results in several cases of bronchial asthma, and let me impress upon you, my hearers, the great value of this old drug over many new pharmaceutical preparations much vaunted, lauded and puffed in our medical journals, and with which we are all so familiar.

In conclusion, I will state that the mother of the girl wrote me about five years after this attack I have just described and said that her daughter had never had a return of it, and that she was happily married.

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## REPORT OF A CASE OF RATTLESNAKE BITE.

By CHARLES R. GRANDY, M. D., Norfolk, Va.,  
Pathologist to St. Vincent's Hospital.

My excuse for reporting this case is its rarity in this section at the present time, and its consequent interest to me, who, practicing in a town, had never seen a case of the sort before, and never expect to see another. As there are doubtless many other physicians in the same category, I feel that the case will be of interest to them as well as to me.

G. W.; 34; married; policeman; height, 5 feet, 10 inches; weight, 208 pounds; a very healthy man. October 21st.—This morning at 8 o'clock, out of bravado patient tried to pick up a somewhat torpid rattlesnake by catching it just back of the head. The snake, however, being the quicker of the two, inserted its fangs near the end of the man's right middle finger. A friend immediately tied a ligature tightly around the finger and another around the wrist, causing the wound to bleed freely. Whiskey was administered in large quantities, and the wound was then cauterized by a nearby druggist.

9:30 A. M., when I first saw the patient, he was markedly cyanotic, and his lips were swollen. His pulse was imperceptible at the wrist, but his heart could be heard beating rapidly and

feebly. Patient, who was somewhat under the influence of alcohol, complained of tingling sensations, of nausea, and of great weakness and dizziness. He did not complain of his finger, though it with the hand and forearm were considerably swollen, the wound itself being concealed by the silver nitrate. His pupils were dilated. Strychnine nitrate gr. 1-15, digitalia gr. 1-100, morphine gr.  $\frac{1}{4}$ , and atropine gr. 1-150 were given hypodermatically inside of ten minutes, with the result that the pulse returned to the radials, beating at the rate of 120 per minute. The finger was now put into warm water and a considerable quantity of yellowish serum milked out of the wound.

11:15 A. M., another hypodermatic (strychnine nitrate gr. 1-30) was given, and patient's pulse came down to 106. Two or three small incisions were made over site of wound and the finger was again thoroughly soaked in warm water, after which a "snake stone" was bound to it at the request of the family.

1 P. M., patient was somewhat "twitchy" from the effects of the strychnine, but his mind was clearer, his pulse stronger, and his cyanosis less than when last seen. Digitalin was given by mouth; also epsom salts.

5 P. M., patient was feeling stronger; the cyanosis and swelling of lips had almost disappeared; his pulse was 100 and stronger, and his temperature 99 2-10; he had passed a fair amount of clear, light colored urine. As his finger was now very painful, it was decided to remove the ligatures. The "stone," which was adhering tightly to the wound, was loosened, and the finger and the stone both soaked in warm water; afterwards the "stone" was dried and replaced. The tip of the finger, where the snake had bitten him, was nearly black; the hand and forearm were swollen and œdematous. Strychnine sulph. gr. 1-50 every 4 hours.

October 22d, patient has had a good night's rest, and bowels have acted. He says he is feeling pretty well except for pain in his finger, which is very tender, the tenderness extending up the tendon sheath into palm of hand. The back of the hand and the forearm are markedly œdematous. Hand and stone are again soaked in warm water.

6 P. M., fearing a tendo-synovitis, a damp bichloride dressing is applied and patient is directed to soak hand in a hot bichloride solution every three hours without removing dressing. The "stone" is not replaced.

October 23d, hand is much less painful and the swelling has subsided. Physical condition of the patient is now good.

October 24th, hand has again been very painful. The flesh around the fingernail is much swollen, but no pus is found on incision.

October 25th, finger has discharged a good deal, and is consequently much less painful. Patient has been out of doors.

October 26th and 27th, same treatment; swelling and tenderness are subsiding.

October 28th, hand dressed at my office. The skin is removed from site of wound, showing dark purplish flesh. Tenderness has disappeared from palm of hand.

November 3d, same treatment has been continued, though he only soaks his hand at bed-time now. The flesh near the end of finger looks healthy, and is skimming over.

November 8th, finger has healed, but is still somewhat swollen. There is no pain or tenderness at site of wound, though the palmar side of second phalanx still remains tender. Iodine ointment is applied.

November 22d, patient has entirely regained the use of his hand.

#### REMARKS.

This case is remarkable for its early and complete recovery, and the lack of severe complications. This was due in great measure to the immediate application of the ligatures, which prevented the quick diffusion of the poison through the system, and to the free bleeding, which must have washed out a large part of the venom. The prompt use of alcohol was also undoubtedly of the greatest service, though, as we have seen, large doses of strychnine were necessary to keep up the stimulation till the body could begin to neutralize the venom.

The use of nitrate of silver in a case of this sort should be strongly condemned. A snake's fang acts like a hypodermic needle and inserts its poison deep into the flesh. Therefore the cauterization of the skin with nitrate of silver can only sheet the poison, which is out of its reach, more firmly within the body.

At first I used no antiseptics, but merely tried to remove the poison by soaking and milking the finger in warm water, which procedure got rid of a considerable amount of an orange yellow serum. After the patient had recovered from his severe nervous symptoms, I made him soak his hand in a strong bichloride solution. My reasons for this treatment are as follows: Snake

venom (which strongly resembles a bacterial toxin from which the bacteria have been removed) does not poison by means of bacteria contained in it, hence antiseptics are at first useless. It does, however, destroy the bactericidal properties of the blood, as well as killing much of the tissue around the point of injection. This often leads to secondary infection and sloughing. The hot bichloride baths were used to prevent this infection, to help restore the circulation and reconstruction of the tissues, and to relieve the pain in the hand, in all of which regards it proved eminently satisfactory.

The "snake stone" was used for its sedative effect on the minds of the patient and his family. Although it adhered to this wound, I feel sure that it will stick just as tightly to any wound from which serum is exuding as to a wound caused by a poisonous snake, and that it has no effect except the mental one just mentioned.

Flexner and Noguchi (*Journal of Experimental Medicine*, Vol. VI, page 277), have published an extremely interesting report of experiments which they are making with snake venom. They have found that venom acts on various body cells. One part of it is distinctly a nerve poison, and can be separated from the rest of the venom. The remaining portion first tends to agglutinate the blood corpuscles; then, if the serum complement be left with the corpuscles, to dissolve both the red and the white cells, as well as the endothelial cells of the vessels. And finally, the destruction of its serum complement deprives the blood of its bactericidal properties. It seems pretty certain that it takes a complex group of toxins to produce these results on the various body cells.

Different snake venoms contain these various toxins in different proportions, and upon this depend the diverse results which follow the bites of the several varieties of snakes. Thus the cobra venom seems especially rich in nerve poison, while the rattlesnake's venom, though not so violent in its action on the nerve cells, contains more of the second group of toxins, which produce the bad local effects so often reported as following the bites of this reptile.

Further reference to the theories and experiments on the effects of snake venom would be out of place in a short report like this. So I will refer those who wish to go deeper into the subject to the above mentioned article by Flexner and Noguchi; to the Huxley lecture on Immunity, by Prof. Welch (Johns Hopkins Bulletin,

tin, December, 1902), and to the article by Dr. Brown on Snake Venom in the *Twentieth Century Practice of Medicine*, Vol. XX. Other references will be found appended to these articles.

## THE CAUSES AND COMPLICATIONS OF GOUT.\*

By JOHN N. UPSHUR, M. D., Richmond, Va.

President of the State Medical Society of Virginia, etc.

The larger the experience I have in the observation and treatment of gout, regular or irregular, I confess the more I feel puzzled to determine the causes which give rise to this affection, and the more do I dread the complicating conditions which may arise, and the more difficult does the therapy seem to be which will give permanent relief. I am fully aware of the popular belief, and the almost universal belief of the rank and file of the profession, that uric acid is the cause, or the presence of it in excess in the system is the cause. But the more I ponder upon this suggestion of causation, the more vague and cloudy does it seem to be. If you will analyze the cases of gout that come under observation, you will be struck with the fact that articles of diet, except in a general sense, are not uniform in causing the trouble in every case, or indeed in every attack—not that I wish to be understood as not attaching great importance to diet as an etiologic factor.

Typical cases of gout, manifest by painful and swollen joints, usually of the smaller joints, but not always—traceable often to imprudence in eating too rich a diet of red meats, game, wines, malt liquors, etc., are a common experience, and are modified and controlled by restriction or complete abstinence in this respect. But we just as often see cases of irregular gout, lithæmia, just as potent in causing suffering, harder of recognition, and more intractable to therapeutic measures, and just as damaging in results and complications, occurring in individuals who are remarkably abstemious in their diet, small eaters, yet who live under nervous strain and tension. These often are the victims of acid, fermentative indigestion—a toxin being formed in the stomach as the result of the fer-

mentative action, absorbed into the system, poisoning the muscular and nervous systems, and manifesting itself by burning eyes, headache, muscular aching and weariness, mental hebetude, disinclination to exertion, and depression of spirits. True, in these cases you may find excess of uric acid.

Haig tells us that it is because the balance is destroyed between the amount taken into the system in articles of food and its product in the system, resulting from nutritive changes in the aggregate, on the one hand, and the amount eliminated from the system through the excretories on the other. He points out the fact that even the menstrual flow is one avenue for elimination, and that when the woman passes her climacteric, and this avenue of elimination is closed, the woman is apt to become gouty.

You will see in the same individual, the eating of an orange or tomato or grapes, especially if these be acid, produce gout in some form promptly in a few hours—it may be simply an urticaria, or sense of swelling in the hands and feet, or scalding urine. Another individual of just as gouty a diathesis, will take one or all of these things without this result; or, what is more marked, the same individual may take them at some other time and escape all gouty manifestations. Again, you find the gouty conditions prominent when the individual has been guilty of no indiscretion in diet, but has had overwork, loss of sleep, great mental strain, etc. Strange to say, the relief of these latter subjects is more difficult than when the condition comes as the result of dietetic indiscretion.

Uric acid in excess is, I believe, the visible manifest product of gout in all its varieties, but I believe we must seek farther for the true cause. When this is determined, I believe it will be found the result of complex processes, involving the function of the liver and kidneys as excrementitious channels—of the subtle process of metabolism as illustrated in nutritive change—of digestive disturbance, wherein fermentation and its resultant toxins play a prominent part, and last but not least, the subtle influence on the nervous system as the storm centre for the explosion of the cumulated disturbance of balance emanating from all of these different directions. This view, to my mind, explains what we must confess to, a most unsatisfactory therapy for the cure or even relief of this affection in all its forms and varieties which so frequently confront us.

\* Read before the Tri State Medical Association of the Carolinas and Virginia, at its annual session at Columbia, S. C., February 25, 26, 1903.

From the above argument comes the necessary conclusion that our ideas as to the causes of gout are, to say the least, vague and uncertain, and therefore if the axiom be true, to cure the disease you must remove the cause, difficulty of cure results because our ideas of the causes acting to produce the malady are cloudy and undefined.

I have been at some pains to search the authorities for their views of the causation of gout, and submit to you the result of my research.

Haig, who has been so conspicuous for the past few years, is a first class hobbyist. He has said some good things, but never faltered in his firm belief that uric acid in excess, as I have already given him credit, is the sole cause; that its removal from the system and restoration of balance between increment and elimination solves the problem. In our experience as clinicians, is this true? I must say, not in my own.

Ewart defines gout as primarily "a perversion of nutrition capable of producing structural changes, a functional derangement fraught with organic consequences."

Loomis-Thompson say it is a disease characterized by the deposit of sodium-biurate in the joints and other parts of the body. Heredity, operating sometimes from infancy, more than one-half of all cases are from this cause, varying in form in different generations. Fundamentally, they say it is the result of disturbed metabolism, consisting in defective oxidation of the proteids, with faulty elimination of the waste products.

Haig claims that drugs that interfere with the elimination of uric acid—i. e., opium, cocaine, antipyrine, strychnia, iodides, nitrates, some sulphates, hyposulphites, and chlorides, lithia, mercury, and acids—are causative. Chronic lead poisoning is often associated with it. A gentleman under my care who has been taking a prolonged course of mercury for syphilis, without other reason developed an acute gouty pharyngitis, such as I shall subsequently describe as one of the complications of gout. It is frequently associated with diabetes melitus, due probably to the toxic agents in the blood. Loomis-Thompson says "it is often associated with tuberculosis"; this statement I question. My observation and experience have convinced me that the two maladies are antagonistic. Roberts lays great stress on the influence of cold; injury to a joint predisposes the malady to focus. Errors in diet, especially combina-

tion of acid fruits and wines with excess of sweets, excessive eating of meat, all agents which tend to hyperacidity in the stomach, also produce it.

Sir Dyce Duckworth believes that there is present in the gouty a peculiar incapacity for normal elaboration within the whole body—not merely in the liver or in one or two organs—of food, whereby uric acid is found at times in excess, or is incapable of being duly transformed into more soluble and less noxious products. He also agrees with Ralfe, "that the failure to complete the uric acid metabolism is due primarily to deficient or disturbed innervation (Loomis-Thompson.)" "In all fairness it must be admitted that uric acid cannot now be regarded as the essence of gout—i. e., it must be regarded as a by-product, or as one of several agents contributing to the symptoms of the disease." This statement is supported by Ewart. Other authorities express similar opinions, and Haig has shown "that considerable doses of uric acid may be taken by man per os without injury."

At the time of the acute attack the blood is found to contain much less uric acid than when pain is absent and temperature normal. The innervation of the nervous system is held responsible for defective nutritive changes, and many authorities believe it to be a true neuritis. The effect of this condition is to interfere with the eliminative function of the liver. The sudden onset of an acute attack is considered proof of its nervous origin. Anders is in accord with the authority quoted above. Tyson says: "While over-eating, especially of meats and imtemperate drinking, associated with luxurious habits which grow out of the possession of wealth, are the most frequent causes of acquired gout; these last are by no means essential." Taking of acids thereby restraining the alkaline solution of uric acid in the blood gives rise to gout, and this is probably the explanation of its etiology from acid, malt liquors and wines.

E. Pfeiffer holds that it is not the deposited uric acid or urates that give rise to gout, but its alkaline solution in the blood, whereby it proves a source of irritation in the tissues; and adduces as proof of this fact that during an acute attack of gout, the elimination of uric acid is increased. He cites further in proof that the administration of salicylic acid gives prompt relief, while the administration of alkalis increases the pain.

Ebstein ascribes the excess of uric acid in the

blood to its formation in those parts of the body where it is not normally produced, as bone, marrow, and cartilage. If the blood and lymph becomes surcharged the balance is restored by increased renal secretion. But if from any cause the lymph moves slowly, the premonitory symptoms show themselves, such as malaise, vague pains in the body and limbs, etc. If a stasis occurs, the acute attack appears. It is not necessary that the joints should be the pivotal points of manifestation, but the same is true if instead we have the manifestations of lithæmia, and the symptoms pointing to some internal organ or viscus. Ebstein's view, that necrosis or debility of tissue is necessary to give direction to the deposit of sodium-biurate is sustained by other authorities, notably Ord and Dyce Duckworth.

This last authority has taken much pains to establish the neuro-humeral theory of gout. He claims that the gouty disorder is primarily dependent on functional disorder of the nervous system, making it thus primarily a neurosis. This fact is back of the production of uric acid or sodium salts manifest in gouty or lithæmic attacks. Loewi has contributed some interesting observations on the metabolism of the nucleins. He has demonstrated that nenelein is formed in the body not only from nenelein, but from other substances. The greater part of the neneleins in the intestines is absorbed in toto. A part is broken up into phosphoric acid, which passes off in the excreta, and nitrogen, which is retained and absorbed. Gouty subjects were noticed to have an increased retention of nitrogen and phosphoric acid between attacks. The excretion of uric acid seems to be dependent on the kind of food eaten. Klemperer says that the increase of uric acid is a secondary matter. Edsall does not believe that uric acid causes any noticeable evidence of intoxication, nor that it produces the decided general symptoms of gout. He believes the main cause of the intoxication to be some substance yet unknown. Ross states that the cause of the gouty paroxysm is yet unexplained.

Gore ascribes the existence of gout, *not to the presence of uric acid in the blood, but to a toxin, which is formed by the action of certain bacilli on an altered secretion in the intestine.* The effect of this toxin on the liver is the production of uric acid. Burney Yeo believes irregular gout due to hepatic inadequacy. According to Stengel and Edsall, there is considerable proof

that gout is not due to uric acid in the blood. Edsall calls attention to the important fact that uric acid and xanthin bases both come from food. Stengel believes that whatever may be the active cause, diet is the most important factor in the etiology. (*Twentieth Century Practice of Medicine, Supplement*, Walker, pp. 160, 161, 162.)

In view of the statements of so many authorities, sustained by others I have not quoted, my contention of the complexity of causation and obscure processes taking place in the function of metabolism is maintained, and emphasizes the fact that we have much to learn of the etiology of gout in all of its phases. Full enlightenment in this respect being a goal most important of attainment, because of its near relationship, not only to the relief and cure of the malady, but even more important and far-reaching than this is a rational preventive treatment, because of the serious complications and sequelæ which accompany the malady or follow in its wake.

In speaking of the complications of gout, I shall claim full latitude to discuss not only those which appear during an attack, but also resultant complications, or what might be more accurately technically, sequelæ, but for the fact that they are either unusual manifestations or positive results coming from a previous attack of gout as a cause.

*Alimentary tract.*—A pharyngitis occurs in gouty subjects characterized by an intensely red throat, œdematous, swollen uvula, and sometimes suppurating tonsils, coming on with marked suddenness, and without our being able to trace the lesions to any other cause. Gouty pain in the stomach and the pains that attend it we are all familiar with; but we may have complications in this viscus when marked articular gout exists. It may be only an intractable nausea, or digestive disturbance interfering with the taking and assimilation of nutriment, so that the patient sinks into a condition of depression, which sooner or later may give a well founded cause for alarm. Or hæmorrhage from the stomach resulting in death may surprise us when least expected. The following case is illustrative:

I was called November 6, 1902, to see Mrs. ———, age 36 years. She was a woman of good physique, and who had not previously suffered from any serious illness. She had had some uterine trouble, simple in character, some

years before, and had borne one child sixteen years before. I found her suffering from an attack of la grippe, which responded promptly to treatment, and at the end of a week she was able to sit up. She had a stomach more or less delicate, which, at times, required treatment for indigestion, but she always got prompt relief. The day after she began to sit up she complained of distressing, typical gouty pains in the balls of both feet, and inability to walk. The next day but one, she remained in bed—typical articular gout developing in her ankles, knees, wrists, elbows and every joint in both hands, all of these joints being swollen and intensely sensitive to the touch. Her temperature ranged from 102° F. to 103° F. She had total loss of appetite amounting to aversion to food, which, however, she took in the form of broths, milk, eggs, etc., never vomiting, only complaining of flatulency and oppression after taking nourishment. She never had any pain in the stomach. Bowels constipated, requiring a purgative to move them. All of the most approved remedies were exhibited without any marked good results. She suffered most acute pain, exacerbations in the evening and at night, necessitating full doses of morphia to obtain any relief.

At my morning visit on December 5th, I thought her better, as did her husband and nurse, and she expressed herself as feeling better, and called my attention to the fact that she could move her fingers, and that the swelling had markedly subsided in her hands. At 5 P. M., I was hastily summoned by phone, and reached my patient, who lived about two miles from my office, in half an hour, to find her just breathing, and she expired in a few minutes, having had a copious hæmorrhage from the stomach, without any premonition or warning.

It has been suggested to me that she had a latent ulcer of the stomach, which was responsible for this untoward result, but I have never changed the first opinion formed, that it was due to rupture of vein or artery in consequence of a gouty phlebitis or arteritis, with softening and rupture. This is the only experience of this kind that I have been so unfortunate as to have.

In tractable fermentative indigestion characterized by great acidity and consequent development of gas we have a compound disorder, distressing from the gastric standpoint, and supplying a toxine which is absorbed into the system and becomes causative of gout in some other location; the original indigestion is primarily

gouty and the product is a fertile source of disturbance to metabolism.

Another secondary result is the development of a diarrhœa hard to control, the result of the fermentation in the stomach extending to the intestine. This is different from that other form of diarrhœa, sudden in its onset, colliquitative in its manifestation, and serious in prognosis, if it occur in the aged or feeble; it is intended to be eliminative by nature, but is none the less harmful for this reason.

Attention has been called to the fact that deposition of the biurate of sodium may be made in the intestinal villi with subsequent ulceration and chronic diarrhœa. Burney Yeo points out intestinal involvement in gout as a cause of appendicitis. We may also have suppurative cholangitis as a complication, and cirrhosis of the liver may develop as the result of the sclerotic change in the arteries.

Duckworth calls attention to the existence of glycosuria, and Prout observed as early as 1843 that many gouty and dyspeptic persons lived for years, unaware of renal involvement, until attention was called to it by the increased amount of urine voided. This increase in the amount of urine may be paroxysmal, alternating with the joint involvement. The most important of all the visceral lesions of gout are the renal, and we should never lose sight of this organ in our care for these subjects.

Degenerative change in the arteries is another important complication, and is of the greatest significance, as it is consequent upon this pathologic change that we have embolism or apoplexy leading up to a fatal result. The establishment of a gouty diathesis should always impress upon us the fact of granular or fibrous degenerative change in the heart walls; not commonly do we find valve lesions, but these degenerative changes are of tremendous significance, affecting most commonly the left cavities of the heart, and may involve all with thinning and dilatation and death at some time when we least expect it.

The air passages do not escape. The asthmatic attacks, the chronic bronchitis, with which these subjects suffer, intractable to treatment, it must be remembered, form a part of renal and cardiac involvement. Some of the most serious manifestations of the malady find expression through the nervous system, as in neuralgias, especially in the form of gastralgia and enteralgia, with headache, such as described by Haig. At-



tacks of the fibrous membranes of the brain, secondary, sometimes, to the joint lesions; but I have seen it develop as a primary lesion jeopardizing the life of the patient, sometimes proving fatal, and when recovery does take place, convalescence is protracted and tedious. Sometimes cessation or arrest of a gouty attack may result in the development of melancholia, with suicidal tendency, or there may be a violent and dangerous maniacal outbreak, re-establishment of the articular lesions, bringing increase of the nervous irritation. Obscure cases of loss of sensory power or motion of the lower extremities lasting for a few days or weeks, characterized by formication, tingling, etc., dull aching, sometimes actual pain, often felt in the heels, may be traced to gouty involvement of the membranes of the spinal cord. Undoubtedly the gouty diathesis may be causative of myelitis.

I have not referred to the alteration found in the joints, or the deformities incident to protracted and recurring articular gout; they are familiar to you. Nor does time allow for a discussion of the intimate and frequent association of diabetes melitus with gout; it has been a matter of common observation. Of the complicating blood conditions, I have only to call attention to the variation in the number of red blood corpuscles and the blood impoverishment which comes as the result of long confinement and suffering. The influence of the malady on the skin is marked, and gouty subjects are at times martyrs to most distressing urticaria and eczema.

210 West Grace St.

### ACETOZONE\* IN THE TREATMENT OF GONORRHEA IN THE FEMALE.

By C. E. DOWLING, M. D., Sparta, N. J.

Mrs. B., 36 years of age, contracted gonorrhœa three months before calling upon me. At

\* *Note by Editor.*—Chemically, this preparation is benzoyl-acetyl-peroxide. Drs. Freer and Novy, of the University of Michigan, late in 1901 and early in 1902, demonstrated its enormous germicidal power. It has been used liberally in Chicago in typhoid fever, causing early decline of temperature etc., relieving stupor and tymanites. In Buffalo, N. Y., Dr. Wasdin and Dr. Westinghouse have also used it satisfactorily in typhoid. From 1,500 to 2,000 cubic centimeters of the aqueous solution of acetozone may be used daily. Its remarkable germicidal effects justify further observations.

this time she complained of the usual subjective symptoms, and exhibited a muco-purulent vaginal discharge. The treatment consisted in washing out the vagina first with ethereal soap and water, followed by plain water, and then with a saturated aqueous solution of acetozone. The acetozone solution was allowed to remain in the vagina for ten minutes, though the patient complained some of a burning sensation. The canal was then washed out with sterile water and packed with gauze, moistened with acetozone solution.

With the exception of vaginal douches of hot water, this was the only treatment employed in this case. The patient was relieved at once, and nothing further was required.

## Analyses, Selections, Etc.

### Anesthesia of the Drum Membrane.

Dr. Geo. B. McAuliffe, Adjunct Professor Otolgoy, etc., in New York Polyclinic, says (*N. E. Med. Monthly*, November, 1902,) that Jacques, by utilizing the selective action of methylene blue, mapped out the nerve plexus in the middle layer of the drum membrane. The nerves spread out in radical meshes from the periphery—mostly from above. In the deeper portion of the dermal layer, detached bundles run in different directions, and end in apparently sensory end tips. The mucous membrane of the Eustachian tube and tympanic cavity get their main nervous supply from the same source—the glosso-pharyngeal. Hence the external dermal layer has very little to do with the sensibility of the drum membrane; and most of the medicines dropped into the ear or applied to the drum membrane have little effect until they nullify the shield-like action of the skin covering. Nature protects the tympanic cavity from the effects of fluids dropped into the external auditory canal by the dermal layer of the drum membrane—a skin without glandular action or hair, acting only as a shield for the layers beneath.

The fact that refrigeration does not extend deeply enough to desensitize the membrane demonstrates the truth of the conclusion; nor can it be localized to the track of the intended incision. Refrigerating sprays need a space of a

few inches to secure evaporation. This would bring the whole membrane and canal under its action. But application of the spray to the sensitive canal and the subsequent thawing are very painful: unfortunately, too, refrigerants interfere with healing, and may cause sloughing.

Various preparations like Bonain's—menthol, carbolic acid and cocain—depending for their action principally on the carbolic acid, have been used with more or less of reported success. But anæsthesia obtained by this class of cauterants can never be complete, for reasons given above.

Fluids which disturb the osmotic equilibrium of the drum membrane and produce minute solutions of continuity in the dermal layer, thereby allowing cocain or its succedanea to reach the nerve filaments are the best we have at present for use in the external canal. Conditions favoring this application of cocain: 1. Removal of foreign substances and loose scales from the drum membrane and canal. 2. Dehydration of the outer layers of the membrane—a dessication which causes molecular contraction and interstices through which the anæsthetic can reach the deeper parts and nerve terminations. 3. Induction of endosmosis.

The first condition is met by the use of hydrozone, which is stronger and better than any other kind of  $H_2O_2$  preparation in softening and boiling out the debris of the canal, and in lessening the resistance of the dermal layer. The hydrozone is subsequently mopped out by cotton applicators or syringed from the canal. The *second* and *third* conditions are met by the use of alcohol and aniline oil. The later is absorbed more slowly, and the effects last longer than the former. Solutions used are 5 to 20 per cent. of cocain in equal parts of absolute alcohol and aniline oil. Anæsthesia is gained in from ten to fifteen minutes.

The disadvantage of the solution is that aniline oil is toxic, and obscures the field. The external canal is generally filled to ensure osmotic instability and certainty of penetration. The toxicity can, in great measure, be prevented by not filling the canal, but by applying to the drum membrane a small wad saturated with the solution, and by making only one application. Obstruction of the field by the dark oil will then be less, and the solution can be more easily mopped away.

After six years of experimentation with tubal injections of cocain, and again, of applying the

anæsthetic to the pharyngeal orifice, to the cartilaginous portion and to the deeper surface of the tube, and to the drum cavity by means of a Weber-Liol catheter, or a virgin silver modification, the author has come to the conclusion that the Eustachian tube is the only channel through which local anæsthesia can be best obtained. Absorption of the cocain by the tubal mucous membrane affects the drum and membrane intermediately, and by reason of continuity of structure. The fact that cocaine anæsthesia has a field of action of about an inch from the spot to which it is applied would likewise bring the tympanic membrane within the area of tubal anæsthetization.

After forcing cocain solution into the tube, in a short time—varying in length according to the amount of vascularity present—probing the different areas of the dermal surface of the membrane occasions little or no disturbance. Sometimes a trifle of sensibility is noticed at the lower margin of the membrane; and at the region of the stapes there is entire absence of any but tactile sensation.

These facts and observations on atrophic drums show:

1. That the dermal layer need not be considered in local anæsthesia of the membrane, and does not play so great a part in sensation as the mucous layer, since palpation of the skin surface does not elicit pain, although it reaches only the mucous membrane.

2. That the pain in palpation does not result from the local impact, but from excitation of the whole sensory apparatus of the tympanic cavity—induced, no doubt, by the sudden abnormal inward movement of the drum contents.

3. That the pain of incision depends on the pressure made on the drum membrane by the knife as much as on the cutting.

4. That the incision should consequently be made with the minimum of inward pressure, and with as sharp and as thin a knife as practicable. This explains why incision in the membrane is made so much easier by the use of the Græfe knife than by the poor knives made especially for the work—knives whose smallness of blade precludes sharpness of edge.

5. That in order to produce the best results in this method of anæsthesia, iso-tonic or iso-osmotic solutions of cocain should be used in order to avoid œdematization of the tube, and subsequent transient otitis media.

## Book Notices.

**International Clinics.** *A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles by Leading Members of the Medical Profession throughout the World.* Edited by HENRY W. CATTELL, A. M., M. D., with Collaborators. Vol. IV. Twelfth Series. 1903. Philadelphia: J. B. Lippincott Co. Cloth. 8vo. Pp. 317.

We know of no series that is more valuable to the practitioner than the *International Clinics*. The present volume has important clinical lectures relating to therapeutics, medicine, surgery, neurology, dermatology, ophthalmology, biographical sketches of eminent living physicians (Drs. Horatio C. Wood and W. W. Keen), and a monograph of about 100 pages on the "Blood in Health and Disease, with a Review of Recent Important Work on this subject." The contents of any one issue include too much material to be individualized, but we feel sure that and doctor who takes this important Series will find in its pages matter of special interest to him. The volumes furnish the practicing physician the kind of help he needs. The publishers have secured a strong editorial staff, and adopted methods which increase the usefulness of this, one of the most successful publications of any country. The illustrations throughout have been mostly taken from photographs and the pictures are presented in the best form possible for a book of its size.

**Medical Microscopy.** By T. E. OERTEL, M. D., Professor of Histology, Pathology, Bacteriology, and Clinical Microscopy, Medical Department University of Georgia, etc. With 131 Illustrations, some of which are Colored. Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Small 8vo. Pp. 362. Price, \$2.

We have given this book a fairly critical examination, and believe that it is exactly what the author claims for it. It is intended for beginners in microscopy, or for those who graduated when laboratory methods received scant attention, but who wish to keep abreast with the times, and to do such microscopic work as will be helpful to them in their daily practice. The idea has been to avoid the confusing material of the larger volumes on microscopy, and to give, as a rule, only some one method which has proved best for routine work, and which is at the same time the most simple and least liable to error. The book, though small, is not a com-

pend. It tells of the microscope—its parts, manipulation, etc., preparation of tissue, bacteria, bacteriologic methods, tumors, blood, urine, semen, and various other secretions and excretions, examination of the stomach contents, etc.

**Seventeenth and Nineteenth Annual Reports of Bureau of American Ethnology to the Secretary of Smithsonian Institution.** 1895-'96 and 1897-'98, respectively. By J. W. POWELL, Director. Washington: Government Printing Office. 1898 and 1900.

Each of these reports consists of two massive volumes. The 17th annual report relates to researches among the American Indians and the Indian Land Cessions in the United States. The 19th report continues the researches among other Indian tribes in the United States. Beyond the special value to the ethnologist, these volumes are of intense interest to the general reader of American history. The illustrations are profuse, and add greatly to the interest of an examination of the volumes.

**Kathlamet Texts and Tsimshian Texts.** By FRANCIS BOAZ. Washington: Government Printing Office.

These are *Bulletins* 26 and 27 of the Bureau of American Ethnology, J. W. Powell, Director of Smithsonian Institution, and are contributions to the study of the dialects of passing generations of aborigines of America, etc. The volumes, each of about 250 pages, are of interest principally to students of dialects.

**Johns Hopkins Hospital Reports.** Vol. X. Nos. 6, 7, 8 and 9. Baltimore: Johns Hopkins Press. 1902. Paper. Large 8vo. Pp. 516. Price \$10 for the Volume.

This issue of the *Reports* contains four papers of great scientific value: One by Dr. Emmerson, on *Metabolism in Albuminuria*; one by Dr. MacCallum, on *Regenerative Changes in the Liver After Acute Yellow Atrophy*; one by Drs. McCrae and Mitchell, on *Surgical Features of Typhoid Fever*; and one by Dr. Schenck, on the *Symptoms, Diagnosis and Surgical Treatment of Ureteral Calculus*. Few authors have the facilities for original work possessed by those having the advantages of the Johns Hopkins Hospital, and but few equally as clever investigators are to be found anywhere. Hence the scientific *Reports* issued must ever be held as thoroughly authoritative, so far as medical records can be so made.

## Editorial.

### Osteopaths in Virginia Must Go Before the Examining Board or from the State.

It is claimed that there are now seven osteopathic practitioners in Virginia. Two of them located in Richmond in 1900. A short while afterwards they were summoned before the Hastings Court of Richmond, charged with engaging in the practice of medicine without a license—the Commissioner of Revenue having refused a license until they presented the certificate of having passed the Medical Examining Board of Virginia. Judge Witt discharged the accused on their claim that they did not use drugs nor medicines in the practice of their profession—announcing at the time that his decision was based on a technicality of the law; but suggested amended legislation to cover such cases. A like decision was rendered by another court of the State.

Late during the legislative session of 1901-'02 the matter was brought up, but because of the lateness of the time when it came before the Senate, the matter was indefinitely postponed.

What is known as "the Harvey bill" was again introduced in the Senate during the session of 1902-'03, and a few nights ago it was favorably passed upon by the committee. This bill provides, among other things, that all such as "osteopaths," "faith healers," "christian scientists," etc., who undertake to prescribe for or treat disease for fee or reward shall first pass satisfactory examinations before the Medical Examining Board of Virginia. Ex-Governor O'Ferrall appeared before the committee as "lobbyist" for the osteopaths, and Mr. Lawless, for the so-called christian scientists. Dr. George Ben. Johnston and Dr. Wm. S. Gordon, Richmond, Va., represented the Legislative Committee of the Medical Society of Virginia, and by their strong speeches made good impressions, and otherwise rendered excellent service for the cause of scientific medicine.

There seems now to be no doubt but that the "Harvey bill" will pass the Senate, and then it goes to the House of Delegates, and it is just here that we urge upon the profession of Virginia to immediately instruct their respective *delegates* in the Legislature to pass the bill as presented to the Senate, for the osteopaths, etc., are still making their fight, and hope to succeed

in "killing the bill" in the House of Delegates.

These seven osteopaths, etc., have enjoyed an extra privilege in Virginia that has been denied the regular and homœopathic professions. For one cause or another, they have not been required to pay either a city, county or State license tax to practice their peculiar callings. Whereas the city, county and State *licenses of the regular and homœopathic practitioners* aggregate in the neighborhood of \$75,000 a year!

And now these osteopaths, *who have contributed nothing to the State* in the shape of license taxes, have the impudence to threaten: "We will not go before the State Medical Examining Board; and if the 'Harvey bill' becomes a law in its present form, *we will leave the State.*" So great would be the loss to Virginia that we cheerfully say: "Peace go with you, and leave joy behind you!"

These unlicensed, untaxable so-called "doctors of osteopathy" are scattered throughout the State, bidding for practice, claiming to treat diseases by peculiar methods of their own, and have certificates of some "wonderful cures," and they charge and collect fees for their services. They profess to have a knowledge of the diseases of the human body, of the functions of its parts and organs, of questions of diagnosis, and they confess to the practice of minor surgery, etc., but they claim they do not prescribe nor use drugs or medicines in their practice! And yet these people, in this day of scientific advancement and study, claim that they acquire knowledge—sufficient to recognize and treat diseases as they appear before them, from colleges of a few months' course, and some of these colleges claim even to give graduating instruction "by mail!"

Such are the essentials in this day of knowledge sufficient to diagnose and treat disease that the consensus of opinion is that it requires at least four years' course of eight months each of instruction to prepare one satisfactorily for this life work. And even then, both the regular and homœopathic schools of practice have sought to further perfect their studies by requiring State Boards of Medical Examiners to pass upon the qualifications of their graduates. And Virginia, beyond some other States, with its University of Virginia, its Medical College of Virginia, and its University College of Medicine, notwithstanding their earnest efforts to furnish the people with educated and worthy doctors, has ever insisted upon examination of graduates of its schools. When one looks back over the

records of the Medical Examining Board of Virginia, and recognizes the unprejudiced and faithful discharge of duty to graduates of its own State institutions, and from time to time find unfortunate proportions of the graduates of these institutions unqualified to pursue the practice of the healing art, how can the people of the State tolerate the idea of graduates of a few months' course in osteopathic colleges to be so peculiarly gifted in knowledge and art as to undertake the grave responsibilities of a profession that claims to diagnose or treat disease?

These osteopaths have the audacity to charge unfairness against the regular and homœopathic professions of the State in requiring of them examinations by the State Board of Medical Examiners—before which tribunal all others who propose to practice the healing art in Virginia have to appear! Such a charge can be based only on consciousness of osteopaths, "christian scientists," etc., of their inability to stand the trial—it is a confession of their ignorance of the principles of medicine, in the proper acceptance of the term.

The "Harvey bill" permits the addition of one osteopath to the State Board of Medical Examiners to examine applicants who may come before it, who desire to do so, to be examined on osteopathic therapeutics—just as the law has for years allowed two homœopaths on the Board to examine applicants who announce themselves as desirous of being homœopathic practitioners. Appeal may be made to any of the homœopathic practitioners of the State as to whether or not unfairness was shown them by the Board of Examiners by reason of their special applications.

Another of the objections the osteopaths raise against the "Harvey bill" is that it "permits persons to practice osteopathy who may be in ignorance of the science." If osteopathy is a science which may be learned "by mail" by almost any one, is it not reasonable to suppose that the graduate of a four years' course college of medicine who passes the Board would be a far more proficient student than the merchant clerk or the office stenographer, who had never seen a dissection?

The whole complaint of the osteopaths, etc., goes to show that it amounts to a carefully planned and shrewd effort on their part to enter the practice of medicine, in the broad use of the term, and yet avoid the test of State Medical Examining Boards. The facts brand them as charlatans, quacks, or imposters.

In this view of the subject, we again call upon the doctors of the State to make haste in using proper influences with their representatives in the House of Delegates of Virginia, and urge the adoption of the so-called "Harvey bill." Its imperfections are relatively few, and these can be better amended by future legislation than to run the risk at this late day of the legislative session of having it now amended. The osteopaths are petitioning the Legislature to exempt those now in practice from the operations of "the Harvey bill."

### The Virginia Press Association.

By invitation of the Seaboard Air Line Railway, left Richmond for a trip to Florida on February 9th. The party went direct to Jacksonville—a city which was nearly destroyed by fire less than two years ago, but which has now been rebuilt. For general good appearance and cleanliness, this city makes the best showing of any place we have seen. From Jacksonville the Association went to historic St. Augustine—a thirty-six miles run. Returning to Jacksonville, a trip to Tampa was made that night. Palmetto, towering cabbage palms, orange groves, with green leaves, blossoms, and ripe oranges on the same trees, strawberries, pineapples, roses and numerous other flowers in full bloom, etc., with plenty of warm weather, were calculated—knowing that it was still February—to make one feel that Florida justly deserved the name—"the Land of Flowers." From Tampa the Association journeyed to Lake City, where a stop was made by special invitation of Mr. T. J. Appleyard, editor of *The Florida Index*. The party was met by committees of the town people, and were conducted to the county court-house, where an address of welcome was made. This was followed by a course dinner at Hotel Blanche. The points of interest—including the Florida Agricultural College—were then visited. Most of the party continued on the trip from Lake City to Tallahassee, the State capital, where they were received by Governor Jennings; others returned to Jacksonville, from which place side trips were made up the St. John's river; others going down the east coast to Palm Beach, and Miami, while still others returned to their respective homes. It is needless to say that the Virginia Press Association will not soon forget the generosity of the S. A. L. Railway—"the straight way South"—

nor of the many kindnesses of their Division Passenger Agent, Mr. Z. P. Smith, who accompanied the party to look after their comfort.

### Dr. William Osler, of Johns Hopkins University, Baltimore,

Held a clinical lecture on splenic leukaemia in the large amphitheatre of the University College of Medicine, in this city, on Wednesday morning, February 18th. Classes were temporarily suspended, that all might be present. At the conclusion of the clinic Dr. Osler delivered a short address, in which he commented upon the opportunities of medical students in this present day as compared with the opportunities of their fathers. He predicted as many discoveries during the coming fifty years as have started the medical world during the past fifty years.

### American Medical Association—The New Code, etc.

The session of the American Medical Association, to be held at New Orleans May 5-8, 1903, promises to be well attended. The local committee of arrangements, of which Dr. Isadore Dyer, 124 Baronne street, New Orleans, La., is chairman, has about completed its arrangements for the greatest meeting the Association has ever held. Dr. A. G. Friedrichs, 641 St. Charles street, New Orleans, La., is chairman of the Bureau of Information. The general officers of the Association are Dr. Frank Billings, Chicago, *President*; Drs. J. A. Witherspoon, Tennessee, C. F. Comstock, New York, C. R. Jones, Ohio, and James H. Dunn, Minnesota, *Vice-Presidents*; Dr. George H. Simmons, Chicago, Ill., *Secretary-Editor*; Dr. Henry P. Newman, Chicago, Ill., *Treasurer*.

The American Medical Association is about the strongest medical organization of the world. Of all kinds and descriptions of persons in the United States dubbing themselves as doctors there are about 126,000—including the U. S. "New Possessions," etc. Of these about 100,000 are "regulars," and entitled to membership in the Association. Every State Medical Society of the regular profession acknowledging fealty of the Code of Ethics of the Association is entitled to membership. Every member who joins the National Association, and pays his annual dues of \$5, is entitled to the *Journal of the American Medical Association*, published in Chicago, Ill.—one of the largest and best medi-

cal journals of the world—having a circulation of about 50,000.

The Association, in its scientific arrangements, is divided into about fifteen sections—for each of which a chairman and a secretary are annually elected by the respective sections. When members of the Association attend a session, they should register, after their names, etc., the section—whether of surgery, of practice, of gynecology, of otology, etc.—they wish to be considered members of. In that section each member may vote for or against any proposition which arises. Such membership in one section, however, does not prohibit the same member from contributing papers to two or more sections—according to the subjects. It is in these several sections that all the scientific work of the Association is done. Each section has its own banquets or dinners or suppers—according to the votes for or against—and each member pays his own way—thus saving the city in which the meeting is held a great deal of expense.

The Association itself holds but one general meeting—that is, during the morning of the first day, when the president's address is read, general reports made, and announcements given, etc. Motions and resolutions of a very general character only are entertained at this session. All matters of a specific character, according to their nature, are referred to the section specially interested. No discussions of propositions or suggestions are allowed in this general session. No voice—for or against a special law for the government of the profession of the country—can be raised in this mass-meeting. Every proposition that looks to the Code of Ethics or organization of the profession or election of general officers of the Association, etc., must be referred to the House of Representatives of the Association, over which the president of the Association presides, etc.

This House of Representatives or Delegates is composed of the general officers of the Association and a delegate for each 500 members or fraction thereof of the State or Territorial Medical Association or Society recognized as entitled to membership. Not more than one State Society in each State is recognized as entitled to representation. Thus, if there should exist two or more Societies—each claiming to be the State Society or Association—only one can be recognized as representing that State. Virginia having about 1,200 or more members is entitled to three delegates and three alternates. At the

session held at Newport News, Va., last September, the following were elected delegates: Drs. J. R. Gildersleeve, of Tazewell, Stuart McGuire, of Richmond, and R. S. Martin, of Stuart. This House of Delegates enacts all laws, from which there is no appeal.

Among the matters of vital interest that come up this year at New Orleans is the final disposition of the proposed Code of Ethics, with reference to the recognition of homeopaths, etc., as entitled to professional recognition by the regular profession.

In our issue of June 27, 1902, we published the proposed Code of Ethics and some comments on the same. Other comments will be found in our issue of August 8, 1902. At the Saratoga meeting, January 10-13, 1902, a committee of five was appointed (Drs. E. Eliot Harris, of New York, Wm. H. Welch, of Maryland, T. J. Happel, of Tennessee, Nicholas Senn, of Illinois, and Joseph D. Bryant, of New York), "to examine and report for final action at the annual session in 1903 the proposed Code of Medical Ethics." It was further resolved at the Saratoga Springs session that "the proposed Revised Code of Medical Ethics be published in the *Journal* (of the American Medical Association) three times before the meeting of 1903."

The Medical Society of Virginia, by an almost unanimous vote during its session last September, instructed its delegates in very strong language to express its views as being "unalterably opposed to such changes" in the proposed Code of Ethics as permit the professional recognition of homeopaths or any other such sectarian body of doctors in professional consultations, etc. Nor can we see how reasonable persons, in the face of clauses in the proposed Code, can take any other view of the matter. "He that is not for us is against us." When homeopaths or eclectic, *et id omne genus*, liberalize their dogmas so as to include the foundation principles of scientific medicine, then will it be time to consider the recognition of all such as entitled to professional consultations. The concession that homeopaths, etc., are educated in anatomy, physiology, diagnosis, etc., does not warrant a consultation with them with regard to treatment of a disease when their tenets of practice forbid the use of certain remedies in definite doses which scientific medicine has proven to be useful. And consultations are rarely held for diagnostic purposes only, but

they are held in order to advise what to do for a patient. True, the regular doctor may use so-called homeopathic remedies in homeopathic doses if he thinks such is demanded; but the homeopath, loyal to his own school, cannot conscientiously use remedies that the so-called allopaths have used in so-called allopathic doses with good results in the cure of the disease. In other words, the regular doctor is at liberty to use any remedy in any dose that either reason suggests or that experience has proven to be useful in disease, regardless of theory of use or dose. When the tenets of the homeopath or the eclectic are renounced, then will the time arrive to pay some heed to the cry of professional recognition. Who has ever heard of the homeopath who sticks to his last making any advances in the treatment of disease? Neither Jenner, nor Lister, nor Crawford Long, nor Pasteur, nor the introducers of quinia in malaria, nor of the serum treatment of diphtheria, nor of X-rays in therapeutics, nor the late immortalized Walter Reed, nor any of the long list of those who have been in like manner benefactors of the human race, have been homeopaths or eclectics, etc. Each and all of them have been regular practitioners, not limiting themselves to any confining tenet of practice.

### Value of Vivisection.

That there should be at this day in high places some cranks about vivisection is remarkable. That they can secure legislative or congressional seats, and thus be influential at times in damaging the cause of medicine in relieving the ills and accidents of humanity, is regrettable in the extreme. Dr. W. W. Keen, of Philadelphia, who was recently summoned to Annapolis, Md., to operate on Midshipman Aiken, of U. S. Naval Academy, to relieve him of the effects of injuries sustained in a football game, had occasion later to address a letter setting forth the facts to Senator Gallinger, who is regarded as a leader of the anti-vivisectionists of this country. The letter sets forth the facts which led him to attribute the correctness of his diagnosis, and the resultant success of his operation to knowledge gained through experiments in vivisection, in such a plain, forcible way for popular appreciation that we reproduce it almost entirely. This single concrete example conclusively shows that knowledge gained by animal experimentation is an immense boon to

humanity, and therefore that such experimentation should be heartily encouraged.

When Dr. Keen first saw Mr. Aiken, three days after the accident, he had been unconscious for half an hour after the accident, and ever since then had complained bitterly of headache, which he located always in the forehead. Soon after the accident convulsions developed, and in six hours after Dr. Keen saw him he had twenty-four of these attacks—all limited to the right arm. There was no fracture of the skull. The only physical evidence of any injury was a very slight bruise at the outer end of the left eyebrow. Dr. Keen then goes on to say, in his own forcible style, what should forever set at rest the objections of anti-vivisectionists:

"Had I seen this case before 1885 I would have been unable to explain why the spasms were chiefly manifested in the right arm. I would have been justified in inferring that probably the front part of his brain was injured at the site of the bruise. Had I opened his skull at that point I would have found a perfectly normal brain and have missed the clot. The young man, therefore, would have died, whether his skull had been opened or not.

"In 1902 observe the difference. As a result of knowledge derived from experiments upon animals which have located precisely the center formation of the right arm, I reached the conclusion that there had been a rupture of the blood vessel within the head, and that the situation of the clots correspond to the 'arm center.' Its position was fixed absolutely as a result of experiments upon animals. As soon as the skull was opened at this point the clot was found, its thickest point being exactly over the arm center, and the blood was removed, with the result that the patient's life was saved. This is only one of hundreds of cases in which a similar exact location has been made by many surgeons both in Europe and America.

"The anti-vivisectionists have frequently denied that surgeons have learned anything from such experiments. I state with the greatest positiveness that without the knowledge derived from experiments upon animals which have demonstrated the facts of cerebral localization, I should never have been able to locate the clot in Mr. Aiken's head and to remove it.

"In view, therefore, of the evidence and positive benefit of such experiments I trust that you will be willing to desist from further efforts at

such repressive and, as I regard it, most inhumane and cruel legislation."

It would be well for the profession to keep such an incident in memory when they are confronted with "anti-vivisectionists" and the like.

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## Obituary Record.

### Dr. Charles C. Conway

Died at his home at Rapidan, Culpeper Co., Va., February 17, 1903, after an ill-health of several months' duration. He was born in Greene county, Va., March 6, 1843. He graduated in medicine at Washington University, at Baltimore, in 1869. He became a member of the Medical Society of Virginia in 1874, and was one of its vice-presidents in 1879. He was appointed one of the original members of the Medical Examining Board of Virginia in 1885. In 1890 he was made vice-president—a position which he held until his withdrawal from that body a few years ago. Dr. Conway was a useful member of the profession, and was in regular attendance at the various medical meetings until the time of his failing health. His interment was at Hollywood Cemetery, Richmond, Va., February 19, 1903.

### Dr. William Elias B. Davis, Birmingham, Ala.

Was instantly killed by a passing train of the Alabama Great Southern Railway in Birmingham, on February 24, 1903. The announcement is a severe shock, for there was no one in the Southern States better known as a doctor of eminence or more loved because of his genial, whole-souled nature. He graduated from Bellevue Hospital Medical College, New York city, 1884, and ever afterwards manifested intense interest in all that concerns the profession—either scientifically or ethically. He was the controlling spirit for years of the Southern Gynecological Association; was president of the Tri-State Medical Society of Alabama, Georgia and Tennessee, and of the American Association of Obstetricians and Gynecologists, Professor of Gynecology and Abdominal Surgery in the Birmingham Medical College, and held many other eminent positions of honor and trust in the profession. Our notice is written as we are going to press before we have any of the details of the sad accident.



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## Original Communications.

### CORNUAL PREGNANCY, WITH REPORT OF A CASE.\*

By STUART MCGUIRE, M. D., Richmond, Va.,  
Surgeon in Charge St. Luke's Hospital, etc.

Much has been written with reference to tubal pregnancy, but little attention has as yet been paid to cornual pregnancy. A recent mistake in diagnosis which led me to operate on a bifurcated uterus about to rupture from pregnancy in one of its horns has interested me in the subject, and I wish to report the case and briefly discuss the condition.

Mrs. S.; aged 28; married for eighteen months, with history of one miscarriage.—Patient began to menstruate at the usual age and her periods were regular and natural. Her general health was good and she had no reason to suspect that she had any uterine or other pelvic trouble. In March, 1902, she missed a period and shortly afterward began to pass blood in small quantities at frequent intervals from the vagina. Three months later she was suddenly seized with severe pain in the lower right abdomen. The pain was characterized as cutting or tearing, was attended by nausea and faintness, and confined the patient to bed. The patient's regular medical attendant was sent for, who stated that he thought the trouble was tubal pregnancy and advised an operation. Several days later the case was transferred to me.

I found the patient in bed, suffering with paroxysms of pain and passing blood from the vagina. The abdominal walls were rigid, but on making a bi-manual examination I succeeded in palpating a soft but elastic mass to the right of the cervix, which corresponded exactly in tactile impression and in anatomical location

with cases of unruptured tubal pregnancy I had previously diagnosticated. I stated that I agreed with the opinion of my predecessor; that I thought the case was undoubtedly one of extra-uterine gestation, and I advised immediate operative intervention. The patient was moved to my private sanatorium and as soon as the necessary preparations could be made the abdomen was opened.

The uterus I delivered through the wound was the queerest specimen I ever saw. But for the fact that as a boy I had dissected many cats and was familiar with the double horned uterus found in the female of that animal, I would have been at a loss to recognize the condition with which I had to deal.

The uterus was cleft from fundus to cervix; the two diverging sides tapering to, and terminating in, the Fallopian tubes. The left horn was flaccid and empty, but the right was distended by a swelling until its walls were so thin that they were transparent. Evidently the case was one of cornual pregnancy, with imminent danger of rupture. In deciding what to do I realized I had three alternatives. First, I could return the uterus, suture the abdominal wound, and endeavor to produce an abortion. But this was deemed unsafe, as the uterus might not have sufficient contractile power to expel its contents, or if it did, would probably rupture its walls in the attempt. Second, I could incise the pregnant horn, turn out the embryo, and suture the incision as in a case of Cesarean section, but this entailed danger of sepsis, and even if successful would leave the woman in a position to become pregnant again. Finally, I could do a complete hysterectomy, thereby not only relieving the present situation, but also preventing future complications. The last plan was adopted. The ovarian and uterine arteries were ligated on each side, the uterus and adnexa removed, and the pelvic cavity drained by several strips of gauze carried through the vagina.

\* Read at the meeting of the Tri-State Medical Association of Virginia and the Carolinas, at Columbia, S. C., February 28, 27, 1903.

Both of the extirpated ovaries were healthy, but I did not leave one in the abdomen, because I have never seen benefit from its supposed internal secretion to the symptoms of the precipitated menopause, and I have seen local trouble follow the practice, due to degenerative changes in a sensitive organ deprived of its chief physiological function. To still further demonstrate my belief that a functionless organ is a dangerous inhabitant of the abdomen I will state that I took advantage of the opportunity to remove the patient's appendix, although it looked extremely innocent and inoffensive.

The patient made a rapid and uneventful recovery and is now in perfect health.

My post-operative study of available literature in regard to cornual pregnancy has been unsatisfactory. What has been written is to be found either as practical points under descriptions of uterine malformations or as incidental allusions under the treatment of tubal gestation.

Cornual pregnancy is not an extra-uterine pregnancy, but a true uterine pregnancy, which, by malformation of the uterus, has become pedunculated and walled off from the main uterine cavity. The malformation of the uterus is congenital and due to imperfect fetal development. The Fallopian tubes, uterus, and vagina are formed from two embryonal structures called the ducts of Muller. These ducts become fused first at their lower ends. Sometimes one duct fails to develop, so that the uterus becomes one sided of one horned—the *uterus unicornis*. Sometimes the ducts may unite only as far as the top of the vagina, thus two distinct uterine bodies resulting, the double uterus—*uterus didelphys*. Sometimes the ducts may unite externally to form one uterine body, but there is no fusion of the cavities, which open separately, the *uterus bicornis duplex*.

Sometimes the ducts may unite to form a normal cervix, but the upper part of the body of the uterus is bifurcated and the two sides diverge sharply from each other, resulting in the two horned uterus—the *uterus bicornis unicolis*.

Sometimes the ducts may unite throughout, but externally on the fundus there is a slight depression, demonstrating the imperfection of development and giving the organ the conventional heart shape—the *uterus cordiformis*.

Finally the ducts may unite so that the uterus presents externally a normal appearance, but

contains a septum which divides its cavity into two compartments—the *uterus septus*.

The result of impregnation of an imperfectly developed uterus depends on the degree of malformation, and the site of implantation. Often full term gestation is impossible, no matter what the location of the embryo. Again, in an unequally developed uterus pregnancy in one horn would probably go to term, while in the other horn it would certainly terminate in abortion or rupture. Impregnation of the two horns at the same time or at different times is possible, leading to superfetation. Ross, of Brighton, reports a case in which a patient miscarried of twins and three months later was delivered of a healthy, full-term child. Careful examination showed the existence of a complete double uterus, each side of which had been impregnated. This woman had formerly given birth to six living children and nothing remarkable had been observed at any labor.

Symptoms in cornual pregnancy are absent when the impregnated horn has sufficient capacity to accommodate the growing fetus. Symptoms are present, however, when pregnancy occurs in a horn of the uterus too rudimentary to fulfill the task imposed upon it. The symptoms consist of intermittent pain, due to the contraction of the muscular coats of the uterus; bleeding from the vagina, due to the detachment of the decidua in the unimpregnated side; and, finally, either abortion from discharge of the contents of the pregnant horn into the uterus, or intra-abdominal hemorrhage due to rupture of its over-distended walls.

Kelly, of Baltimore, in his unrivalled book on *Operative Gynecology*, states that an accurate diagnosis of cornual pregnancy is always difficult to make. If the case is seen after rupture there will usually be no time to do more than determine that there is intra-pelvic hemorrhage, due to an abnormal pregnancy. If the case is seen before rupture two signs will be of value, the first that the developed side deviates at an angle of from 40° to 60° from the normal position; the second, that the pregnant horn is found by rectal examination to be connected with the uterus by a broad band which is attached at the lower part of the uterine body.

Pregnancy in a rudimentary horn of the uterus usually ruptures from the fourth to the fifth month, somewhat later than is the case with tubal pregnancy. Authorities seem to agree that the same treatment should be applied

to both conditions. If rupture has occurred the abdomen should be opened and the uterus removed. If rupture has not occurred and pregnancy is still in the first six months a section should be done and the condition corrected. If the diagnosis is not made until after the sixth month, then, in view of the lessened danger of rupture, the operation may be postponed, provided the patient can be kept under careful observation until the child is viable, when it should be removed by an abdominal incision.

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### THE X-RAY TREATMENT OF CANCER; REPORT OF CASES.\*

By THOS. A. GROOVER, M. D., Washington, D. C.,

In Charge X-Ray Department Lionel Laboratory, Central Dispensary and Emergency Hospital, etc.

So far as I am aware, the first cases of cancer treated by means of the X-ray were published by Drs. Johnson and Merrill, of this city, in December, 1900. Prior to that time its therapy was chiefly limited to lupus and some of the eczemas. Indeed, it is only within the past two years that this extraordinary form of energy has been seriously considered as a therapeutic agent. Though its sphere of usefulness has not as yet been definitely determined, enough is known of its beneficial effects upon carcinoma alone to justify the assertion that it occupies a permanent and by no means unimportant place in the physician's armamentarium.

Before proceeding to a report of the cases which I have treated, I desire to call your attention briefly to its physiologic action. As you are well aware, exposure to the X-ray under certain conditions produces what is commonly called, for the want of a better name, an X-ray burn or dermatitis. No sensation is experienced at the time of exposure, and, as a rule, no signs or symptoms of disturbance are noticeable until the fourth or fifth day afterward. There may, however, be evidence of local reaction within twenty-four hours, or not until the third week, but the time of its appearance bears no relation to the severity of the lesion. These so-called burns may be classified, like other burns, as belonging to the first, second or third degree, ac-

ording to their intensity. In those of the first degree there is simply a transient erythema, lasting perhaps a few days, followed by an exfoliation of superficial epidermis. There may be hyperæsthesia of the skin, and a slight burning sensation, but no real pain. In hairy regions depilation may occur without inflammatory signs. In cases of the second degree, the formation of blisters supervenes, the condition resembling a scald, but is much slower in healing and less acute in character, requiring three or four weeks, or perhaps longer, for the entire disappearance of the reaction. In burns of the third degree there is sloughing of the deeper layers of the skin and subcutaneous tissues. These severe lesions assume an almost malignant character, persist many months or even years, and resist all kinds of treatment.

In addition to the three grades of X-ray burns described, there is another form, differing somewhat in character, which occurs after repeated short exposures. It is very commonly seen on the hands of skiagraphers, and the writer regrets to say that it can be seen on his own hands in a very characteristic form. In my case it did not make its appearance until more than a year after almost daily exposures. It first appeared as small papules, few in number, but the skin of the hand soon became red and roughened, with an obliteration of the normal markings. The skin is now markedly thickened, especially about the folds of knuckles, and the longitudinal striations of the nails are more marked. This condition is characterized by extreme chronicity, resisting all kinds of treatment. Of course, in severer grades there might occur all degrees of sloughing.

From the foregoing it is seen that we are dealing with a form of energy capable of producing a profound impression on cell activity, but it must be admitted that as yet we know little of the essential factors concerned in its production. We know some of the contributing factors, such as the nearness of the tube to the skin, the length of time of exposure, and the vacuum of the tube, but the actual form of energy at work is as much a mystery as the X-ray itself. As to the nature of these peculiar lesions, many theories have been advanced, the one gaining most credence being that it is a trophic change primarily affecting the nerves of the blood vessels and skin. The delay in their appearance after exposure, their progressive character, and their failure to react to stimu-

\* Read before the Columbian Medical Society, Washington, D. C., December 13, 1902.

lating treatment, are strong reasons in favor of this view. The severer lesions are rather atrophic ulcers than burns. Histologically, there is at first a dilatation of the capillaries, and later their occlusion, together with occlusion of the smaller arterial branches. Assuming that the lesions are trophic in character, it is reasonable to infer that the beneficial effects of the X-ray in carcinoma are due primarily to a modification of the nutrition of the cancer cell, thereby inhibiting their growth and proliferation, and ultimately destroying the morbid elements.

The method of using the X-ray, or rather the "dosage" necessary for securing the best therapeutic results in carcinoma, has been a subject of dispute among various experimenters along this line, some claiming that the production of a burn or dermatitis is not necessary or desirable. It is quite true that its beneficial effects are manifest without the production of a burn, but the writer's experience coincides with the majority of opinion that the best and quickest results are obtained by setting up a moderate grade of dermatitis. It is my object in thus treating cancer to produce a burn corresponding in grade to that of the second degree before described. To do this is more or less a matter of experiment with different apparatus. Different tubes working, so far as I have been able to judge, under identical conditions, vary greatly in the results produced. However, after the efficiency of your apparatus has been accurately determined by experiment, one's results should be fairly constant. I have not noticed any idiosyncrasy on the part of different individuals as regard their susceptibility to X-ray dermatitis, upon which great stress has been laid by various observers. Undoubtedly such cases are met with, but not nearly so frequently as we would be led to believe by a perusal of the literature. I believe that an explanation of many of these cases could be found in the varying efficiency of the apparatus rather than in individual susceptibility. All of the cases which I have treated (excepting Case No. 1) have been treated with the same tube. The technique used is as follows: The skin wide of the diseased area is protected by tin-foil. The tube adjusted to a vacuum of moderately low grade is brought to within two inches of the part to be exposed. Sufficient current is used to bring the platinum anode to a dull red glow. The exposure lasts twelve minutes, and is repeated on alternate

days until three have been given. Usually within two or three days after the last exposure reaction is noticeable. In some cases, even this early, the cancerous nodules have begun to disappear almost as if by magic, and the patient experiences a marked relief from pain. Indeed, the results promised at this time are, as a rule, more flattering than the subsequent progress of the case will justify. The reaction reaches its acme within about ten days, when healing begins at the periphery, and progresses much in the same manner as an ordinary burn, except that it is slower. During this time the patient is supplied with some simple ointment to act as a protective and obviate the discomfort arising from the drying of secretions. When all signs of reaction have disappeared, if evidences of disease are still present, exposure to the ray is again resorted to. Even if no signs of disease are apparent, it is perhaps a good plan to give an exposure from time to time, hoping thereby to limit the possibility of recurrence. It has been my experience that reaction is much more quickly obtained in these secondary than in primary exposures; or, in other words, the X-ray seems to have a cumulative action, in consequence of which greater caution must be exercised in its use.

The subjoined report includes all cases (eight in number) in which this method of treatment has been given a fair trial, irrespective of results obtained. For the sake of brevity unessential details in the history of the cases have been omitted.

*Case 1.*—Mrs. S.; white; age, 59. General health always good. About eighteen years ago a small papule appeared near inner canthus of left eye, which subsequently broke down, leaving an ulcer which increased slowly in size, ultimately involving the upper and lower lids, and the peri-orbital tissues. Four years ago she was operated upon by Dr. Shute, who removed the eye and the surrounding diseased tissues as thoroughly as possible. The microscopic examination showed the growth to be an epithelioma. The wound healed readily, and for a year she was apparently free from disease. About this time a nodule reappeared in the orbital cavity, which has progressively increased in size. She was referred to me for X-ray treatment by Dr. Shute, July 21, 1901. Examination then showed a hard growth nearly as large as an English walnut, situated in the floor of the orbit, partially adherent to the bone and

slightly painful. The lachrymal duct patulous, and about its exit an ulcerated area one-fourth inch in diameter. No glandular involvement could be detected. Exposed to X-ray three times monthly until April, 1902. Owing to my inexperience in the use of the apparatus a well-marked reaction was not produced until that time. The growth, however, had steadily diminished in size, and within eight months the tumor was less than one-eighth the size than when treatment was begun. At this time quite a severe dermatitis was produced, which was six weeks in disappearing. In June, 1902, no signs of disease were apparent except a slight redness about the opening of the lachrymal duct, and the condition was essentially the same when the patient was last seen by me two months ago. No nodules or ulceration could be detected by a most careful examination. I am convinced that if I had had my present experience to guide me a much quicker result would have been obtained in this case.

*Case 2.*—Mr. H.; white; age, 70. Prior to the onset of present disease, seventeen years ago, he had always been vigorous and healthy. At that time a tumor appeared on left cheek, which broke down within two years, leaving an ulcer, which never healed. It has been treated with the curette and caustics repeatedly, with no other result than the infliction of severe pain. The disease has progressed steadily. He was referred to me by Dr. Slaughter, of Alexandria, Va., May 3, 1902, and he then presented a typical picture of advanced malignant disease. There was a cavity in left cheek which led into the antrum, discharging quantities of thin, offensive pus. The surrounding tissues—in fact, the entire left side of face—studded with hard nodules, the larger ones the size of an English walnut, and apparently at the point of breaking down. Both eyelids involved, resulting in his inability to open them. Owing to the very advanced stage of the disease in this case, little could be hoped from any treatment further than a possible inhibition of its rapid progress and an amelioration of the more distressing symptoms. The entire side of his face was exposed to the X-light for fifteen minutes on three successive days, resulting in a moderately severe burn, the beard over the exposed area dropping out in handfuls. This seemed to aggravate the pain for four or five days, after which he experienced a marked relief. The nodules rapidly lessened in size, many of them disappearing.

The cavity communicating with antrum showed no inclination to close, but the discharge lessened, and became less offensive. He has been exposed to the X-ray on an average of every three weeks up until the present time, and I feel convinced that no other method of treatment would have been so effective in the amelioration of his distressing condition.

*Case 3.*—Mrs. W.; white; age, 56. Family long lived and healthy. A son recently died of pulmonary tuberculosis. General health always good. About five years ago noticed a swelling on the left jaw, which has progressively increased in size. About two years ago it broke down, leaving an ulcer. Soon afterward she was operated upon by Dr. W. P. Carr, who excised the growth, which he found to involve the parotid gland. A microscopic examination showed it to be an epithelioma. The wound never entirely healed, a salivary fistula being persistent. The growth speedily returned, and she was referred to me for X-ray treatment July 29, 1902. Examination showed a hard, immovable mass about the parotid gland. There was a fistulous opening discharging saliva, about which was an ulcer one inch in diameter. A little above angle of jaw was a distinct hard nodule freely movable. Suffered considerable pain. Exposed to the X-ray on alternate days until three exposures had been given. A moderately severe reaction resulted. The nodules rapidly disappeared, the ulcer healed, and the fistulous opening closed. One other exposure was given in this case, which produced a dermatitis of moderate grade. In examining this case recently no nodules or ulceration were apparent, but a certain hardness of the tissues leads me to believe that there is possibly some disease still present. She is receiving no treatment, but is being kept under observation.

*Case 4.*—E. T. S.; male; white; age, 73. General health always good. Five years ago a small sore was noticed on inside of lip, which steadily increased in size. Two and a half years ago was operated on by Dr. W. P. Carr, and microscopic examination of growth excised showed it to be epitheliomatous. The wound never healed entirely, the disease recurring, and has progressed with great rapidity. Referred to me for X-ray treatment Aug. 15, 1902. Examination then showed a scar extending outward two inches from angle of mouth. Inside of mouth along line of scar and at angle of mouth a characteristic malignant growth, hard and

nodular, with everted edges; painful and bleeds easily. One enlarged cervical gland felt on right side. An area two and a half by one and a half inches over seat of growth was exposed for twelve minutes on alternate days until four exposures had been given. A moderately severe dermatitis resulted. After the reaction had disappeared it was noted that the ulceration at angle of mouth had disappeared, but no change was noticeable in the appearance of the growth along line of scar inside of mouth. On November 1st, with the assistance of Dr. Abbe, an effort was made to expose the diseased mucous membrane directly through the mouth. A dermatitis was produced on the lips owing to our inability to protect them with tinfoil during the operation. It must be admitted that little, if any, impression was made upon the disease in this case. The only reasons that I can assign for its failure to react favorably are: First, its tendency to progress rapidly; and, secondly, to the fact of our inability to expose the growth directly to the rays on account of its location. According to the statement of W. J. Morton and others, malignant growths involving mucous membrane react more favorably to the X-ray than those simply involving the skin, but this case certainly does not bear out that statement.

*Case 5.*—W. B. Y.; male; white; age, 52. Two brothers dead—one of abscess of liver, and one of pulmonary tuberculosis. General health always good. Never had any serious illness. Had a wart-like growth on scalp since childhood. Twenty years ago this wart was irritated while combing his head, causing an ulcer which never healed completely. Two years ago the diseased area was excised, and a microscopic examination showed it to be an epithelioma. The wound never healed; ulceration began and has progressed steadily. Referred for X-ray treatment September 5, 1902. Examination then showed a round ulcer over right parietal region two inches in diameter. The edges indurated and nodular, and in places adherent to the bone. Surface bled easily, and was quite painful. No glandular involvement can be detected. Exposed to X-ray for twelve minutes on alternate days until three exposures had been given. A moderately severe reaction resulted. On October 20th the following was noted: "The ulcerated area is only half inch in diameter. No nodules or induration. Firm white cicatrix over healed area." November 8th, ulcer now about size of dime. There appears to be a small nodule on margin. Exposed for ten minutes.

*Case 6.*—Mrs. M. P.; white; age, 65. Mother died of cancer of breast. Father died of some brain disease in his 77th year. Several brothers and sisters dead, none of whom had cancer. With the exception of uterine and bladder trouble, fourteen years ago, which lasted three months, general health has always been good. Seven years ago there appeared a small ulcer on bridge of nose, supposed to have been induced by friction from nose-piece of spectacles. Until December, 1901, she had been a prey of cancer quacks, when she applied for treatment at the skin clinic, Emergency Hospital. She there received various local treatments, but the condition became progressively worse. Referred to me by Dr. Carmichael, September 15, 1902, with a diagnosis of epithelioma. Examination then showed an ulcer one quarter of an inch in diameter on bridge of nose, edges of which are raised and markedly indurated. It was quite painful, and there was a watery discharge which seemed to irritate the surrounding skin. Apparently not adherent to periosteum. Was exposed to X-ray for fifteen minutes on alternate days until two exposures had been given. A moderately severe dermatitis resulted. Within a month the ulcer had entirely healed and all induration had disappeared. No other treatments were given. At a recent careful examination no evidence of disease whatever could be discovered.

*Case 7.*—James C.; male; white; age, 76. Father died of pleurisy, age 56. Mother died in her 70th year of some pulmonary disease, associated with hemorrhages. Four sisters dead, one of whom had cancer of the stomach. Had pleurisy when sixteen years old. For the past ten years had been troubled with dizziness. General health always good. No specific history. About twenty years ago a small nodule appeared at outer angle of left eye. It was treated with various salves and caustics, but the disease steadily progressed until lids were involved, and considerable ulceration took place about original site of lesion. Sight in left eye is much impaired, and for a long while there has been a persistent redness of conjunctiva. For a number of years he had several dirty scabs on various parts of body—one on nose and one over middle of zygoma being persistent. Has always refused active surgical interference. Referred to me for treatment September 20, 1902, with a diagnosis of epithelioma. Examination then showed an ulcer about outer canthus of left eye, with multiple hard nodules at margin; a nodule

the size of a bean in lower lid. Conjunctiva injected. Dirty, brown scabs on nose and over zygoma, which, when removed, left a raw, bleeding surface. No glandular involvement. Exposed diseased area about fifteen minutes once a week until three exposures had been given. Moderately severe reaction. Nodules rapidly disappeared at outer canthus and ulceration healed. On October 25th, another exposure was given for ten minutes on account of persistence of nodule in lower lid. Nodule rapidly disappeared. November 1st, ulcerated spot on nose exposed for fifteen minutes. The only evidence of disease about eye at this time is a redness of conjunctiva and a slight suspicion of hardness in lower lid.

*Case 8.*—F. R.; male; white; married; age, 42. Mother died of pulmonary tuberculosis, age 45. Father died of pneumonia. No history of malignant disease. With the exception of an attack of typhoid fever has always been healthy. No specific history. Five years ago an ulcer appeared on lip, which was diagnosed as "smoker's cancer," as he gave a history of having smoked a pipe for a number of years. It has been treated with salves and caustics without benefit. During the past year it has greatly increased in size. Referred for X-ray treatment October 4, 1902. Examination then showed a circular ulcer half an inch in diameter on lower lip at junction of skin and mucous membrane, covered with a dry, brown scab, which, when removed, left a raw, bleeding surface. The edges raised and markedly indurated; quite painful. No microscopic examination was made in this case, but the clinical appearance left little doubt as to its malignancy. The ulcer was exposed to the X-ray on alternate days until three exposures had been given. A marked reaction resulted. Three weeks later no signs whatever of disease could be detected. The site of the ulcer is occupied by a firm, white cicatrix.

#### SUMMARY OF CASES.

Of the eight cases which I have reported three are apparently cured. Three have improved to such a marked degree that the prospects of an ultimate cure are very promising. In one case, owing to the advanced stage of the disease, nothing was to be hoped from any treatment further than the alleviation of pain and a possible inhibition of its rapid progress, both of which the X-ray accomplished more effectively than any other treatment of which I am

cognizant. In one case the X-ray had little, if any, beneficial effect.

#### CONCLUSIONS.

First. The X-ray is a form of energy capable of producing a profound influence on cell activity.

Second. The changes induced are trophic in character.

Third. The X-ray has a marked beneficial effect upon malignant growths, in some cases apparently effecting a cure.

Fourth. In the slow-growing epitheliomata, situated in accessible regions, the X-ray treatment should have precedence over all others.

Fifth. In advanced cases of malignant diseases, the X-ray is the best palliative measure at our command.

Sixth. From the nature of the problems which confront us a number of years must necessarily elapse before the status of the X-ray in the treatment of cancer can be accurately determined.

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## SOME THEORIES AS TO THE CAUSATION OF CANCER.\*

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Such an intimate acquaintance has the world had with malignant epithelial neoplasms that a familiar household name has been given them. "Karkinos," or crab, was the name used by Galen to signify such sores of the breast as were characterized by malignancy, by tendency to return after being removed, and by rapidity of growth. The Germans call cancer "krebs," which means crab. Sanscrit, "karkata" and "karkataka," used in the same sense, meaning crab, applied to cancers. In Hindustanee "kark" (crab) is used in the same sense. All of these people had in their mind a description of the disease as well as a name for it.

From the examinations of Bischat, Lobstein and others, Laennec supported the idea that cancers were heterologous—in other words, that they were different from the cells of the body.

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J. Muller locked horns with him, for he demonstrated that the cancer cells were identical with the normal, physiologically acting cells of the body. It was the brilliant and many sided Virchow, however, who finally established beyond contradiction that the cancer cell, as well as all tumor cells, were identical with the cells of the body, and who gave a new meaning to homologous and heterologous—making homologous mean tumors that grew among similar, and heterologous mean tumors that grew among dissimilar cells from themselves. But he defended the idea, and for his whole life believed that cancers were of connective tissue origin.

This theory of his was energetically and bitterly opposed by such men as Tiersch and Waldeyer. Virchow's reputation was so well known and his defence was so masterly that only in the last few years have scientists given up the connective-tissue-origin theory. There are to-day but few, if any, pathologists who do not believe that cancers are of epithelial origin.

Of the many opinions as to the causation of cancer that have been advanced since the time of Galen, the ones that have had the most facts to support them are (1) the parasite, (2) Tiersch's theory, (3) Cohnheim's, (4) Huseman's, (5) Ribbert's, (6) Wakefield's, and (7) the bacteriological.

Virchow overturned the parasite idea when he established the fact that all cells of tumors find their prototype in the human body.

Before discussing the other theories as to exciting causes, it might be well to discuss briefly the usual place of finding cancers and to mention some of the predisposing causes.

It has been noted, after many years of investigation, that cancers select certain organs for their primary growth in order of their frequency—the uterus (vaginal portion); outer skin (lip, ear, eyelid, cheek, extremities); female breast (much more seldom the male breast); stomach (pyloric end, more seldom the cardiac, and rarely the fundus); rectum, œsophagus, ovaries, outer genitalia, penis, scrotum, clitoris, labium majus, vagina, prostate and bladder, testicle and epididymus, abdominal viscera (particularly the pancreatic head), small intestine, gall bladder, gall ducts, liver, thyroid gland, kidney, bronchi, lungs, tube, ureter, vesiculae seminales, ventricles of brain, dermoid cysts, bone, etc.

Almost every patient suffering from a cancer, particularly where the cancer is superficial, will

give the history of some injury to the affected part.\* So prominent is this fact that at one time it was generally believed that direct violence was the cause of cancer. The causative effect of age will be discussed later. Sex as a predisposing cause cannot be elaborated any more than mentioning the facts that men are more subject to injury, if that be a cause of cancer, while women bear and suckle the babies. Race seems to have something to do with the appearance of this dread pathological lesion. Hygienic surroundings and contact no doubt have their bearing, and a run down condition certainly does.

Carcinomas occur usually in old people. Tiersch used this fact as the foundation upon which he built his theory. He believed that the initiative for cancerous growth came from the epithelium, but that a lessened resistance on the part of the connective tissue stroma helped. He theorized that this lessened resistance was due to a poor blood supply, which would be the case of those suffering from sclerotic arteries and the like; consequently cancers were found almost exclusively among the older people.

Cohnheim explained the tendency on the part of the cancer cells to proliferate as due to the embryological nature of their cells. He believed that all tumors originated in the same way by assuming that more cells were manufactured than were necessary for building the organs of tissues of the embryo. So long as the normal physiological cells were actively doing their allotted duty and were healthy, the embryological (excess) cells had no chance to grow. Just as soon as the physiological cells ceased to multiply to increase the size of the organ or tissues, but more particularly when the tissues began to degenerate from age, the embryological (excess) cells commenced to assert themselves and begin embryological in character, their growth was rapid. From Cohnheim's theory we would naturally expect to find tumors either about puberty or in old age, or whenever the body got into a rundown condition. This theory was substantiated by a series of experiments conducted by Leopold, who attempted to grow a piece of cartilage taken from a full-grown guinea pig in the abdomen of another. The experiment failed. But when a piece of cartilage from an embryological guinea pig was used, an enchondroma was grown.

Huseman, of Berlin, who knows more about tumors than any living man, in my opinion, ex-



plains the origin of tumors by the theory that certain epithelium undergoes a retrograde metamorphosis, taking on the growth characteristics of the embryological cells, and losing in part, if not wholly, their secretive and other properties. They, in this way, have gained growing powers at the loss of their differentiating and functioning properties. This is known as the "anaplasia of cells."

Ribbert assumes that the first changes in beginning carcinomas take place in the connective tissue, which for some such reason as chronic inflammation or hypertrophy cuts off certain epithelium from its accustomed associates. These cells not being in their usual place, and having now no especial function to perform, grow to be tumors.

A more recent theory of Wakefield might be mentioned at this point. He believes that gelatiniform tissues as observed in neoplasms and elsewhere invariably represent a stage of degeneration of tissues once healthy, the said degeneration bearing no relation whatever to the embryology of the tissues. The conditions responsible for the increase in the involved tissue is a retardation of katabolism. He also believes that tissues are subject to tumor formation in inverse ratio to their katabolic digestibility, this digestibility being aided by an alkaline medium.

To illustrate these theories in a practical way:—Cohnheim's would be a man who was born with the desire to steal; this desire was kept in subjection for fear of punishment by laws formulated by his neighbors for their mutual protection; opportunity presenting in such a way that he thinks he will not be caught he steals; the habit then grows on upon him until presently he is found out, punished, and looked upon by his neighbors as an outcast—a tumor.

Hauseman's theory is, the citizen that allows his passion to take away his energy and desire to work, he degenerates into "the bum" found at every almshouse, who gets fat at the expense of the community.

Ribbert's idea of cancer causation might be likened to the cancer quack, who began legitimate practice with bright prospects and many friends, but who, because of the desire to get rich quickly, cut himself off from the honorable practitioners, by this very cutting off losing the desire to uphold the dignity of the profession, to further the good of his fellow doctors and of the community as a whole, and expended all his

energies in amassing a fortune, preying, as does the tumor, on the organism of the commonwealth.

Wakefield's theory is the man that accumulates a fortune by failing to pay his debts. All of us could be tumors of this kind in a short time if we could only get credit.

Many different bacteria as causes of cancer have been described. With none of these, except the blastomyces of Leopold, have I any personal knowledge; so, as the time is limited, I shall call your attention to these alone.

Geheirath Leopold, of the Frauen Klinik, Dresden, along with his assistant, Dr. Rosenthal, began investigations to ascertain if there were a causative bacterium for cancer early in 1894. Not until 1900 did he read his paper before the Medical Congress at Paris, publishing his complete investigations to the world.

The material examined was taken from body-warm cancers, removed from various parts of the body; scrapings from the innermost portions were taken with aseptic precautions. These scrapings were examined upon an especially constructed warm microscope stage in sterile beef tea, normal salt solution, or blood serum. Among fatty degenerated cancer cells were found particles with double contour, some of which were filled with yellow pointed or long-drawn-out particles, highly refractive. These particles seemed to have a peculiar motion; all did not move at once; the motion began at the periphery. After they had been moving some time, suddenly a particle pushed through the covering membrane cell; the others followed, but no lesion of the cell wall was to be seen. Other particles formed, and this cycle of procedure would continue for hours. It was not necessary to keep the temperature constant for this process to take place.

In 1898 Leopold reported that he had observed a hanging drop made of freshly prepared carcinomatous tissue in sterile bouillon for two hundred consecutive days.

In 1900 the same observer showed pure cultures of blastomyces obtained from human cancers; likewise tumors in animals which were produced by pure culture of these same blastomyces obtained from human cancers. The blastomyces obtained from the tumors of the animals were identical in appearance—in staining peculiarities and in growth with those obtained from human. To make the circle complete, the blastomyces derived from the animal

cancers must be injected in to produce tumors in other animals or in man, which shall likewise contain blastomycetes identical with the others.

The procedure of growing these blastomycetes was first to find them in the sterile bouillon, then aseptically and with care to infect a tube of neutral gelatine. In this tube there was a mixed infection. The second contained a few other germs. The fourth tube gave a pure culture of blastomycetes. These blastomycetes stain with the usual coloring fluids. Hemotoxylin and fuchsin or eosin can be used with best results.

Many animals were infected with pieces of fresh tumors. A white rat was infected with a piece from an ovarian cancer; after sixty-one days the rat died of numerous tumors. The microscopical diagnosis was adeno-sarcoma with many blastomycetes. In the case of a guinea pig infected with a cervical cancer, the liver was covered with epithelial tumors and contained blastomycetes. A rat injected into the testicle with a pure culture of blastomycetes derived from an ovarian cancer, after 145 days died, filled with numerous tumors. These proved to be round and giant celled sarcomas with numerous blastomycetes.

To recapitulate: Leopold was able (1) to see blastomycetes in scrapings made from body-warm cancers and to study them; (2) to make pure culture; (3) to inject a pure culture into the testicle of a rat that died of tumors in which were found numerous blastomycetes; (4) to make pure culture of the blastomycetes found in the tumors of the rat.

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## THE DIAGNOSIS OF CUTANEOUS CANCERS.\*

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There can be no question that the establishment of an accurate diagnosis is essential to the successful management of morbid growths of the skin. It is a common error that the sole requisite for determining such a diagnosis is the exhibition of the affected portion of the integument, and that the physician shall be able, by merely viewing the surface for a few minutes, to pronounce definitely the nature of the disease and determine the therapeutic measures to be adopted. But much more than this is essential, as much so as in the investigation of diseases involving any other organ of the body.

Three almost indispensable aids in obtaining a correct diagnosis are: A good light, a good eye, and a microscope.

If possible, secure a history, past and present, of the physical condition of the patient, his parents, and his children. Note his age and occupation and whether married or single. Unless these facts are taken into consideration, the management of the case must be haphazard, unscientific, and culpable.

The principal diagnostic points of cutaneous cancer are (1) the advanced age of the patient; (2) the beginning of the disease as a wart, mole, nodular, or scaly patch; (3) the usual slow progress of the disease; (4) the single character of the growth; (5) the striking appearance of its border, which is of a pearly hue with roll-like elevations or a hard elevated infiltration; (6) the scant, and in the later stages, viscid, discharge, frequently streaked with blood; (7) the situation of the affected portion, usually the nose, eyelids, and frequently involving the other portions of the face.

The conditions which simulate cutaneous cancer are syphilis, lupus, and Baelzer's disease.

*The syphiloderm*, which bears a most striking likeness to a skin cancer, is the tubercular ulcerating form. Its distinguishing features are (1) its more rapid growth; (2) its multiple lesions, consisting of several superficial ulcerations, rarely round in shape, but segmented or irregularly circinate; (3) the presence of tubercles which have not undergone destructive

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changes; (4) its usually free discharge of a distinctly pustular character. A pronounced symptom of a syphilitic ulceration is a strong tendency to reparative cicatrization, due partly to the exhaustion of the infective poison and partly to an insufficient but modifying treatment.

*Lupus vulgaris* is a disease which usually develops in youth and rarely after the age of 35. It presents a tubercle of a reddish-brown color and of a soft consistency. In the earlier period of its career it is more diffuse than cancer, while in the ulcerating stage its edges are often bordered by non-ulcerating papules. The presence of the tubercle bacillus is revealed by the use of the microscope.

*Baelzer's disease* was, for a long time, rather confusing to me, as the literature on the subject is rather limited. It is a chronic affection of the mucous glands of the lip, marked by an indolent swelling and infiltration of the periglandular tissue and a slow ulcerating process extending from above downward. There is also present catarrhal inflammation of the mucous membrane of the lip. The distinctive points of the disease are (1) the absence of general systemic disturbance; (2) the absence of implication of the neighboring lymphatic glands; (3) its ready response to simple treatment, as the application of tincture of iodine.

The forms in which the most uniformly good results have been reported have been those forms amenable to treatment by excision with the knife, the application of caustic pastes, and of the actual cautery. This fact caused the belief that in order to obtain beneficial results an actual "burn" must be produced; consequently, in the treatment of cases by the X-ray the length of exposure necessary for a tube of definite resistance to produce this effect was ascertained and an attempt was made to produce a burn of gradually increasing severity until a certain depth was reached. This was, indeed, a most tedious and time-consuming method of cauterizing. Further experimentation, however, has demonstrated conclusively the fallacy of this theory.

The exact *modus operandi* of the rays on the diseased tissues has furnished a subject for much speculation, some being of the opinion "that the effect is produced by the projection of molecules into the tissues"; some that electrical discharges or waves emanating from the tube are the active agents; some that the tissue elements are made to vibrate in a manner different from their normal molecular motion with a resulting molecular disintegration; some that the ultra-violet ray is produced "within the tissue by a process of interference"; others that ozone is liberated in the tissues by the X-rays.

The most generally accepted theory is that the "rays are composed of negatively charged corpuscles or electrons." The theory of the bactericidal action of the rays has been practically abandoned. Whatever be the correct theory, the fact remains, as shown by recent experiments of Dr. Ellis, of the Jefferson Hospital, that a distinct and marked degeneration results in the diseased tissues subjected to the action of the rays, resulting in a replacement of the malignant tissue by fibrous or adipose tissue; and this change may be produced without subjecting the patient to the suffering and inconvenience—not to mention the scars resulting from sloughing of tissue incident to a burn.

Our object being to produce a cure *tuto, cito et jucunde*, if the cure is as certain and the after appearance of the diseased area better, we may sacrifice rapidity for safety, pleasantness, and good cosmetic effect. The idea of producing an actual destruction of tissue by the so-called X-ray burn has heretofore been abandoned. Authorities differ in the amount of "reaction" desirable, but it seems generally preferable to

## X-RAYS IN THE TREATMENT OF SUPERFICIAL CANCERS.\*

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That the Röntgen ray is an agent of the most powerful therapeutic value in at least some forms of skin disease, has, by all who have had any considerable experience in this method of treatment, ceased to be a matter of doubt.

Of the graver forms of skin affections, the treatment of which by radio-therapy has proven successful, I mention especially lupus vulgaris and erythematosis, psoriasis, xeroderma pigmentosum, eczema resisting other therapeutic agents, and epithelioma.

Since the subject assigned to me is limited, I shall briefly discuss the treatment of the more superficial forms of cancer.

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make the exposures long enough to produce a slight hyperæmia, as is seen from exposure to the sunlight and, as in the case of exposure to sunlight, a subsequent "tanning."

It is not my desire to go to any length into the technique of the treatment of these cases, but a few practical points may be at least referred to.

The healthy skin surrounding the diseased area must be protected by some substance more or less opaque to the rays. The materials most commonly used are lead foil and rubber sheeting (one sixteenth to one quarter of an inch in thickness). An opening is cut into the protective sufficiently large to expose the diseased area and a small band of healthy skin surrounding it. Rubber is to be preferred, as it does not attract electricity, and the patient is, therefore, less liable to slight shocks that are sometimes experienced when foil is used. Short exposures should be made at first—five to ten minutes, or less, at a distance of eight to ten inches from the anti-cathode or platinum plate. These should be made every third day for a series of four or six exposures and an interval of ten days or two weeks allowed to elapse in order to determine whether or not the individual possesses any unusual susceptibility to the rays. After this the length of exposures should be gradually increased if no ill effects are present and the distance from the tube reduced to six inches or less.

The effects of treatment become manifest within time limits varying from almost immediately to six or eight weeks, and should be kept up as long as any improvement whatever is noticeable and for some time after healing is apparently complete. The first effect is relief to a greater or less extent of pain. Then follows lessening of the discharge, if such be present, a drying up of the diseased tissue and scaling off in the form of a crust, the lesion contracting at the periphery, and an ultimate *restitudo ad integrum*, with scarcely a resulting scar.

As in every other diseased condition, there are cases of external cancer that defy this as well as all other forms of treatment. Thrice happy would we be if we possessed a single remedy that would be an absolute specific in every case of any disease. If then, in a malady of such a serious nature as carcinoma, wherever its location, we discover an agent that effects a cure in a large percentage of cases, is it not

worthy of a most careful and thorough consideration?

The cases least favorable for treatment by radio-therapy are those that have progressed until the whole system has, to a great extent, lost its vigor, and the vitality of the tissues is so impaired that their reparative power is forever gone. However, this is an almost indeterminate problem, as has been shown by the recovery of many cases considered hopeless. Is there any case, then, that is not worth the trial?

It is well to bear in mind that not infrequently, from too short exposures, the diseased tissues are stimulated and the progress of the malady hastened. The remedy should, therefore, be faithfully and skilfully administered lest evil, rather than good, result.

If, in this brief and unsystemized paper, I have succeeded in arousing your interest in this most interesting subject, I shall consider myself amply repaid.

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## CASE OF LEUKAEMIA—A CLINICAL LECTURE.\*

By WILLIAM OSLER, M. D., Baltimore, Md.,  
 Professor of Medicine in Johns Hopkins University, etc.

The patient is a young white married woman, and mother of one child. She came to the Virginia Hospital from a malarial district, and reports that she has had repeated attacks of chills and fever. You will notice that she is quite pale, and has some bronzed splotching of the skin, but she has had no jaundice. There is nothing peculiar about the tongue. There is not marked loss of flesh. There is no notable cardiac valvular disease, nor is the pulse char-

\* Delivered before the classes of the University College of Medicine, Richmond, Va., February 18, 1903, reported by "A Student."

acteristic of anything except progressive weakness—faster than normal, soft and compressible—but she complains of palpitation on the slightest exercise, and has noticed a frequent tendency to nose bleeding from slightest causes. She had her last attack of intermittent fever some time during August, 1902, and has been growing weaker ever since that time. The shortness of breath in this case is evidently due to the progressive anæmia.

Inspection shows the right side of the abdomen is normal in size, and percussion of that side reveals nothing abnormal. But the left side is bulging in its upper part—just below the ribs. You will notice as I press a hand slightly down just below the ribs of the right side a very distinct lump or tumor, which moves up and down on respiration. The location of this lump corresponds with the position of an enlarged spleen. You will notice two shadows move up and down the abdomen near the median line with the respiratory acts, as I press on the skin above and below the lump just enough to make the skin a little tight above the spleen. These shadows are caused by the notches on the anterior surface of the organ. On deep inspiration the lower border of the tumor extends several inches below the umbilical level.

Palpation evinces tenderness over the whole abdomen—especially marked in the region of the tumor. The tumor is smooth, solid, regular in outline, and appears to be just beneath the skin. It is felt to move up and down as she breathes, and the way it comes forward from beneath the ribs is quite characteristic. We can feel the notches on the anterior border or surface of the tumor, which cause the shadows just spoken of under the head of inspection. Percussion reveals dullness over the tumor. No enlargement of the liver or other abdominal organ is apparent, although an autopsy might show leukæmia enlargements of the solitary and agnate glands of Peyer.

A blood examination has been made, and the number of colorless corpuscles has been found to be out of all proportion to the number of red. You will recall that the average normal number of white corpuscles per cubic millimeter at about six or seven thousand, whereas the number of red corpuscles is about 600 or more in the same measure. In the case before us the proportion of white corpuscles is about 1 to 15 or 20 red corpuscles. Among other characteristic features of blood in splenic myelogenous

leukæmia is the presence in the cells of Erlich's myelocytes, which appear to be derived from the marrow, but do not occur in normal blood.

The diagnosis of this case is splenic leukæmia. The facts which force us to this conclusion are: The general appearance of the patient, her history of malaria, the facts revealed by palpation and inspection. But all of these might be deceptive were it not that the microscopic examination of the blood, showing the enormous out of proportion increase of white blood cells to red, make the diagnosis certain.

The prognosis in such a case as this is grave. The history of this patient seems to have made the case exceptionally rapid in its course; for in six months she has reached a condition not often arrived at before the end of the third year. Death may take place as the result of hemorrhages, or diarrhœa, etc. Oedema of the lungs, or pneumonia may carry off the patient. Ascites or anasarca may develop.

As to treatment, certain remedies may retard the progress of the disease. Chief among these is arsenic in large doses—even improvement under its use may be apparent. Quinine should be combined in a case like this, presenting so distinct a malarial history. Iron is also often a valuable help. Phosphorus or some of its preparations is theoretically correct, if not experimentally proven to be good therapeutics. Inhalations of oxygen gas is helpful for the dyspnoic attacks that are almost sure to occur at times.

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**Sure Death.**—"Medical science has made such progress," said the doctor, when speaking of his profession, "that it is almost impossible for anybody to be buried alive now." Then he wondered why everybody laughed.—*Boston Courier.*

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**New Orleans Polyclinic.**—Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, Post-office Box 797, New Orleans, La.

## PULMONARY TUBERCULOSIS—MEANS OF EARLY DIAGNOSIS—TREATMENT.\*

By O. F. BLANKINGSHIP, M. D., Richmond, Va.,  
Formerly Demonstrator of Chemistry, etc., University College of  
Medicine, Richmond, Va.; Examiner for Life  
Insurance Company of Virginia, etc.

It is now conceded that an early diagnosis in consumption is of the utmost importance, for upon it depends to a great extent the success or failure in treatment. If we wait until the processes are well advanced our hopes of curing or benefiting our patient are very much reduced, and who of us has not shrunk from taking charge of well developed or far advanced cases, knowing generally how futile are efforts towards a cure?

I will not attempt to go into the pathology or morbid anatomy of the tubercle, that being ancient history to you all. Pulmonary tuberculosis is a disease which may attack the old and young alike, but it attacks most frequently the adolescent and young adult or middle aged. When it attacks the very young it is more apt to attack primarily some other portion of the system than the lungs—principally the glandular system and joints, bones, or meninges. Tuberculosis is a disease of the weak, or it attacks those that have been weakened or run down by some other disease. Of course, heredity has a great deal to do with it. It seems that there is inherited a peculiar predisposition or weakness of the body cells that makes them peculiarly susceptible to attacks from the tubercle bacillus. Also habits and manner of life have a great deal to do with it. Those who lead sedentary lives, or work in dark, close and ill-ventilated rooms, are prone to it. Certain trades and callings also predispose to it; glass-blowers are very prone to it, knife-grinders and those who work in dust, as colliers, millers, etc.

The reason the lungs are so often affected is that the bacilli are conveyed in the air most often and the pulmonary cells and mucous membranes offer a good nidus for their development. I think also that the lung cells are less resistant than the alimentary canal.

I will not devote much time to the description of acute or general miliary tuberculosis, as this affects other organs than the lungs as well. It generally is due to a secondary infection and runs such an acute course that very little can generally be done towards a cure. It is fre-

quently mistaken for other diseases, especially typhoid fever. The lung symptoms are such as cough, dullness, deficient breath sounds, dyspnoea, cyanosis, and if the disease lasts long enough, expectoration.

There are three varieties of pulmonary tuberculosis—acute tuberculosis, acute pneumonic phthisis or galloping consumption, chronic ulcerative phthisis (the usual form) and fibroid phthisis.

*Acute Pneumonic Phthisis.*—This generally begins as an acute attack, frequently mistaken for pneumonia or typhoid fever, or it may follow an attack of pneumonia. It may generally be distinguished from typhoid fever by the temperature curve; there are more remissions and a greater range of temperature, beside the lung symptoms. The lung signs are consolidation, bronchial breathing, dullness, fever 103° or 104°, muco-purulent expectoration. The apices are generally first affected—moist rales, diminished movement, profuse sweats, formation of cavities, etc. When we have pneumonia that does not undergo the usual course, continuance of fever, and in which the consolidation does not clear up, we should be suspicious and examine the sputum for the tubercle bacilli. As for treatment, as a rule, it is of little avail. Support the strength by good nourishing diet and alcoholics. I believe creosote is one of the best of our remedies or carbonate of guaiacol, and symptomatic treatment.

We now come to *chronic ulcerative tuberculosis*, the usual form, and the one that interests us most, for there is more hope of benefiting and curing our patients if we take the case in time and adopt the proper means of treatment.

It is produced, as we know, by the tubercle bacilli gaining entrance to the tissues and setting up changes which result in tubercles, and subsequently necrosis and breaking down of the tissue or caseation, or calcification, which is nature's method of curing the disease. If the tissues become necrosed, and break down and are coughed up, cavities are formed. The symptoms of the disease are caused by the reaction of the system against the invaders and the effects of the toxins produced by the bacilli and the interference with function produced by the growth of the bacilli.

The *diagnosis* is made by observation of the symptoms, subjective and objective. It is by no means easy to make an early diagnosis unless the utmost care and pains are taken, as the dis-

\* Read before the Church Hill Medical Association, January 22, 1903.

ease is so insidious in its beginning. Frequently the patient does not attach enough importance to his symptoms to heed them, or he attributes them to some other cause than the real one, and often if he consults a doctor he makes the same mistake, either from heedlessness or carelessness. Incipient tuberculosis is frequently mistaken for malaria and other troubles. I do not know that the doctor is to blame, but we should be more careful, especially if we have reason to suspect the disease from heredity or association with another who has the disease.

Some of the prominent subjective symptoms are—first, a gradual loss of strength and vigor, a loss of flesh, loss of appetite, a slight rise of temperature, perhaps not enough to be noticeable, one-half or one degree, a cough, especially at night and morning, at first dry and hacking, later some expectoration. Consumption frequently begins with a simple bronchitis, which may follow whooping cough or measles. Cough may be absent or very slight at first. I should say the earliest and most frequent signs are the slight evening rise of temperature and the loss of strength and cough. And in seeking to make a diagnosis I should advise the frequent use of the clinical thermometer. I should advise that the first prescription in a suspected case be a clinical thermometer, with instruction how to use it, and make the patient record his temperature every 3 or 4 hours. (When I come to treatment, I will show how important is the thermometer—in fact, no rational treatment can be used without it.)

The physical signs are not very marked or distinct in the beginning. The apices are generally first affected, more frequently the right than the left. The precise spot is more often not in the extreme tip, but one or two inches below this, corresponding to the middle of the clavicle in front or the supra-spinous fossæ. In my experience the back is better for auscultation than the front. At first there may be only a harshness about the breath sounds on expiration, or a jerky inspiration (but this is not trustworthy unless other signs are present, as I have often noticed it in nervous people), or a few moist rales. As the disease progresses, we have broncho-vesicular or bronchial breathing, deficiency of the vesicular sound and more or less rales, fine or coarse, and dullness on percussion, perhaps some pleural friction sounds, lack of expression, a flatness above the clavicle, increase of fremitus and vocal resonance—the latter two

I consider very important. The expectoration at first is not characteristic (we may have it streaked with blood or we may have hæmorrhage). The first characteristic phenomena are little particles that look like pearl millet or sago seed. It then becomes more muco-purulent, and finally, if we have cavities, nummular.

One of the chief early diagnostic signs is finding the tubercle bacilli in the sputum. Though it is not always present, it should be sought for often, for if found the diagnosis is positive. A negative result should not have too much weight, for bacilli are not always present early in the case. The tuberculin test I have never tried, but it is highly spoken of by many authors, though a recent work says it should not be tried until all other means have failed. Personally, I should be a little fearful of it. It depends upon the system reacting to the test; if tubercle is present the temperature rises several degrees inside of 24 hours.

X-rays have been used, but I should think that except in very expert hands it would be of doubtful use, for by the time enough deposit formed to cast a shadow, other means would be sufficient to detect the condition.

Morning subnormal temperature is very characteristic. This was especially noticeable in a case of tubercular-peritonitis I had a few years ago, an account of which was published in the *Virginia Medical Semi-Monthly* at the time.

The treatment of pulmonary tuberculosis in private practice is very unsatisfactory, chiefly because our directions are not carried out properly; partly because the patient in the early stages does not recognize the gravity of his condition, and frequently because the patient is not able to give up his vocation on account of pecuniary considerations. If the patient is able, and we see him in time, advise him to take advantage of climatic and sanitarium treatment, but this is often out of the question. We should be careful as to where and to whom we send incipient consumptives, for climate without good medical supervision will accomplish little; however, a chief thing in treatment is fresh air and proper hygiene and diet. Fresh air is attainable at home as well as away. The great difficulty at home is getting the patient to follow directions implicitly; besides, at home they are apt to worry and bother about business and family affairs. We should first endeavor to obtain the patient's confidence, and seek to impress on him that he has a serious malady, but one

that is curable in a great proportion of cases if taken early and persistently treated. Impress the fact that he is not cured if he feels better for a while, for of consumption it can be said as of liberty: "Eternal vigilance is the price of health."

As to climatic treatment, it is generally agreed that a moderately dry climate with a good deal of sunshine is the best, and in going to a different climate the patient should for the first month or two be careful to take very little exercise until he sees how the place suits his case.

Right here I would like to correct a prevalent error—that is, that consumptives should take a great deal of exercise. This is entirely wrong, if they have much fever, more than from one-half to one degree. When they are afebrile they can begin to exercise with care and discretion; walking is the best. In sanitariums and among doctors who make a specialty of this trouble, more stress is placed on hygiene and diet and staying out of doors nearly all the time than on drugs, though they are used as corroborants to build up the system and to meet special indications. The patient should sleep the year round with his bed-room windows open, and in the daytime he should be out of doors, amply protected from the wind and the weather, on the porches or piazzas in bad weather, and in the sunshine in good weather. Fever is no contraindication, but if fever is present the patient should be recumbent in a chair specially constructed so that all positions can be assumed from prone to full sitting posture. The diet should be simple and easily digested, and partaken of often, milk being used as an auxiliary to the regular diet.

One of the best things to reduce fever is absolute rest in recumbent position. In regard to the drug treatment I will say but little; so many things are exploited as cures, only to fall into disuse after a short trial. We need remedies to aid and build up appetite and digestion, and to relieve cough when excessive (heroin is one of the best). Creosote or carbonate of guaiacol have their advocates, and are of benefit. Recently I have read of the mixed fat emulsion treatment as practiced in one of the New York outdoor dispensaries with a good deal of success, but that really is a diet cure. The serum treatment has not been the success it promised to be. The electric arc light treatment promises to be of service, though it is too soon to say positively. Lung gymnastics are of service, but should be used very sparingly unless the patient is

afebrile, or nearly so, as pleurisies may be set up or made much worse.

In conclusion, would say I think we should pay more attention to outdoor treatment and diet, and rely less on drugs than we do. And I would again urge upon ourselves the duty and obligation of making as early a diagnosis as possible, thus giving the patient the benefit of it, for the earlier the diagnosis the more chance of a cure.

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## Proceedings of Societies, Etc.

### THE BALTIMORE MEDICAL AND SURGICAL ASSOCIATION.

JANUARY 26, 1903.

The meeting was called to order at 8:30 P. M. by the President, Dr. E. L. Whitney; Dr. Eugene Lee Crutchfield, Secretary.

#### Injuries of the Lung.

Dr. I. R. Trimble read a paper on this subject.

Last spring I took up as a matter of experiment the subject of operations on the lungs of dogs to see what the results would be. The work had been done over and over again by other men, of course.

I first took a medium-sized dog, shaved and prepared the animal, resected the ribs, opened the pleura, and pulled out the lung. As soon as the opening in the pleura is made, after a few inspirations, the lung collapses. In the dog there is practically no mediastinum. Packing the opening and compressing the lung against the walls, I produced artificial respiration, then pulled out the packing, when we noticed a quick respiration and then sudden collapse. We took several and pulled out half of the lung and cut it off, and then placed it back and sewed up the opening, when almost all of the dogs got well. So we found that a dog can get along very well with only one lung. Again we found that by splitting them from apex to base we could sew them up with interrupted sutures and place them back. Then later we would open the chest and examine the condition. The greatest danger in injury through the chest wall and to the lung is from collapse, and there was generally septic inflammation of the pleura of that side, then extending to the other side, and pericarditis



and pneumonia would follow. We carried out these experiments to show what would happen under such conditions. We also know, of course, that it is very much more difficult to get the skin of the dogs clean and prevent infection.

I thought I would speak of these experiments because several cases have come under my notice having a direct bearing upon the subject.

Most of these injuries are produced by breaking of a rib and consequent puncture of the lung, producing an emphysematous condition of the lung, pneumo-thorax, or hæmo-thorax; and the usual treatment is to put a compress around the chest, put the patient to rest, and generally he goes on to get well unless he develops an empyema, which may be introduced by the air. Of course, if we have empyema there is nothing to do but to drain it. The lung may be severely injured and no hæmoptosis occur for several days. We may have a pneumonia or an endocarditis or pericarditis or pleurisy.

Gunshot wounds of the lung we see rarely; and generally when we do, if the patient was some distance away from the gun, or there is little deviation from the perpendicular, there is but little resulting injury to the lung. In these instances we clean the wound of exit and of entrance; and if any spicules of bone or any foreign body has been carried in, we get rid of it; and if the lung has been much injured we cut off the lacerated parts and then sew it up as we would in any other injury, and then put the parts to rest. Of course, with some bullet wounds there is little to be done, except to cleanse the wound, and generally there is a little pleurisy or pneumonia, and the patient gets well. If septic material has been carried in from without, or is drawn in from the air, we may have sepsis follow; and that we deal with as we would any other septic condition.

A stab wound, unless near the hilus involving some of the larger vessels, generally gets well with but little bleeding. Where there is a great escape of air into the pleural cavity we have a pneumo-thorax, of course, and by putting the parts at rest the lung heals up.

Dr. Murphy found, in 1898, that in tuberculous disease of the lung if we allow air to enter the cavity slowly we can compress the whole lung and keep it that way for a long time, and then draw off the air and the lung will resume its normal position. He found that oxygen let into the pleural cavity would be readily absorbed, as would also carbon dioxide. It would

not be good treatment to force air into the pleural cavity and compress the lung in order to stop breathing, of course. It could be done, but would not be a good surgical procedure. We may have a rupture of the alveoli of the lung, which may not go through the visceral layer, and then we have air escaping into the tissues of the lung itself, causing emphysema—above the clavicle or about the ensiform cartilage, where it escapes from the mediastinum.

The next thing is that of *hernia of the lung*, which may be subcutaneous or compound. A subcutaneous hernia means that the lung has broken through the parietal layer and gotten between the ribs and skin; if a compound injury, it has broken through the skin and can be cut off. Dr. Murphy mentions an instance where a doctor was called to see a case of compound hernia of the lung seven or eight days after the injury and found the protruding part covered with magots. He got permission to operate, first from the patient and then from the priest, and with the ordinary procedure of cleansing, cut off the protruding part and half an inch or more of necrotic skin surrounding it and dropped the organ back into the cavity, and the patient went on to recovery. This doctor said that if he had been called at first he would have washed it up and placed a chicken split down the back around it to keep it warm until he could have put it back. That is what we would do now, of course, minus the chicken.

In severe injuries to the lung the patient has already gone through the initial shock and has probably collapsed and the other lung has taken on the extra work by the time we see them. Only a short while ago a man was brought in with a stab wound of the lung, cutting the internal mammary artery, to tie which we had to make a large incision and resect a portion of the cartilage of the second rib, when we found that the lung itself had been punctured. We did nothing with that, as small stab wounds of the lung generally get well. The small amount of blood in the pleural cavity was restored and the man soon recovered.

The other day a young boy was brought into the hospital, having been caught between the shaft of the wagon and the wall. It had caught him on the right side between the angle of the fourth and fifth ribs. The injury had been sufficient to rupture the intracostal muscles under the skin, and his lung had been caught up, producing a subcutaneous hernia of the lung

between the rib and the skin. At every inspiratory effort air would penetrate everywhere around the body. When he was cleansed up, the tissues about the neck were all filled up with air and there was ballooning of the abdomen and distension all down the buttocks and legs. We gave him a whiff of ether, cut open the skin freely, and there was the hernia with a big hole in the lung. The lung was dropped back into the cavity while air was escaping rapidly. Several branches of the bronchus had been cut. We packed the lung against the mediastinum with gauze. There was not much bleeding, and the other lung took on the work and respiration ceased to be so rapid. We left this a few minutes and then pulled out the packing to see if there was any bleeding, and we found that no large vessels had been cut, and so replaced it. We then made an incision through the abdominal skin to allow the air to escape. The intracostal muscles had been ruptured; and whether we should pull the lung out and sew it up or pack it against the mediastinum were the questions that arose. We decided to leave the packing and did so for forty-eight hours. A little pleurisy resulted. We took out the packing at the end of forty-eight hours and the lung expanded some. We then sewed up the opening, leaving a small drain, and his temperature went along pretty well—100° or 100.5° F.—for four days, and then he got a little fever. At the end of a week we found that he had empyema; so that we resected out the angle of the ninth rib, opened the pleura, and drained from the bottom. The boy at the present time (this was one week ago) is in good condition, his temperature not running above 100°, with good appetite, and he is getting along nicely. He may have been infected through the dressings, of course, but I think he got his empyema from the air which had escaped through the ruptured bronchus into the pleural cavity before we had a chance to operate.

What we have done on the dog, then, we find we can follow out in the human being. If a large bronchus or a large vein has been involved in such an injury, we will probably have the patient die before we can do anything; but if we see the patient in time, if there is much hæmorrhage, or hæmo-thorax, I think it advisable to make a large opening, pull out the lung, tie the injury, and treat it as we would in any other cavity, the abdominal or the cranial, for

instance. Then we must watch for pleurisy, and if it occurs, institute free drainage.

#### DISCUSSION.

*Dr. J. C. Bloodgood:* I have never seen a case of hernia of the lung. We have had a large number of injuries to the lung and have found, as Dr. Trimble has pointed out, that no matter how severe the injury is, if it is without any complications that demand surgical interference, it may be treated in this way. We have had I do not know how many cases of bullet or stab wounds that recovered with only slight signs of pleurisy or pneumonia. The only opportunity where I felt justified in exploring the lung was a case of protrusion, in which there was a large hæmo-thorax, and I thought perhaps hæmorrhage into the lung. There was not much difficulty in getting rid of the blood in the cavity and packing the rupture in the lung. I noted that the lung retracts much less than under similar conditions in the dog, but there was little difficulty in checking the hæmorrhage with gauze. In attempting to suture the lung I found that a suture tied sufficiently to check the hæmorrhage cut through the lung tissue so that I had to pack with gauze and drain the cavity. It has been found that though the lung contracts, if you make an autopsy you find a hæmo-thorax again, and there is no cavity except that occupied by the gauze. In this case I simply put a little gauze into the opening of the lung. The boy developed pneumonia after the operation and died in about a week. At autopsy it was found that there was no pleurisy and the gauze in the laceration of the lung was held in good position and the lung was healed around it, but scattered around through the lung were collections of pus where there had been hæmorrhage that we had not been able to see at the time of operation. In some way infection had gotten into these areas of hæmorrhage.

*Dr. Trimble:* I would like to mention the use of the X-ray in the location of foreign bodies in the lung. Unless these are removed the patient dies of septic pneumonia, or septicæmia with pus all through the lung. A case of that kind was reported last year. A man was struck by a car and on examination a small part of one of the ribs could not be found. He was put up in strips and got along pretty well for three weeks, with an occasional slight cough, but while up around the ward he was taken with a sudden

hamorrhage and died. At autopsy about one and a half inches of the fourth rib were found in the lung, where it had ulcerated into a large vessel.

Dr. McDonald had a case of gunshot wound of lung where the X-ray was used. He found the wound of exit but not of entrance. He marked on the back where he could get a shadow, finding it at the angle of the sixth rib. He resected it pretty freely, caught the lung, and could feel within it a foreign body imbedded an inch in the tissue. He cut out the bullet and found that he could stop the hæmorrhage with a solution of adrenalin. He then dropped the lung back into the cavity and sewed up the opening, leaving a small drain, which he took out in the course of a week, and the man made a good recovery. That is the only case I know of where a foreign body has been located in the lung and taken out at once. In the *Annals of Surgery* there is mentioned a case where there was driven into the lung a piece of iron which was located by the X-ray and taken out. Some years ago a man came into the hospital with a broken clavicle of the right side and three or four ribs with disorganization of the upper lobe of the right lung. The wound was made by the explosion of an emory wheel, which, of course, carried in a lot of dirt. It was cleansed and a gauze drain put in with packing and the man recovered.

### Inguinal Colotomy by Keen's Method.

Dr. S. T. Earle read a paper on this subject.

The results secured in this case were so good that I thought it worth while to call your attention to it. Keen recommended this method in 1899 for inoperable cases of cancer of the rectum, doing a permanent colostomy in this way in order to give the patient a more complete control over the artificial anus.

After cutting the colon the proximal end is carried through the musculature of the abdominal wall, the oblique muscular wall, and brought out one inch below the peritoneal opening.

This case came into the hospital on September 3d last, from West Virginia. He had been treated for some liver trouble, as he stated, and had been purged to an intolerable extent. The carcinoma involved the sphincter and extended up the bowel further than I could reach. It involved all the tissue and made his life very unbearable because of involuntary evacuation of feces. I did the operation after Keen's me-

thod, bringing out the proximal end of the bowel through the oblique muscle. I found the bowel in an empty condition and merely stripped it up to get out what fecal matter it might contain. I closed up the peritoneal cavity, shutting it off as carefully as possible, and then divided the bowel. I brought the upper end down through the skin incision and stitched it there. I did not close the lower end, but dropped it back into the cavity and attached it so that I could use it for the purpose of washing out and keeping the bowel as clean as possible to prevent auto-infection.

Notwithstanding the irritable condition of the bowel at the time of operation, before he left the hospital he had very good control of his discharges and is very comfortable. Of course, the other trouble is progressing, but he has the other trouble is progressing, but he has the comfort of having good control of the fecal discharge.

### DISCUSSION.

*Dr. Randolph Winslow:* I am not familiar with the operation that Dr. Earle mentions as Keen's, but it seems very similar to one devised by Von Hecker, in which the colon is brought up through the rectus muscle.

*Dr. Earle:* In this case it was brought up through the oblique muscle. The principle is, of course, the same.

### Report of Cases of Thyroid Tumors.

Dr. Randolph Winslow read this report:

Some years ago at a meeting of the Clinical Society of the University Hospital I had the pleasure of showing some cases of patients upon whom I had performed the operation of removing a portion of the thyroid. I now have the photographs of these cases, which I will pass around, and I do not care to dwell particularly upon them, as they have already been reported.

The first was a very large tumor, occurring in a woman 38 years of age, which had existed for ten years, and was getting larger. She had been treated at the Eye and Ear Hospital with injections of iodoform. The growth was painless and not very adherent to overlying skin. The patient could not attend to her household duties and we advised extirpation of the tumor, which was done in July, 1900. It was a large cystic thyroid, containing a pint of fluid. It was removed through a curved linear incision without difficulty. Although from the picture it looks as if it might be bilateral, it was really

unilateral. It required considerable section, of course, but was not at all difficult to remove, and the woman made a good recovery.

The *second* case, a picture of which is passing around, was a growth of a different character, the first being of a cystic nature and containing a brownish fluid, while this was an adeno tumor with a great development of adenomatous tissue. She was a young woman of 27, and stated that her mother had died at the age of 34 from the effect of a large goitre. The woman herself came under observation as a parturient woman at the Lying-in Hospital. The tumor was disfiguring, and she submitted to operation. It was a more difficult operation than the first, owing to the fact that it was parenchymatous and the parts were very vascular. A small incision was made at the right of the neck, the gland exposed, and I started by trying to shell out the growth, but the bleeding was so profuse that I had to abandon that method and ligate the vessels. On the left side I left a portion of the thyroid tissue, removing, with that exception, the whole gland. I think, however, that I left too little thyroid—it was a piece about the size of my thumb. She had no special difficulty, and has continued well with no symptoms as yet of myxœdema.

The cases that I have had since these occurred within the last six months.

The *first* was that of a woman admitted in July, 1902; white; aged 37; a housewife. The patient had been in good health, with the exception of headaches, which she attributed to her eyes. About six years ago she noticed a slight growth on the right side of her neck, which gradually increased in size. It never caused her any pain nor had she ever noticed any redness or inflammation. There was no pulsation at any point and no uncomfortable feeling, except that due to the disfigurement. The growth was about the size of a lemon and quite firm. The patient was not emaciated, but her appetite was very poor. At operation an incision about six inches in length was made on the right side of the neck along the sterno cleido mastoid muscle and a tumor about the size of an orange was removed, the wound closed, and the patient made a good recovery. Microscopical examination showed it to be a colloid growth.

*Another case* came under my observation within the last few weeks. This case was admitted January 2, 1903; discharged January 12, 1903; white; female; 18 years of age; living

in the city. All the family have enjoyed good health. Patient never had diseases incident to childhood. Has been in this country two years. About the time she arrived she noticed a swelling under her throat which gradually grew larger and larger, until it had reached the size of a large egg. The condition did not improve under treatment, and she decided to allow an operation. The incision was made along the anterior border of the sterno cleido mastoid muscle, and the tumor was found to be a cyst containing a brownish fluid, about a teacupful in amount. It was readily dissected out, leaving the rest of the gland intact. There was practically no bleeding and no ligation of vessels of any particular size. The wound was washed out with formalin solution and normal salt. The patient made a good recovery, her pulse and respiration never growing above normal.

This condition, though extremely common in some parts of the world, is rather unusual in this part of the country. When they occur they usually affect women or girls, and, naturally, are a source of mortification, and in some cases disfigurement and danger. If the growth occurs outward, involving the lateral lobes, it produces a great prominence in the neck that is distressing and uncomfortable, but which may not cause any difficulty in respiration or deglutition. If, on the contrary, the isthmus is involved, it may make considerable pressure and dangerous symptoms supervene.

The thyroid gland is liable to all sorts of abnormal growths, just as other glands are, but it is especially with the non-malignant growths that we are particularly concerned. They consist of cystic growths, adenomatous growths, and connective tissue growths, involving the connective tissue between the alveoli of the gland. Perhaps the most frequent of these is the cystic growth. We have frequently, however, the adenomatous form, large pulsating, or large, soft, fresh growths that consist chiefly of distended alveoli and adenomatous tissue, or we may have the growth consisting of connective tissue forming localized growths in the gland, and it is particularly these that can be hulled out by simply splitting the gland and enucleating them.

My experience has not been sufficient to enable me to speak to any especial advantage on these cases. I think that a person suffering with the condition is justified in having the tumor removed, or at least a sufficient quantity of it to relieve the symptoms. It is not safe to remove

the whole gland unless we have a condition of caccexhia or myxœdema. On the contrary, if we leave a certain amount these conditions will not occur, and in the removal of cysts they will not occur. I think, therefore, that a certain portion of the gland should be left, and if I were to operate again on the large parenchymatous tumor. I would leave more than I did in the case presented.

In regard to the medical treatment I think there is much doubt. I understand that at times the administration of thyroid extracts is followed by good results, but I do not see how this can be possible in the case of cysts, for instance, nor in a case of large, diffuse, parenchymatous tumor, where there is already too much thyroidal secretion. I do see how it might be followed by good results in the case of a growth consisting of connective tissue which, by pressure, crowds out the normal elements of the gland. So, whether the growth is interfering with the functions of the individual or is preventing them from following comfortably their occupation, or where it is disfiguring, I think the operation is justifiable. The mortality is not great if the operation is done properly, and I think the patient should have the advantage of the surgical procedure. Of course, if there are symptoms of pressure upon the trachea or larynx, the justification is still greater. The proper procedure is, if possible, to tie off the inferior and superior thyroid arteries, which can usually be readily located before division. One danger is that of injury to the recurrent laryngeal nerve, but that can be obviated with reasonable care.

I would like to speak of a case of a different kind that came under my observation a few years ago. It was that of an old lady with *Graves' disease*. She had a great, large, pulsating mass with a thrill like a whirlpool in it and a large bruit. She had symptoms of thyroidism and was nauseated, and vomiting every little while, tossing from side to side; her eyes were somewhat protuberant, and she had an irregular heart-beat, with tachycardia from 80 to 150. In this case nothing appeared to do her any good until I put her upon the extract of thymusgland—three grains every three hours. That in a short time reduced her symptoms, and from a condition of extreme danger she was in a few weeks able to leave for the seashore, and she has been well ever since. The gland subsided, the bruit disappeared, and she is now in good health.

## NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY, JANUARY 16, 1903.

*T. Halstead Myers, M. D., Chairman.*

### Snapping of Knee.

*Dr. Taylor* presented a child 6 months old; no history of sickness or injury, who, two weeks before, was brought to the hospital on account of "snapping of the left knee." On examination it was found that the tibia becomes voluntarily sub-luxated forward, and was pulled back with an audible snap. This is specially noticed when the child kicks and cries. The condition was noticed only three weeks ago by the mother. Birth was normal.

*Dr. Sayre* had seen some similar cases in children 8 and 9 years old. In his cases, if the leg were supported the slipping did not occur.

*Dr. Whitman* had seen a number of such cases as that presented, also others in which the motion occurred in other joints. Last week he observed a child who "snapped" both hip joints. He thought in the cases of "snapping knee" that the motion of the tibia was usually sideways, rather than forward.

### Cases Operated on by Dr. Lorenz.

*Dr. Shaffer* presented three cases operated on by *Dr. Lorenz* on December 18th, and spoke of a fourth. The first case—girl; aged 8—had had some little pain for a few days after operation, slight ecchymosis in the inguinal region, otherwise satisfactory. Can go about with a chair, but does not walk alone. The second case had been taken home after a week and a half and had done well under those surroundings. The fourth case was satisfactory, and could also get about with support. The other case was also doing well, though the child was not present.

*Dr. V. P. Gibney* presented the following cases:

SEX.	Age.	Single. Double.	Previous Treatm't.	Date.	Operator.
Female	9	Single.	None.	Dec'r 15.	Muller.
Female	6	"	"	"	Lorenz.
Female	7	"	"	"	"
Female	3	"	"	Dec'r 16.	Gibney.
Female	3	Double.	Stretch, wght. & pul'y.	"	Whitman.
Female	10	"	None.	"	Gibney.
Female	7	Single.	"	"	Warren.
Female	6	"	"	"	Whitman.
Female	7	Double.	Stretch, wght. & pul'y.	"	"
Male	4	Single.	None.	Jan. 13.	Gibney.
Female	10	"	Stretch, wght. & pul'y.	Jan. 15.	"
Female	11	"	"	Jan. 14.	Warren.

#### UNSUCCESSFUL OPERATIONS.

Female	10	Single.	Ext. bed, wght. & pul'y.	Dec'r 16.	Whitman.
Female	10	"	"	Dec'r 30.	Gibney.
Female	12	Double.	"	"	Whitman.

In regard to the immediate discomfort of the operation, *Dr. Gibney* said that no patient in the

hospital had been obliged to take a narcotic, except probably on the first night, and then only a small dose. As soon as practicable the cases were fitted with a high shoe and given a chair and allowed to go about the wards.

### Walrus Fin Deformity.

*Dr. Gibney* also presented a case of a rare deformity—a reversion of type, as it were—or “walrus fin” deformity, in a child 5 years old. There was also congenital equino-varus of the left foot and equino-valgus of the right. It was being kept under observation and the number of bones lacking, the size of those present, and methods of reducing the deformity were being determined. The scapulae are rudimentary and the arms are in extreme inward rotation. The child can feed herself with difficulty.

*Dr. Whitman* said that the deformity in this case was in a way accounted for by the fact that the child was evidently in a constrained position in utero. We had seen the patient in the early months of life. It was a breech presentation, the extended limbs were flexed on the abdomen so that its feet were on either side of the head and the arms were fixed between the thighs, the hands being pressed into an attitude of abduction. This attitude could be reproduced for many months. It evidently explained the apparent ankylosis at the knee and elbow joints and the failure in muscular development.

*Dr. V. P. Gibney* stated that in the case he presented some years ago the hips were dislocated and the arms were in the same position as the case shown. It was also a breech presentation.

*Dr. Taylor* referred to a somewhat similar case some years ago, where the elbows were ankylosed in extension, and the shoulders very stiff. He thought the etiology of these cases was still obscure, though *Dr. Whitman's* explanation threw some light upon it.

*Dr. Sayre* remarked upon the marked contraction of the flexors of the wrist in *Dr. Gibney's* case. The hand seemed in a condition similar to that seen in many club hands with deficient bones. The internal rotators of the shoulders were also contracted, but the movement at the elbow joint seemed fair. He thought by constant traction the arms could be brought into a fairly good position.

*Dr. Gibney* mentioned that in the reported case, several years ago, he had corrected the feet and had developed a fair sized patella; also

hip dislocation, which existed, had been reduced and he had secured a little motion at the knee. He had tried holding the shoulders back at various times, but it seemed to cause great distress. He said he felt at a loss to know just what to do with the upper extremities.

*Dr. Shaffer* suggested the daily holding of the limbs in position for a longer or shorter time. He did not think good results would follow forced position resulting in breaking of the tissues. Not having carefully examined the patient, however, he could not offer any definite suggestions.

*Dr. Dowd* suggested the feasibility of elongating the flexor tendons of the hands by operation.

*Dr. Sayre* thought that a good deal could be accomplished by elongating the flexor tendons and constantly keeping the shoulder back in position. This could be done on one arm at a time to avoid, as far as possible, the great discomfort consequent in immobilizing both arms. He spoke of a case under treatment, in which the stretching process was carried out each time as long as the patient could endure it, and a fairly good position was being obtained.

### Congenital Dislocation of Shoulder, Etc.

*Dr. Sayre* presented a case somewhat similar to *Dr. Gibney's*, resembling those reported by *Seudder*, of congenital dislocation of the shoulder, with twisting of the arm and slight flexion of the wrist. The patient, a boy, had been unable to use the left shoulder since birth. The diagnosis was separation of the epiphysis at the upper end of the humerus, which had been unrecognized. The left scapula is also much smaller than its fellow.

### Anterior Dislocation of Carpus.

*Dr. Fiske* presented a girl of 12; seen November 19, 1902, who, after a fall on the back of the wrist with the hand in extreme flexion, showed the condition apparently of anterior dislocation of the carpus. There was no swelling, œdema, or sensitiveness. With a good deal of force the condition was reduced and the wrist put in plaster of Paris for three weeks, at the end of which time, when the dressing was taken off, the wrist was in exactly the same condition as before reduction was attempted. *Dr. Fiske* asked for suggestions as to treatment.

*Dr. Whitman* thought this resembled cases of so-called spontaneous subluxation, described by *Madelung*. The other wrist presented a somewhat similar condition, and it might be that the

fall had simply exaggerated a pre-existing deformity.

### Right Upper Arm Shorter Than Left.

*Dr. Whitman* presented a case first seen two weeks ago. The patient, a youth 18 years of age, complained of discomfort in the shoulder. On examination the right upper arm was found to be nearly two inches shorter than the left. *Dr. Whitman* thought the patient had probably always had more or less discomfort and thought that the shortening was due to arthritis or epiphysitis in early life. The X-ray showed downward and inward displacement of the head of the bone, as well as shortening of the shaft.

### Tuberculous Ankle Joints Cured.

*Dr. Homer Gibney* presented a case of cured tuberculous disease of the ankle joints in a young child 8 years of age. The treatment was according to his usual method of putting the limb up in plaster and cutting windows in the bandage if suppuration occurred, through which drainage was carried out, followed by the use of apparatus. In the case presented no apparatus was being worn; the child was at home and went about as it pleased.

### Dislocation of Fourth Cervical Vertebra.

*Dr. Homer Gibney* also presented an X-ray of a case of dislocation of the fourth cervical vertebra in a man who had fallen eight feet. He complained of pain, the head was tipped forward, the chin to the right, the pain was present in both shoulders. The discomfort was great, and when seen ten days after the accident in the dispensary, traction was decided upon. He was suspended in the swing for five minutes and the pain was relieved, and he was able to get his arms above his head in six hours. He was suspended a second time for ten minutes. The symptoms were all relieved and he went back to work. He referred to another case reported some years ago, the patient being now a motorman. In some cases a half jacket was applied and in some the Thomas collar was used.

### Presentation of Instruments.

*Dr. Pittle* presented two forms of *hip rest*, one adaptable to any table. The plate to support the pelvis was on the same level as the table, therefore no other support was needed for the shoulders than the table itself.

## Book Notices.

*Lessons and Laboratory Exercises in Bacteriology, Arranged for Use of Students.* By ALLEN J. SMITH, M. D., Professor of Pathology in the University of Texas, Galveston. Philadelphia: P. Blakiston's Son & Co. 1902. Cloth. Large 8vo. Pp. 298. \$1.50 net.

This book gives an outline of technical methods introductory to the systematic study and identification of bacteria; and beside the progressive stages of study noted in the table of contents, a full index is added to enable the easy reference to a subject. After an introductory chapter, lessons are taught on sterilization, the preparation of tubes, flashes, dishes, etc., for culture media, description of culture media, the inoculation of media and cultivation of bacteria, gross appearance of bacterial cultures, individual bacteria and their physical and chemical characteristics, isolation of bacteria in pure culture, classification and identification of bacteria and pathogenic action of bacteria. A bacteriological chart is included (unbound) in each book. The work is essentially one for use in the laboratory, but it is a readable volume of great value as well to the practitioner who seeks to know the characteristics of the bacteria causative of the disease for which the doctor is called. A number of blank leaves are left in the book for such notes as the student may wish to make as he proceeds with his laboratory investigation. The volume is profusely illustrated with "figures," which describe apparatus, their mode of use, the shape, etc., of bacteria, etc.

*Text-Book of Pharmacology and Therapeutics.* By ARTHUR R. CUSHNY, M. A., M. D., Professor of Materia Medica and Therapeutics in University of Michigan, etc. *Third Edition. Revised and Enlarged. Illustrated with 52 Engravings.* Lea Bros. & Co., Philadelphia and New York. Cloth. 8vo. Pp. 756. \$3.75 net.

This recent 1903 edition eliminates some of the useless or dead material of former editions, and adds the important advances of the period intervening since the issue of the second edition. While numerous minor changes are made in this work on "the action of drugs in health and disease," among the more important advances noted is the determination of the food value of alcohol. Attention is called also to the increased use of cocaine as a local anæsthetic, the subarachnoid method of medication, the more

definite value of the adrenal gland extract, etc. Another improvement, of use alike to practitioner as to the student, is the tabular classification of drugs according to their therapeutic uses. Always a valuable and authoritative work, this third edition is made more valuable because of its incorporation of the latest advances in therapeutics. It is needless to add for the benefit of those acquainted with their excellent work, that the publishers' part has been well done.

**Anatomy.** By WILLIAM H. ROCKWELL, JR., M. D., Formerly Assistant Demonstrator of Anatomy in College of Physicians and Surgeons, Columbia University, New York. *Illustrated with 70 Engravings.* Lea Brothers & Co., Philadelphia and New York. Small 8vo. Cloth. Pp. 620.

This manual for students and practitioners is one of "Lea's Series of Pocket Text-Books," edited by Bern B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York, etc. This volume provides the student with a manual "at once compact and fairly complete," based upon the order and descriptions of *Gray's Anatomy*. This work is not designed to replace that of other authority, but simply to present the more important facts in a briefer and more accessible form. It is the anatomical work for one wishing to review his studies with reference to examination day, and it is full enough of descriptive anatomy to serve every practical want of the surgeon or practitioner. Nothing that is essential to the every day needs of the surgeon or physician is omitted. Beyond the thoroughly systematic arrangement of the subjects, a full index aids the reader in his hasty search for a fact. It is a fine book, neatly issued.

**Manual of Materia Medica and Pharmacology.** By DAVID M. R. CULBRETH, Ph. G., M. D., Professor of Botany, Materia Medica and Pharmacology in the Maryland College of Pharmacy, etc. *Third Edition, Enlarged and Thoroughly Revised.* With 473 *Illustrations.* Lea Brothers & Co., Philadelphia and New York. 1903. Cloth. 8vo. Pp. 916. Price, \$4.50 net.

This *Manual* comprises a description of "all the organic and inorganic drugs which are or have been official in the United States Pharmacopoeia, together with important allied species and useful synthetics, especially designed for students of pharmacy and medicine, as well as

for druggists, pharmacists and physicians." It is a valuable companion book with any of the works on therapeutics, but it in no wise undertakes to supplant such authorities. We wish such books admitted into its pages descriptions of all drugs that seem ethical that are of common use with practitioners in their prescriptions, etc. Thus in this book we find no description of *passiflora incarnata*, preparations of which are quite commonly prescribed, with a belief in its reputed therapeutic qualities. Nor do we find mention as such of acetozone, perhaps the most powerful of internal antiseptics ever brought out for general use; the same may be said of sublamine—the substitute for bichloride of mercury in surgical practice, etc. It is a book of special value to the pharmacist, the country doctor particularly, etc. The index is full, and a great help to the owner in finding out the point he seeks. Neatly printed and issued, as usual with all the standard works of the Lea Brothers & Co.

**Practical Treatment of Stammering and Stuttering.** By GEORGE ANDREW LEWIS, Originator of the Lewis Phono-Metric Method, etc.; and a *Treatise on Cultivation of the Voice.* By GEORGE A. HYN-SON, M. A., Instructor in Public Speaking in the University of Pennsylvania, etc. *Illustrated.* Detroit: George Andrew Lewis. 1902. Cloth. 12mo. Pp. 415. *Gilt edge.*

This is a book that will interest a great many of our readers. It is a well written and enticing book—leading the reader to go on from page to page in the hope of finding out a fixed pathology and a definite line of treatment that he may apply to cases about which he is constantly consulted. The chapter on the causes of defective speech is an excellent one, and would well repay any one to read it carefully and be impressed by its teachings. Many selections of popular pieces of literature, from poems, orations, etc., are given for practice of voice purposes. The book occupies a peculiar position—alike interesting and instructive to the doctor, the general teacher, the home people, etc. Medical technicalities are not used unless plainly defined for the general student.

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**A Help Mate.**—"Miss Touchey would make just the wife for some struggling doctor."  
"Why?" "She is always giving some one fits."  
—*Inter-Ocean.*



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## Original Communications.

### GASTRO-ENTEROSTOMY.\*

By JOHN B. DEAVER, M. D., Philadelphia, Pa.,  
Surgeon in Chief Medico-Chirurgical College of Philadelphia, etc.

I am glad to have the opportunity to meet the members of this Society, whose leader is my personal friend. In selecting a subject upon which to address you this evening I thought I could not do better than speak of some of the points in connection with the subject, *gastro-enterostomy*. This should interest you especially, not only because of its importance, but because gastro-enterostomy in connection with gastric hemorrhage has been written upon in two classical essays by your distinguished head and professor, Dr. Rodman.

To simplify the subject as much as possible, you must understand that in obstructive lesions at the pylorus or in certain diseases of the stomach where that organ must be placed in a great measure at rest, it is necessary to make an additional outlet to the stomach. This is obtained by cutting an opening in the stomach near its lowest level, either on the anterior or posterior wall, making a similar opening in the bowel, usually the jejunum, and sewing the two together.

The indications for the performance of gastro-enterostomy have increased in number with the perfection of the surgery of the stomach. In 1881, Wolfiler performed the first operation in a case in which pylorotomy was impossible; and in the Hunterian Lectures for 1900, Mayo Robson, of England, tabulated 1,978 cases. It was early recognized that in cases of obstruction due to carcinoma too far advanced to justify excision (pylorotomy), that gastro-enterostomy offered a means to relieve the patient of death by starvation. The majority of gastro-enteros-

tomies have been performed for malignant disease.

In benign obstruction of the pylorus, the resulting dilatation of the stomach must also be relieved by an artificial opening. The more frequent causes of this condition are, a stricture of the pylorus consequent upon the contraction caused by a healed ulcer, and kinking or occlusion of the pyloric orifice as the result of adhesions following an inflammatory lesion of the biliary passages. These adhesions can rarely be separated without the danger of tearing the stomach. A third indication for gastro-enterostomy is gastric ulcer, either acute or chronic. This portion of the subject has been so thoroughly handled by Prof. Rodman that I cannot do better than give you an abstract of his papers, one of which was read before the American Surgical Association in May, 1900, and the other was the oration in surgery, delivered at the fifty-first annual meeting of the American Medical Association, in June, 1900.

Dr. Rodman, after discussing the symptoms and the usual methods of medical treatment, gives some very interesting post-mortem statistics collected by Savariaud, which showed "that there is no constant relation between the size of the vessel and the amount of, or the rapidity with which, the blood is lost. It is impossible, therefore, to diagnosticate with any degree of certainty the source of the hemorrhage, and an opinion at best is only a guess based upon anatomical or pathological probabilities." This fact is important to remember when called upon to make a choice of the methods of operating—viz., excision of the ulcer or gastro-enterostomy.

"Given, then, a case of gastric ulcer resisting medical treatment for a reasonable time, what is to be done in the face of uncontrollable vomiting, leading to inanition, severe pain and other symptoms due to its presence (excluding hemorrhage or cases where it was not the prominent symptom) ?

\* Read before the William E. Rodman Surgical Society of the Medico-Chirurgical College of Philadelphia, January, 1903.

"First. Shall the ulcer be excised? This is, of course, the ideal operation and method of treatment. The size, location and duration of the ulcer, and, above everything else, the presence or absence of dense adhesions to surrounding organs, as the pancreas, liver, omentum, gall-bladder, etc., etc., will each have great weight in deciding between the merits of a partial gastrectomy and gastro-enterostomy, or other less radical procedure.

"If the lesion is situate at the pylorus or upon the anterior wall, and is, therefore, accessible and easily removed, pylorotomy is preferable, especially in persons past middle life, and in ulcers that run a chronic course. *Per contra*, if the ulcer be situated posteriorly, as it so frequently is, and at the same time adherent to adjacent tissues, requiring a difficult and prolonged operation for its removal, gastro-enterostomy should, unless we are facing probable malignant degeneration, be preferred, being less dangerous and almost equally satisfactory in its ultimate results as partial gastrectomy.

"It acts by rapidly emptying the stomach, putting the ulcer at rest, and promptly relieving the hyperchlorhydria—all of which facilitates the healing of the ulcer, and in time results in cure. That it will occasionally fail to cure, we must admit, since Kocher had a fatal case of hemorrhage after the gastro-enterostomy wound had healed."

Dr. Rodman emphasizes the fact "that many cases supposed to be malignant at the time of operation, on account of enlarged lymphatic glands, induration of tissue, etc., etc., and, therefore, too advanced for resection, have yielded entirely to gastro-enterostomy, time demonstrating in several of them that either mistakes in diagnosis actually were, or could easily have been, made, subsequent observation having proved that the enlarged glands were inflammatory and had entirely passed away. Gastro-enterostomy is also to be preferred when multiple ulceration is suspected, and in those cases where the element of shock is a factor and speed is necessary."

In acute gastric ulcer with hemorrhage, Professor Rodman concludes: "First. It would be highly injudicious to subject a patient to laparotomy during the first hemorrhage, even if the surgeon should see the case then, as he rarely will. The treatment of such cases should be by absolute rest to the stomach with astringents,

opium, and, possibly, best of all, high enemata as advised and practiced by Tripiier.

"Secondly. A surgeon has been called to see a case that has had one severe hemorrhage, but which has probably ceased, and the patient is successfully rallying from the shock. Here, too, the free use of normal salt solution and other approved methods for combating shock should be the sole thought of the surgeon at this time.

"Third. A case has bled freely once, recovers and in a few days bleeds seriously again, what should be the treatment?"

In such instances, I thoroughly agree with Dr. Rodman that inaction is only justified in order to await reaction so as not to operate in great shock. Gastro-enterostomy affords rest to the stomach, leading to a clot formation and to the subsequent healing of all the ulcers. Surgical intervention certainly offers the best chance of relief in these cases of repeated hemorrhage.

I have dwelt at some length on this indication not only on account of its importance, but because the operative treatment of gastric ulcer has been very much neglected in this country.

Among less commonly observed indications we find the results of healed gastric or duodenal ulceration, such as hour-glass contraction of the body of the stomach where other mechanical means, as division in the long axis of the organ and closure in the direction opposite to that of the cut, is not deemed advisable; also in cases of excessive dilatation of the stomach with loss of motor power consequent upon a strictured duodenum, the result of a healed ulcer. A gastro-enterostomy would afford relief where an ulcerated communication exists between the common bile duct and the stomach. In such instances it is sometimes nearly impossible to safely break through the adhesions and repair the fistula. Where gastrolisis can be performed and the fistula closed, the rest and drainage which gastro-enterostomy affords gives additional security to the perfect healing of the stomach. Furthermore, should adhesions reform, as they are very prone to do, the artificial opening prevents the dilatation and other symptoms incident to pyloric narrowing.

In 1898 Keen, in the Cartwright Lectures, suggested the advisability of operating upon the stomach in obstinate digestive troubles which have not yielded to purely medical means.

It certainly seems reasonable to believe that,

in those intractable cases of chronic gastritis where multiple erosions of the stomach are present at the pyloric region, with the mucosa in the neighborhood of the erosion deeply hemorrhagic, and with the occasional "occurrence of profuse or even fatal hemorrhage" (Osler), gastro-enterostomy by placing the pylorus at rest would cure the condition.

A secretory necrosis of the stomach, with hypersecretion of hydrochloric acid and known in Germany and France as "Reichman's disease," is frequently rebellious to internal medication.

In this disease, while the irritation of the highly acid gastric juice induces pyloric spasm at first, yet in most instances atony and dilatation of the stomach occurs and the pylorus becomes eroded and fissured. In these cases gastro-enterostomy places the organ at rest and prevents the accumulation of the intensely acid gastric juice with its severe symptoms.

Mayo Robson suggests that, in acute dilatation of the stomach, after lavage has failed, the abdomen should be opened, the stomach emptied and connected with the jejunum, and Weir advises the same operation in tetany, which is often associated with a dilated stomach and may be caused by it.

Thus, you will see that we have many indications to perform gastro-enterostomy—entirely too many, I believe.

In gastric and duodenal ulcer and the certain gastric disorders which I have mentioned, the operation is to be heartily endorsed. But when

more prompt diagnosis and the earlier application of surgical methods will result in more pyloroplasties and less gastro-enterostomies for carcinoma of the pylorus.

Similarly, many of the benign obstructions met with are due to the adhesions thrown out about previous and neglected attacks of biliary tract infections. These may be avoided by earlier operations in gall-bladder surgery.

The earliest operations, those of Billroth and Wolfier, consisted merely in sewing the duodenum to the anterior surface of the stomach.

(Fig. 1.)  
But these operators soon found that the contents of the stomach could not be depended upon to pass into the proper loop of bowel, and that a vicious circle was established. Wolfier, therefore, performed the operation as shown in Fig. 2.

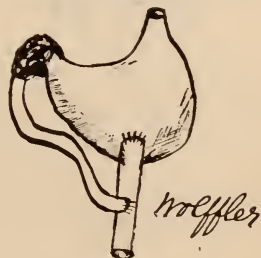


Fig. 2.

Lucke then reversed the coil of bowel so that the direction of the peristaltic current in the artificial opening and in the stomach would be the same—viz., from left to right. (Fig. 3).



Fig 3.



Fig. I

gastro-enterostomy is required in malignant obstruction of the pylorus, it means mere palliation, the disease having advanced beyond the stage of cure. Let us hope that in the future a

These difficulties resulted in many modifications; and, in 1885, Von Hacker proposed the posterior method, which has been found to give

good results, both functionally and as far as the actual mortality is concerned. (Fig. 4).

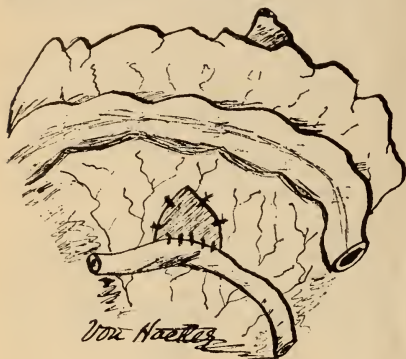


Fig. 4.

The methods, then, for performing gastroenterostomy are (1) the anterior operation, where the bowel is attached to the anterior wall of the stomach and a communication made between the two viscera; and (2) where the bowel is attached to the posterior wall of the stomach and a communication is established. The particular operation to be performed will be governed by the practice of the operator and the exigencies of the case.

The anterior operation may consist either of attaching the duodenum to the stomach, which would be technically gastro-duodenostomy, but more commonly the jejunum is the part of the small bowel selected and at a point about twelve, fifteen or eighteen inches from its origin.

In the anterior operation the bowel is brought anterior to the great omentum and transverse colon, which, in the writer's judgment, entails greater risk from adhesions and intestinal obstruction than is the case in the posterior operation, and does not bring the opening at the most dependent portion of the organ, so essential to the stomach, which no longer possesses much, if any, peristalsis. It is believed, however, that the traction of the small bowel brings the anastomosis to the lowest level finally. It has also been claimed that regurgitation of bile and pancreatic juice is less likely to occur after the posterior operation, but personally I cannot speak definitely as to whether this is true or not.

In the anterior operation, after the anastomosis has been made, the proximal and distal

ends of the loop of small bowel are stitched to the stomach, the former at a point higher and the latter at a point lower than the anastomotic opening, in this wise preventing kinking of the bowel and lessening the chances of interference with the circulation of its contents.

The posterior operation is carried out by making a vertical incision in the transverse mesocolon—i. e., at a right angle to the bowel, through which the posterior wall of the stomach is delivered and to which the jejunum is to be attached. The margin of the opening in the transverse mesocolon should be whipped over with a running stitch and at a point upon either side attached to the posterior wall of the stomach. When the operation is completed this opening should adjust itself closely to the stomach in order to prevent a knuckle of bowel becoming engaged between the stomach and the margin of the opening, causing an intestinal obstruction. By the proper disposition of gauze the portion of bowel to be anastomosed, being brought out of the abdomen, can be so compressed against the margin of the abdominal wound as to prevent the escape of its contents when opened. In incising the stomach, as well as the intestine, the incision should first be carried down to the mucous coat, which will then protrude, when, with a pair of tissue forceps it is grasped and separated at the margins of the wound for some distance from the submucous coat. The mucous membrane is then cut away to the extent of the length of the wound and about one-half to three-quarters of an inch in width. This prevents the mucous membrane from pouting into the anastomotic opening and lessening its size, which during the repair of the wound would interfere considerably with the emptying of the stomach, unless the opening is made liberally large.

Of the mechanical devices used in this operation to perfect the anastomosis, the Murphy button is doubtless the most popular. Personally, as a rule, I use simply a needle and thread, but I have, however, used the Murphy button and the Mayo Robson bone bobbin in particular cases. The great advantage of the needle and thread operation is that the materials are always at hand and the opening can be made practically of any length and thus lessen the tendency to subsequent contraction that would otherwise close the opening, as has been known to follow the use of mechanical devices, particularly the Murphy button and Senn's plates. Reoperation

has been required on account of the latter accident. Too large a button or bobbin must not be used for fear of bringing about pressure necrosis of the bowel, which would result in perforative peritonitis. I have known this to occur.

In performing either the anterior or posterior operation, I do not constrict the proximal or distal portion of the bowel with elastic ligatures; I never use the elastic suture, nor do I use a clamp for the stomach.

The occurrence of vomiting after gastro-enterostomy, if at all disposed to be persistent, will cause the greatest anxiety to the surgeon. In some cases this is due to the formation of the so-called "vicious circle," where the contents of the stomach pass out into the duodenal instead of the jejunal limb of the loop, are mixed with the bile and pancreatic juice and are returned either through the more or less patulous pylorus or through the afferent loop back into the stomach again. In other instances the bile and pancreatic juice may pass into the stomach through the still permeable pylorus, and result in nausea and severe vomiting. In still other cases, a simple reversed peristalsis may occur, and the intestinal contents regurgitate into the stomach by means of the distal (efferent) loop of jejunum.

The cause of such severe vomiting has not yet been determined, some observers having shown that the secretions of bile and pancreas can be



Fig 5. Entero-enterostomy.

led directly into the stomach without impairing digestion or causing vomiting. A number of writers have stated that in all cases of gastro-enterostomy there is a reflux of bile and pancreatic secretion into the stomach.

That severe vomiting from a vicious circle is not observed often is fortunate, yet that it does occur cannot be disputed. The correction of this condition is a question that has occasioned much thought upon the part of certain surgeons. The writer has been fortunate enough to have had it occur in but four of his cases, in two of which it was necessary to do a second operation, consisting of anastomosing the proximal loop of the jejunum at its most dependent point to the distal loop of the jejunum at a point equally distant from the anastomotic communication with the stomach with satisfactory results. (See Fig. 5.)



Fowler  
Fig 6

Fowler has recently devised a method for the relief of the vicious circle. He makes the communication between a loop of the jejunum and the stomach, performs entero-enterostomy between the afferent and efferent portions of this loop, and, finally, passes a No. 20 silver wire two or three times around the afferent loop between the two points of anastomosis and drawing upon the turns tightly enough to occlude the lumen of the intestine without strangulating its wall. This absolutely prevents the duodenal end of the loop from communicating directly with the stomach. (See Fig. 6.)

It is interesting to note that gastro-enterostomy for dilatation, the result of pyloric obstruction, has been followed by a lessening in the size of the stomach to an extent which will depend entirely upon the contractile power of the muscular coat. When the condition of dilatation has lasted for a long time and has appeared gradually it is questionable if there will

be any actual lessening in the size of the stomach after operation; but, if dilatation has come on very rapidly, it will be readily seen that the muscular tone has not been overtaxed and, therefore, the organ should regain its normal size in a comparatively short time. I would lay stress upon the careful examination of cases of dilated stomach. In some instances this condition is caused by kinking of the pylorus from the downward displacement of the organ due to peritoneal relaxation. Gastropotosis is frequently coupled with a like condition of other abdominal organs, particularly the kidney or liver, and operation of any kind is of very little if any, use, unless it be for the mental effect. I furthermore believe that the neuropathic side of ptoses is too often overlooked; I have never seen much actual good from the stitching in place of a movable kidney—a very popular operation with many gynecologists and a few surgeons. I would not have you understand or infer that a movable kidney is never to be the subject for operative treatment; to always be able to draw the line between operative and non-operative cases of ptoses I grant is very difficult, but when in doubt do not operate. I am one who feels that many of the operations done for the several varieties of ptoses will not stand the test of time as will the operation for appendicitis, typhoid fever, gallstones, pancreatitis, etc.

The after-treatment of a patient upon whom gastro-enterostomy has been performed is of the greatest importance. The first indication is to combat the shock which is always present in greater or less degree. Hot water bottles should surround the patient; strychnia and atropine may be used if necessary. Above all, the use of saline solution is to be recommended where shock exists, by the bowel at first, combined with whiskey, and later intravenously, if the condition of the patient should warrant it.

Vomiting is the next complication to be feared. This can best be avoided by withholding all food by mouth for thirty-six hours, substituting rectal feeding; at the end of twelve or eighteen hours if great thirst is complained of, small amounts of hot water may be given, ceasing with the appearance of nausea. If vomiting does occur, the best treatment is undoubtedly gastric lavage, using small quantities of water at a time, 200-300 c. c. and by giving absolutely nothing by mouth.

Peritonitis is unavoidable if the anastomosis gives away, but with the careful use of the

needle and thread method the danger is minimized and far less liable to happen than with the use of mechanical appliances. Upon the onset of peritonitis, a reoperation is imperatively demanded, the anastomosis strengthened and the peritoneum washed out. If the shock does not prove fatal, such patient should usually recover, as the infection from the fasting stomach is not of a very virulent type.

Pneumonia and other pulmonary complications more frequently follow operations upon the stomach than upon other abdominal organs. The reason is not clear; perhaps some disturbance of the muscles of respiration prevents coughing and expectoration and possibly septic emboli may lodge in the lung, especially the portal circulation.

The best treatment is the avoidance of conditions liable to give rise to such a complication. The anesthetic should be skilfully given, the stomach emptied before operation, and exposure of unnecessary portions of the body avoided. The arms should never be folded across the chest, thereby impeding respiration. In twenty-four hours' time the semi-recumbent position should be adopted with the relief of excessive hypostatic congestion of the lungs.

The results of gastro-enterostomy must be judged separately by the particular lesion for which the operation is undertaken. Timely surgical interference in ulcer of the stomach will result in greatly reducing the mortality in hemorrhage and in the chronic ulcerations in an increased ability for work and the daily enjoyment of life, of which such sufferers are deprived. In various chronic forms of gastric disease the operation may result in cure from the induction of rest to the stomach. Operation is not to be hastily advised, neither should medical treatment be continued in a routine manner, year after year, without relief.

In carcinoma of the pylorus the disease is unchecked and the death of the patient will soon follow, but the last months of this unfortunate disease may be made more restful by the cessation of vomiting and the ability to assimilate food.

1634 Walnut street.

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Here lies the form of Ezra Hurst,  
An Indian cut his hair,—  
Cut his hair off, bottom first—

'Twas more than Ez could bare.—Puck.

## A NEW AND ORIGINAL STITCH AND METHOD OF CLOSING THE ABDOMINAL WALLS AND OTHER DEEP INCISIONS.\*

By JACOB MICHAUX, M. D., Richmond, Va.,

Ex-President and Honorary Fellow Medical Society of Virginia;  
Professor of Obstetrics, University College of Medicine,  
Richmond, Va., etc.

There are several important desiderata that necessarily present themselves to the mind of the surgeon in closing his incisions. He desires prompt union; and in order to obtain it, if he is discreet, he handles the parts gently. He seeks to approximate the edges throughout their whole extent with a pressure from his stitches that is not too great, and is yet uniform along the whole course of their passage. He wishes, of course, to remove all chances of infection. These are the matters that must of necessity engage the attention of the operator. My endeavors to meet these indications resulted in devising the figure of 8 stitch, and an application of it, which, so far, has succeeded very well.

My method is as follows: Take a suture with a needle on either end, and pierce the peritoneum only on one side, bringing the needle out just under the surface of the rectus muscle (supposing we are closing an incision in the median line), pass over the rectus and catch up the aponeurosis. Now lay down needle No. 1 and take up the other and repeat the operation on the opposite side. Now, the peritoneum and aponeurosis are pierced on both sides. The next step is to cross over, taking up the aponeurosis *again* (with needle No. 1), on the opposite side, carrying the needle through the fat and skin at one thrust. Then needle No. 2 is taken across the incision; the aponeurosis pierced as well as the overlying fat and skin on that side. This completes the stitch.

It will now be seen that the aponeurosis is pierced twice on each side, thus ensuring a firm hold upon this important structure, and that each thread as it crosses must draw the edges of aponeurosis together. This is desirable because upon the close union of its edges depends the exemption from hernia. The peritoneum is easily adjusted, and the fat and skin give little difficulty in the adjustment of the edges of these incisions; but it is difficult to approximate the

middle portions closely, and especially the edges of the aponeurosis.

The obvious answer to this statement is, why not stitch them together as we have been doing heretofore. My reply is that it is desirable to take out the whole suture when the incision is healed, that the risk of infection may be reduced to a minimum.

The ordinary stitch going through all the structures has been used by some, myself among the number; but the objection to it that it must be furthest apart (i. e., have the longest diameter) just where we want the closest approximation—namely, in the middle. Therefore it follows that should sufficient force be applied to draw the central parts of the lips of the incision together, the danger of necrosis of tissue is great.

I have only used this stitch and this method of applying it in a single case—one of suspension of the uterus—thus far; but found upon examining the first one drawn to the proper tension all the requirements fully met, and the after results so good that I believe it to be a useful measure.

I desire to call attention to the advisability of not including the muscle in the stitch in central incisions. It causes constant twitching of the fibers, which not only cause pain, but prevent prompt union.

The advantages claimed are these:

1. Uniform tension along the walls of incision.
2. Close approximation of edges of aponeurosis.
3. Complete removal of suture after healing.
4. Simplicity.

It is obvious that the general principles of this procedure may be applied to all deep incisions wherever located.

I desire now in conclusion to state that nearly two months after I had devised this stitch I found upon looking up the literature of the subject that Dr. Murphy, of Chicago, had introduced it some time ago—about three years, I think.

Drs. Charles M. Edwards and Warwick, of Richmond, Va., and Dr. Ardan, of the Virginia Hospital, Richmond, Va., assisted me in the operation in which this stitch was used. I believe that my method of applying it is new.

\*Read before the Medical Society of Virginia during its thirty third annual session, held at Newport News, Va., September 23 25, 1902.

## Correspondence.

### Alcohol as a Beverage Should Be Discouraged.

*Editor Virginia Medical Semi-Monthly:*

Dear Sir:—Three times during the last half century medical manifestos have been issued giving the opinion of physicians on alcohol. The first was issued in 1839, and was signed by eighty-six persons. The second in 1847, and was signed by 2,000 physicians, and the third appeared in 1871, with the signatures of over 4,000 physicians, including the names of many leading physicians in all parts of the world. A fourth declaration of opinions is now being circulated for signatures, and reads as follows:

"The following statement has been agreed upon by the Council of the British Medical Temperance Association, the American Medical Temperance Association, the Society of Medical Abstinents in Germany and leading physicians in England and on the Continent. The purpose of this is to have a general agreement of opinions of all prominent physicians in civilized countries concerning the dangers from alcohol, and in this way give support to the efforts made to check and prevent the evils from this source.

"In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we, members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to speak plainly of the nature of alcohol and of the injury to the individual and the dangers to the community which arise from the prevalent use of intoxicating liquors as beverages.

"We think it ought to be known by all that—

"1. Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action and interferes with the function of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will, and having other markedly injurious effects. Hence, alcohol must be regarded as a poison and ought not to be classed among foods.

"2. Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual de-

terioration of the tissues of the body and hastens the changes which old age brings, thus increasing the average liability to disease (especially to infectious disease) and shortening the duration of life.

"3. Total abstinents, other conditions being similar, can perform more work, possess greater powers of endurance, have on the average less sickness and recover more quickly than non-abstinents, especially from infectious diseases, while they altogether escape diseases specially caused by alcohol.

"4. All the bodily functions of a man, as of every other animal, are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centers.

"5. Further, alcohol tends to produce in the offspring of drinkers an unstable, nervous system, lowering them mentally, morally and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved the importance and danger of this increase cannot be exaggerated.

"Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay, compelled, to urge the general adoption of total abstinence from all intoxicating liquors as beverages as the surest, simplest and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but is also natural.

"We believe that such an era of health, happiness and prosperity would be inaugurated thereby that many of the social problems of the present age would be solved."

This declaration has already received the signatures of over 1,000 physicians in all parts of the country. I have been appointed chairman to present this manifesto to American physicians for their endorsement. I should be very glad to receive the name, title and address of any physician who is willing to aid by his signa-



ture to correct public sentiment and assist in the prevention of one of the great evils of the age. This is purely a scientific effort for the purpose of having a general consensus of opinion of the leading physicians of the world, and it is assumed that American physicians are equally enthusiastic and prompt to lend their signatures to this statement as in the wine-drinking countries of Europe. A postal-card with address and title is earnestly solicited from every medical man who would like to be represented in this great movement for a clearer comprehension of the subject.

Address T. D. CROTHERS, M. D., Hartford, Conn.

## Proceedings of Societies, Etc.

### BALTIMORE MEDICAL AND SURGICAL ASSOCIATION.

Meeting was called to order by the president, Dr. E. L. Whitney, at 8:30 P. M., February 23, 1903; Dr. Eugene L. Critchfield (1232 Preston street), secretary.

Dr. William T. Watson reported cases of (a) persistent hiccough; (b) an attempted abortion; (c) an accomplished abortion; (d) fatal case of puerperal septicæmia.

#### Case of Persistent Hiccough.

(a) Miss B.; aged 19; previous history unusually good. At the end of December, 1902, she passed a week without any appetite, and then the following week she had nausea and vomiting. On the 5th of January, the vomiting ceased suddenly and a persistent hiccough took its place. It was paroxysmal in character, lasting two or three hours, followed by an intermission of several hours. It was what might be called a belching hiccough; she would have apparently a sudden contraction of the diaphragm, then a closure of the glottis, followed by a belching of gas, the whole cycle giving her a rocking motion which was very violent. At the end of a paroxysm her abdominal muscles would be very sore and tender to the touch. There was a zone of soreness at the lower border of the thorax, which corresponded with the insertion of the diaphragm, that she complained of very much.

To illustrate the severity of the attack, on

January 8th, I was called about 10 o'clock at night, when she had been having a violent attack for about two hours. Two hours previously she had taken twenty grains of trional and then I gave her one-fourth grain morphia hypodermically and watched her for an hour, but it had no effect on the hiccoughs and but little on the pain. I then allowed her to inhale a half ounce of chloroform, but as soon as it was taken away the paroxysm started again. I gave her another half ounce and then the hiccoughs ceased and she slept all night.

These paroxysms continued from January 5th to February 14th—a period of forty days—and then gradually diminished in intensity, and, toward the end, in frequency between the hours of 6 and 12 P. M. Fright or excitement had a tendency to bring them on. There were usually some premonitory symptoms—certain nervous sensations travelling upward over the chest, but sometimes they came on without any warning whatever.

Another marked symptom throughout her whole illness has been insomnia. Prior to this attack she was, as she termed it, "a sleepy head"—hard to wake up in the morning. At one time we gave her 100 grains of bromide of potassium daily for fifteen days, and besides that occasional doses of fifteen grains of chloral and trional, and yet she did not average more than six hours sleep a day. Even when this made her tongue thick and her eyelids heavy, she would be still quite wide awake.

Anorexia was another symptom, a very marked and distressing one. There was not only want of appetite, but the sight of food, and sometimes the mere mention of it, would nauseate her. During the whole illness she has taken very little food, and it is difficult to understand how she maintained her strength as well as she did.

Another curious fact was that between January 8th and 15th she developed a marked pain over the region of the appendix with considerable muscle spasm. She had no fever at any time; so that the trouble in this region could not have been inflammatory. At the end of a week this pain subsided, but recurred at intervals during her illness.

On February the 15th, she had a paroxysm of itching of the palms of the hands, soles of the feet, her ears, nose and tongue. This lasted for several hours, then disappeared and never returned.

She has had no hiccoughs now since the 14th of February. Occasionally her arms and legs get "as heavy as lead," as she expresses it, for an hour or so, and then feel all right again. She sits up a few hours daily and does not look as badly as one would expect, considering the little food she has taken and the suffering she has endured. The worst symptom at present is want of appetite and an occasional attack of nausea. The insomnia is gradually disappearing. The attack is evidently one of hysterical origin.

### An Attempted Abortion.

(b) This case, which was designated on the program as two weeks ago as "an attempted abortion," has since then become an accomplished one.

The patient menstruated on December 5, 1902. She had always been regular, and when on January 8th her menses did not reappear she introduced an entire match stick into the uterus, the full length. It remained there for a week, without discomfort, but at the end of that time, January 15th, she became alarmed at its non-appearance and sent for me. I found a little bloody-purulent discharge oozing from the cervix, but the match stick was not visible. On introducing a pair of dressing forceps about a quarter of an inch, I got hold of it and drew it out. There was no fever and no symptoms calling for ennetting; so I washed out the vagina with an antiseptic solution and she was douched daily with sterile water.

On January 23d, a week later, she was apparently all right.

On February 5th, the uterus was somewhat enlarged, with rounded fundus and was apparently in a pregnant condition, notwithstanding the fact that a match stick had lain in the uterus for a week. On February 13th, however, a miscarriage occurred, and thus in a measure spoiled my story.

### An Accomplished Abortion.

(c) Mrs. X.; aged 33; married; one child 13 years old. She had been ailing two or three weeks, complaining of vague abdominal pains and latterly with nausea and vomiting. I was asked to look after her for a few days by a physician who was out of town. She read books, was quite chatty and when free from pain hardly looked ill at all. The symptoms of pain and nausea increasing, I made a pelvic examination and found the uterus enlarged, softened, retro-

flexed and firmly fixed—plugging up the whole pelvic canal, with the cervix pressing against the symphysis pubis. I told her that she was in all probability pregnant, and that the nausea was due to this, and the pain to the malposition of the uterus. I recommended that the organ be replaced under anaesthesia. She expressed herself as being disappointed at being pregnant, and hoped she would not go to full term.

On Sunday morning, a few days later, the pains were severe and there was some hemorrhage and she sent for me to make an early call. The pains were intermittent, like labor pains, and as she strained the fundus of the uterus would come down lower than the cervix, which was pressed against the symphysis. That evening the pains and hemorrhage were more severe, but there was no progress towards the evacuation of the uterus. I concluded that an abortion was inevitable and that the abnormal position of the uterus was interfering with the process of evacuation. I called in a physician, who chloroformed my patient, and I thereupon corrected the position of the uterus and tamponed the vagina. I catheterized the bladder at this time and withdrew a fair amount of urine, which I did not further examine. We noticed at the beginning of the anæsthetic that her pulse was 150 and this continued throughout the anæsthesia. The recti muscles never relaxed, although the anæsthetic was given for over one hour and the conjunctival reflex was absent. The muscles remained perfectly rigid and I was unable to press my hand into the abdomen to any extent, the replacement having to be done by pressure from below. This was done on Sunday evening about 6 o'clock.

On Monday morning at 2 o'clock my patient's temperature was 102°, but at 10 o'clock it had arisen to 103°. Her pulse was 150, and she was slightly delirious. I removed the tampon and the fetus and placenta were in the vagina. Everything seemed to have come away. I catheterized again, but did not examine the urine. On Tuesday her temperature was less, but her pulse was faster and weaker, and she was more delirious. The urine was withdrawn by the catheter and found to be small in amount and full of albumin and casts. During the next thirty-six hours there was complete anuria. She died on Wednesday evening late. This sudden death was quite a shock to me and to all those connected with the case. About the time of her death I became aware of

the fact that on the day preceding my replacement of the uterus under anaesthesia some one had been smuggled into the house and had doubtless passed something into the uterus and the abortion that resulted was due to this fact, and not to the unaided efforts of nature, as I had at first supposed.

I have been puzzling over some of the features of this case ever since it occurred, and have not come to any very definite conclusions, and I hope to learn how they appear to the minds of those present. Could the work done by the abortionist on Saturday evening have caused an acute nephritis by Tuesday morning, and perhaps earlier? Could the use of an anæsthetic have lighted up an old nephritis which might have existed undiscovered? Was the nephritis due to the pregnancy? and, if so, was not the abortionist's treatment, in emptying the uterus, a proper procedure, even though not done with any such good intention?

#### Fatal Case of Puerperal Septicaemia.

(d) Fatal puerperal septicaemia is not such a rare thing that the cases need to be reported, but, of course, are much more rare than formerly. In my own practice I have never seen a case. The nearest to it that I have seen was a woman who had a pelvic abscess nearly two months after the birth of a child, the infection, I think, dating from the puerperium. She died after operation. This case which I wish to report happened in the practice of a mid-wife. The patient had a temperature of  $102^{\circ}$  or  $103^{\circ}$ , and complained of severe pains in the neighborhood of the sacro-iliac synchondrosis. We had to use morphia to quiet the pain in order to move her about in bed. The uterus was irrigated but with no effect, and in a few days her temperature ran up to  $105^{\circ}$  and remained so for a matter of nearly three weeks from the onset of the fever. At the end of the second week abscesses appeared along the ulnar border of the left arm and at the base of the first finger and thumb of the right hand. I opened up the abscesses and cultures showed a pure growth of streptococci. I thought of using serum at the time and called in a specialist in obstetrics, but as he had heard no good reports from the anti-streptococci serum we did not use it. The husband had great faith in orange juice, with which he said he had always treated his family, and so he bought a crate of oranges and fed the woman upon the juice. I had nothing better to offer, and so allowed him

to go ahead—simply suggesting that he put in occasionally a little white of egg. The case went on to fatal termination.

I have spoken of this case merely for the purpose of eliciting discussion upon the use of formalin in streptococcus septicaemia. If the case had occurred subsequently to the publication of the almost miraculous cures by formalin, I should have had no hesitancy in using this remedy, for with our present means of treatment the case was inevitably fatal.

#### DISCUSSION OF DR. WATSON'S CASES.

*Dr. Ingle:* It seems to me from what Dr. Watson has said that the work of the abortionist was entirely responsible for the fatal termination of this case. The primary cause of the whole thing was undoubtedly the nephritis, and it was probably due to the abortionist's work, who, it is to be presumed, did not use any precautions. Did I understand the doctor that the tampon was used in the posterior cul-de-sac to support the uterus or to favor evacuation?

*Dr. Winslow:* Did you use any salt solution in that case?

*Dr. Watson:* No, we did not. We were greatly influenced in the matter of treatment by the prejudices of the husband.

*Dr. Winslow:* I have extreme doubt as to whether there is any efficacy whatever in the formalin treatment. The quantity used is so minute—two drops of a 40 per cent. solution to a quart of water, I believe. I had a letter recently from Dr. Herbert Richardson, in which he says that if the quantity of formalin used were sufficient to be of value at all it would kill the patient, and that the quantity that is said to be used is certainly not of sufficient strength to affect the micro-organisms. He suggested the use of some of the newer salts of silver—protargol or argyrol. I came up on the car recently with Professor Welch, and in conversation with him on this subject, at a time when there was a good deal in the papers about Dr. Chandler's case, he said he thought the beneficial effects were rather from the amount of fluid used, and not from the formalin contained in it. We see constantly cases of septicaemia, or apparent septicaemia, where the patient has a temperature almost out of sight and the next day down to normal, that recover. Years ago I remember attending a colored woman in confinement, whose temperature ran up to a high point and I wrote a prescription to get something for washing out the uterus,

and the next day her temperature was down to normal. She said she did not have the change, and had not gotten the prescription filled. We see these things happening constantly. We know that injections of normal salt solution are sometimes very efficacious. I am of the opinion that the formalin theory will not stand the test of time.

*Dr. Cone:* About the use of formalin in infectious cases, I think there is one thing that ought to be considered, and that is the question of whether a poison of this kind taken into the system will not do more damage than the organisms. This formalin treatment may aid us in coming to some conclusion about this matter. I do not believe it possesses any more efficacy than the normal salt solution injections. There is a possibility that the formalin stimulates the spells to greater activity against the poison. There is an increase of leucocytosis, which, of course, is an aid, as the leucocytes act as scavengers, but the salt solution may bring this about too. This point has not, to my knowledge, been investigated. I believe that the greatest effect is produced by diluting the poison and flushing out the kidneys, which, of course, the salt solution does.

*As to the case of hiccough,* I would like to speak of a case I had in 1894 or 1895 in the Hopkins Hospital. The case was one of ascites in an old man, and everything was tried—the bromides, morphia and nitroglycerin. After a couple of weeks he died. I saw another case in private practice some seven years ago. I did not know what to do except to use the antispasmodics, but they did not do any good. I think, perhaps, in this case the question of a purely nervous element might be thought of. It might be a purely hysterical condition.

*Dr. Craighill:* I was going to ask Dr. Watson if he had tried asafetida or valerian, as it looked as though it might have been hysterical.

*Referring to the case of abortion,* I had a similar case some years ago in private practice—a country woman who had used a knitting needle to produce an abortion, or who said she had, but I found out afterwards that it was not true, and that she had been to an abortionist who was the cause of the trouble. She rapidly developed fever with marked tenderness over the abdomen and I made a diagnosis of peritonitis. A prominent gynaecologist was called in, who promptly everted the uterus and inserted a pair of sharp scissors in the posterior

cul-de-sac and let out considerable pus. This patient went on to recovery. I examined her urine at the examination and found it full of albumen and casts. Apparently she is in good health now.

*Dr. Richardson:* There is this point to be considered about formalin: The amount of toxine is small and any substance that would reduce it would probably render it inert. If you oxidize the toxine, or if you reduce it, you render it inert. The amount of formalin used is so infinitesimal—about 1 in 5,000 of a 40 per cent. solution, something like 1 to 11,000—and about 600 cc. of water, a little over a pound in weight, which is so small a percentage. Could it, in that amount, reduce the toxine in a chemical sense? As to the use of the silver salts, they will oxidize when in the organic form, and will not precipitate the chlorides, while nitrate of silver would; so with these organic silver salts you can get an antitoxic effect with no deleterious influence upon the blood. Formalin will coagulate the blood. You have all seen this at autopsies where formalin is used—the blood coagulates so that you cannot scrape it off. The theory of the diphtheritic antitoxin is that it acts as a reducer.

Some time ago I read a paper for this society on the oxidations that were discovered by Siebert, showing that he could destroy any of the toxins with an oxidation solution of the vegetable oxygen. This was done by direct observation. If you mix the oxidation with the toxin in two hours the toxin is rendered inert. The same thing applies when you inject it into animals. I have grave doubts that formalin will have any efficacy. But I believe that we will find a substance soon that will be a universal antitoxin, and that it will be a substance that will oxidize or reduce the toxin, and there will no longer be any need of passing it through the animal to produce the antitoxin.

*Dr. Rowland:* It seems to me that these cases of septicæmia brought about by abortion are the most unfortunate ones that we ever meet with. I have come to dread them more than anything else. As to this case, there can be no doubt whatever that the doctor did exactly the right thing. I see nothing else that could have been done, as it was the only proper course. The nephritis certainly must have been a very acute one, as in the beginning there was no symptom of it. Of course, there is no history of a toxæmia previous to the visit of the abor-

tionist. Then, whether any medicine was given to produce the abortion must be taken into consideration, too, for it is a well-known fact that the drugs used for this purpose do not produce an abortion until the patient has been pretty thoroughly poisoned.

*Dr. Pierce:* I was in consultation with a practitioner of this city this week in a case of evident criminal abortion. In curetting we found a large mass of placenta and blood clots in the uterus. The temperature fell on the following day to normal and remained there about three days. Then it went up. She had a vigorous chill, temperature going up to  $104^{\circ}$ . Two days later it was  $106^{\circ}$  and the pulse 160. We then gave her an intravenous injection of formalin, 1-5000, twenty ounces, without any effect whatever. Her temperature continued at  $105^{\circ}$ , with a pulse of 150 to 160, and she died five days later. There was no effect whatever from the injection of formalin.

*Dr. Watson:* In spite of what has been said, I still hope that there is something in the formalin treatment, and if I should get a case similar to Dr. Pierce's, I would certainly try it. If it simply induces us to use the salt solution and the salt solution proves efficacious, we would have to be thankful for the formalin method. The case that occurred in Bellevue Hospital, where the woman was in a comatose condition, with a temperature of  $108^{\circ}$ , and who is now perfectly well, was certainly almost like a resurrection. It may be, of course, that there are only certain cases in which it will be of use. In my case, there was no local trouble whatever. It was a pure case of septicæmia.

We have an antiseptic that we introduce into the blood to kill infectious organisms without killing the patient—that is, quinine—which we introduce into the blood to destroy the malarial organisms. And why should it not be possible to discover an antiseptic that will kill germs in the blood without destroying the blood itself? In the Bellevue case the blood was not altered by the injections at all.

The tests that we are making of the formalin solution are most severe, it must be remembered. If we made the same tests with diphtheria antitoxin we would meet with failure. A case at all analogous in severity will not respond to 40,000 or 60,000 units. In such cases the antitoxin is almost useless, because the system is so thoroughly poisoned. Now, it is in just such cases that formalin is being tested, and if it

cures a small percentage of these, why should it not be more successful in milder cases?

In regard to the case that I tamponed, I regarded it as an inevitable abortion at the time and filled up the vagina thoroughly, expecting to hasten it. The point that Dr. Rowland brought out is interesting—that is, if the patient may not have taken some drug that affected the kidneys. Of course such drugs are given secretly.

### Amputations Done Under Local Anaesthesia.

*Dr. Randolph Winslow* said: I suppose that most of us would rather have our patients asleep and unconscious of the progress of an operation. It is very nice to have your patient in a condition of absolute quiet; of course, that is the desirable condition of affairs. But there are certain cases in which the administration of an anæsthetic is as serious a matter as the operation itself where the patient is likely to die under the influence of the anæsthetic. It is in such cases as these that the method of which I wish to speak will be applicable.

Some time last year I had a stout woman of about fifty years of age under treatment for diabetic gangrene. One of the conditions to be feared in the administration of an anæsthetic in diabetes is that of coma resulting, and I was apprehensive in this case, and concluded to amputate the limb without the administration of a general anæsthetic.

I have a man in the hospital at present with gangrene, and it was found that there was a lump in his popliteal space, hard, small, slightly movable, not elastic at all, no expansile pulsation, no bruit, no thrill; apparently it was a solid tumor. As the man was 62 years old, it was thought to be a malignant tumor. He was not in a good condition; his arteries were hard and it was deemed inadvisable to give him a general anæsthetic. I amputated this limb at about the middle or lower third of the thigh under local anaesthesia.

Another case in the hospital at the present time was that of a young negro who had been employed in an ice-house, and who had gangrene of both feet as the result, the gangrene extending above the ankles. In this case also I did the operation of amputating both limbs—about the middle of the leg below the knee—under local anaesthesia.

The method I made use of was that of injecting the nerves with cocaine. In operating be-

low the knee, or even above the knee, the sciatic nerve is exposed between the semi-tendinosus and the biceps muscles about the middle of the thigh. Schleich's solution of cocaine, or a 2 per cent. solution, is injected into the skin, the incision made, the nerve exposed and fifteen or twenty minims of a 2 per cent. solution thrown into the nerve. The nerve looks like a tendon, of course, and unless you know previously the location of the nerve—that it is in the center of the space between these two muscles—you may be in doubt. The nerve can be injected anywhere in this space. It swells up and becomes edematous, and renders the parts below practically anæsthetic. Of course, the anterior portion of the limb has the anterior crural nerve, breaking up into its terminal and middle cutaneous branches and sending a long branch down below the knee, which is the internal or long saphenous nerve, so that in amputation below the knee injection into the sciatic nerve anæsthetizes all below the knee except that part supplied by the long saphenous nerve. As a matter of fact, that does not seem to interfere. Injection into the sciatic renders the operation practicable without infiltration of the anterior crural or along saphenous branch of it.

In the case of the lady of whom I speak she did not complain of pain, but she did complain that some one was pressing upon the limb. That sensation was really caused by the Es-mark bandage. The tissues above the knee were, of course, not anæsthetized. If we want to go further, however, with the anæsthetic effect we can inject the long saphenous nerve, or can expose the anterior crural nerve and inject that. This woman, long after the limb had been removed, asked the nurses when we were going to saw the bone, showing that she suffered extremely little. There were no after effects whatever, and she went home in ten days.

If you wish to amputate above the knee, of course, you have a much more complex nerve distribution. In the first place we have the sciatic nerve distribution, then the anterior crural with its distribution to the structures in Scarpa's triangle. We have the femoral artery and vein to the inner side and the nerve about one-half inch to the outer side of the artery and below Poupart's ligament. There are other nerve distributions to the outer side of the limb. We have the external cutaneous nerve, which is not anæsthetized by injecting the anterior crural, and to the inner side we have the genito-

crural and obturator. Nevertheless, the operation can be performed without the patient suffering much pain.

In the case of the man of whom I spoke, the gangrene of the lower extremity was due to thrombus of the popliteal artery. I injected the sciatic nerve, and you do not wish to inject it low down in such a case, but rather high, between the gluteus maximus and biceps muscles, and in a well-developed individual there is so little space there, as the gluteus maximus covers it. I also injected the anterior crural below Poupart's ligament, so that all the tissues supplied by the sciatic and anterior crural nerves were rendered anæsthetic. He made very little complaint and the operation was done comfortably. When it was over he said he could stand another one perfectly well. He went out well and his condition remained perfectly satisfactory.

The case of double amputation of both legs for gangrene seemed to me to be more successful than the others. The man never moved or winced. When asked, he said it hurt some, but not much. He said it did not hurt at all to saw the bone; he knew it was being sawed, but felt no pain—only the grating. The incision through the soft parts was painless. When asked what he was thinking about he said "something to eat." He did absolutely well.

I do not claim any originality for this. I got it from Kriel, of Cleveland, but it seems to me to open opportunities which otherwise we would not have. Of course, we can get the same result by injecting the spinal cord, sub-arachnoid space, with cocaine. I have done that, but do not like it. It may be all right, but the mortality is greater—it is, in my opinion, dangerous. If you once get an infection there is no stopping it. The actual effect of the cocaine injected into the spinal cavity is of itself, in some cases, serious. It is an operation which, whilst I have done it in several cases, I do not like it. The injection of the nerves, however, is followed by no bad effect. There is no danger attached to it. You must know, of course, where the nerves are, which is not at all difficult, and which every surgeon is supposed to know. This injection can be done in the upper extremity, but the nerve distribution is so much more intricate that it would be attended with more difficulty. The incision would have to be carried into the neck, and the brachial plexus would have to be exposed. I have not done it in that

locality, but suppose it could be done with equal success. It offers a means by which we can remove limbs or do other surgical work without general anaesthesia. The method is applicable to the ligation of arteries, stretching of nerves, joint resections or almost anything.

*Dr. Hiram Wood* read a

### Report of Case of Foreign Body in the Eye; Removed With the Magnet.

I thought it might be of interest to the society to see what is the largest foreign body I have ever seen removed from the eye, and I have never seen any record of a larger one. Quite a little attention has been given in late years to the use of the strong magnets in extracting bodies from the eye, and we have a large, permanent magnet at the hospital attached to the ordinary street current which is used a great deal now for diagnostic purposes as well as for extraction. I have had two cases this winter that have demonstrated the beneficial use of the magnet—one a boy of 18, whom I saw three days after the accident. The foreign body could be seen in the bottom of the vitreous chamber, and having located it exactly, we made an incision over the point and extracted the small bit of steel. This resulted in preservation of normal vision. This other man has not anything like normal vision. He came into the hospital six weeks ago and was referred to our department. About two hours previously he had been struck in the eye by a chip of iron. There was a scratch on the nose and an opening in the sclera just behind the cornea. The lid was swollen, the iris cut and pushed into the wound. The sterilized end of the magnet was brought in front of the eye for diagnostic purposes, but the assistant turned the current on a little too quickly. The magnet was fully six inches away from the eye, but as soon as the current was turned on the eye popped forward and this piece of iron came out through the original opening and attached itself to the end of the magnet. It is 17 mm. long. There was no reaction whatever. There was a little traumatic iritis and the man has a traumatic cataract, but still has good light perception and the eye-ball has been saved.

Adjournment.

### NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY, JANUARY 16, 1903.

*T. Halstead Myers, M. D.,* Chairman.

(Continued from last issue.)

### Lorenz and Other Hip Cases.

*Dr. Taylor* spoke of three cases operated on by *Dr. Lorenz* at the Post-Graduate Hospital—two single and one double *dislocation of hip joint*. They had done well; the shock was moderate, and the pain not severe after the first ten days. There was a great deal of ecchymosis, and the children have been slow in learning to walk. A symptom presented in the two unilateral cases, and which he thought he noticed in one of the cases shown by *Dr. Gibney*, was paralysis of the quadriceps extensor femoris. This was explained, he thought, by forcible stretching of the anterior crural nerve. *Dr. Taylor* did not think this paralysis was a serious matter, or it would probably be entirely recovered from. He expressed surprise that none of the children operated on a month ago could walk—he did not consider their hobbling about with support or a roller chair as walking.

*Dr. Myers* thought it impossible to be sure that the paralysis of the quadriceps extensor existed, as in nearly every case the shortening of the ham-string muscles was not fully overcome at the time of operation, and this would prevent voluntary extension of the leg in its new position; moreover, the electrical reactions could not be taken, as the limbs were still in plaster.

*Dr. Sayre* reported on two cases operated on by *Dr. Lorenz*, both of which were in good condition. The case of double dislocation still showed some ecchymosis, as did the case of single dislocation. The children seemed reasonably comfortable, though the unilateral case was as yet unable to walk without assistance.

*Dr. Taylor* said that the case appeared to be one of *obstetric palsy*, with partial recovery. In such cases modelling of the joints, surfaces and subluxation, due to prolonged muscular contractions, with vicious fixation of the joint, was occasionally met with. Many of the cases of so-called *congenital luxation of the shoulders* were probably of this character.

*Dr. Whitman* referred to the open operation used by *Dr. Phelps* in contrast to bloodless reduction, stating that the latter was the operation of choice. He agreed with *Dr. Taylor*, that the case presented by *Dr. Sayre* was one of *obstetric*

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Wealth is the difference between what you earn and what you spend.

*palsy, with secondary subluxation of the femur.* He thought true congenital dislocation was extremely rare. In reducing the dislocation, he proceeded much as in the Lorenz operation for dislocation of the hip. He usually put the arm up in the Sayre position for fractured clavicle, but in some cases had fixed it with the upper arm raised to the level of the shoulder straight from the side. He had only operated on four cases, of which two had disappeared from observation. He simply expected to overcome the deformity and to restore the power of supination of the hand; he does not look for restoration of motion at the shoulder joint.

*Dr. Myers* said he had stretched under ether several times the contracted pectoral muscles in a similar case, but without satisfactory result.

*Dr. Sayre* had as yet no results—his cases being yet under observation or had disappeared. He considered the free shoulder motion due to the formation of a new glenoid cavity. He thought as to treatment, that while forcible manipulation was theoretically proper, its results were uncertain.

*Dr. V. P. Gibney* suggested that the case had not been retained in position sufficiently long.

*Dr. Myers* had seen the same deformity in an adult at both wrists, the result, she said, of a fall on her flexed hands when 11 years of age.

*Dr. Sayre* said that the lower end of the radius seemed to him to be abnormally shaped. He thought there was a twist in the lower epiphysis of the radius, as if it had been fractured. The cartilage below the ulna was also dislocated. He observed that the child was probably rickety, and that this had a bearing on the treatment.

*Dr. Wallare* said that he felt pretty sure from examination that the tendon had slipped over the styloid process, and this retained the position of deformity. He felt confident that if the tendon were pulled back into place and the wrist fixed long enough, there would be no further trouble.

### Case of Dr. Whitman, Short Humerus, Arthritis.

*Dr. Taylor* remarked that he had seen a number of cases of congenitally short humeri; such cases came under the class of phocomelia. This condition had been found in epileptics, and had been classed as a stigma of degeneration. The case presented, however, did not come under this

category, as it appeared to be due to previous joint trouble.

#### DISCUSSION OF DR. H. GIBNEY'S CASES.

*Dr. V. P. Gibney* said that this case of tuberculous ankle joint was in keeping with their general results. He spoke of a series of 56 cases, which he looked up some years ago with final recovery. It seemed of this series that the joints which suppurated most made the most permanent recoveries.

*Dr. Sayre*, referring to the case of dislocated cervical vertebra, said he had seen several similar cases with fracture and displacement of the vertebrae with paralysis in one or both arms. After support and the use of a jacket extending to include the head, the paralysis disappeared in a comparatively short time—eight weeks. The head was supported six to eight months. The deformity had not been entirely relieved.

**Hogan's Nerve.**—"I hear Hogan is sick," said the barber.

"Yes, but he's better now," said the bailiff. "He went to a doctor, who looked him over and then wrote out a prescription.

"How much will that cost, doc?" asks Hogan.

"About a dollar and a half," says the doctor.

"Have you got that much to loan me, doc?" says Hogan.

"The doctor took the prescription back and crossed off all of the items except 'aqua pura.'

"You can get that for ten cents," he says, handing it back to Hogan: "and here's a dime."

"Don't I have to take those things you scratched off?" asks Hogan.

"No," says the doctor. "Those are nerve tonics. You don't need 'em."—*Med. Brief.*

### For Senile Debility.

R—Syr. hypophosph. comp. . . . . ʒiij  
 Celerina (Rio) . . . . . ʒij  
 Acidi phosphoric dilut. . . . . ʒj  
 M. S. Teaspoonful four times daily.



## Analyses, Selections, Etc.

### How May We Cure Posterior Displacements of the Uterus.

Dr. Augustin H. Goelet, of New York city, read a paper on this subject before the Tri-State Medical Association of the Carolinas and Virginia, at Columbia, S. C., February 25 and 26, 1903, in which he said that errors in treatment and unsuitable operations are far too numerous to warrant the belief that posterior displacements of the uterus are clearly understood by all who attempt to deal with them. He emphasized the importance of the utero-sacral ligaments in supporting the uterus, claiming that their significance is frequently lost sight of, both in the operative and non-operative treatment of these conditions; to the importance of an accurate knowledge of the condition of the endometrium, uterine walls, and pelvic floor; and to certain concomitant conditions which would make operations fail in their object. Dr. Goelet disputes that posterior displacements can ever be cured by strictly non-operative treatment.

He advises in the treatment of *retroflexions* of not too long standing, dilatation with curettage and introduction of drainage stem with the fundus thrown forward by a tampon during treatment, followed by a pessary to hold the fundus in an exaggerated position till no tendency to return to the former position is shown. In *retroflexion with retroversion*, after the first condition is cured, the second is best treated by shortening of the utero-sacral ligaments, while some can be cured only by ventral suspension. Shortening the round ligaments in the inguinal canal was advised in "*movable retroflexions*" without complications as the best method of procedure.

In retroversions the author advises as sufficient in a limited range of cases initial treatment of the metritis and endometritis present by curettage and gauze in the uterus, followed by tampons rather than pessaries, with the faradic current for tonic effect to the utero-sacral ligaments.

The author described a new operation for fixation of the cervix in a posterior position. After denuding a small area on the posterior aspect of the cervix and a corresponding one on the vaginal wall in the posterior cul-de-sac, the two places are brought together by suture. This

simple procedure holds the cervix backward in position and throws the fundus forward.

It was further claimed that in retroversion with prolapse and cystocele, ventral suspension gives the best results, as also in conditions of extensive adhesions complicated by diseases of the appendages. Ventral suspension does not interfere with pregnancy.

### Typhoid Bacillus in Urine and Sputum; Value of Urotropin in the Condition.

Dr. Mark W. Richardson, Boston, read a paper on this subject before the Boston Medical Library, December 15, 1902 (*Boston Med. and Surg. Jour.*, February 5, 1903).

Observations upon 103 cases of typhoid fever showed that typhoid bacilli were present in the urine of twenty-two, or 21.35 per cent. of the cases. Since 1887, thirty observers have made bacteriological investigations of the urine of 1,291 cases of typhoid fever. Of these, 278 gave positive results—a percentage of 21.5, which approximates remarkably closely to the author's percentage of 21.35.

Urotropin has been used by eight observers in fifty-three cases. All reports have been favorable except that of Gwyn, who found that in two cases of cystitis due to the typhoid bacillus the organisms persisted, though in much diminished numbers, in spite of a long-continued use of the preparation. Gwyn prefers irrigation of the bladder with corrosive sublimate 1:50,000.

Very rarely the use of urotropin has been followed by painful micturition and hematuria. These symptoms have, however, ceased immediately upon the omission of the drug, and no permanent injury to the kidneys has resulted.

Our present knowledge of the subject may be summed up as follows:

1. Typhoid bacilli are present in the urines of about 21 per cent. of individuals afflicted with typhoid fever.
2. The bacilli, when present, are generally in pure culture, and their number is frequently enormous—many millions in each cubic centimeter of urine.
3. The invasion of the urine by the bacilli takes place in the later stages of the disease. Unless measures are taken to remove the organisms they persist frequently for weeks, occasionally for months and rarely for years, and thus constitute (a) a danger to the patient

himself (cystitis and possibly orchitis and epididymitis), and (b) what is much more important, a grave source of danger to the public health.

4. The necessity for the rigid disinfection and supervision of typhoid urines is apparent.

5. Urotropin will, in the majority of cases, remove the typhoid organisms from the urine, not only in the cases of simple bacilluria, but also in those in which a cystitis has resulted. Very rarely an obstinate cystitis may require the use of vesical irrigations. Very infrequently a case will be seen in which the use of urotropin is followed by hematuria. In such cases the drug should be omitted and irrigation of the bladder instituted.

6. This subject in its relation to the public health is of the utmost importance. It should be a fixed rule, and one rigorously enforced, that no typhoid convalescent be discharged as well until his urine has been proved permanently free from bacilli. In large hospitals, with their well-equipped laboratories, such supervision can be carried out with ease. Cases in private practice should be the care of the local boards of health. In this way only can we prevent a considerable percentage of our typhoid convalescents from becoming unsuspected foci for the further distribution of the disease.

As to the presence of the typhoid bacillus in the sputum, the author in 1897 (*Jour. Boston. Soc. of Med. Sciences*, 1897, November 16), isolated this organism on three successive days from the sputum of a case of typhoid fever complicated with pneumonia. In fifteen cases with no pulmonary complications the results were negative.

Since 1897 the subject has been investigated by a few observers only. Their results showed that the typhoid bacillus may be present in the sputum during typhoid fever, especially if there be a coincident bronchitis or pneumonia. The typhoid bacilli are almost invariably associated with other organisms, such as the pneumococcus or the influenza bacillus, and are to be regarded rather as secondary invaders than as the primary cause of the complication. The sputum in these cases is generally hemorrhagic and may contain large numbers of bacilli for considerable lengths of time. Seven weeks is the longest period of persistence recorded. The subject needs much further study, but enough is

known to show that in the typhoid sputum we have still another excretion which must be carefully disinfected.

Dr. F. C. Shattnek stated that for several years it has been his routine practice, alike in hospital and in private, to give his typhoid fever patients eight to ten grains of urotropin three times a day for two days in every week until convalescence is completed. This obviates all danger from the urine and has never produced any untoward symptoms.

### Beta-Eucain as a Local and Dental Anaesthetic.

In a brochure on "Local Anæsthesia and Its Application in Dentistry" (Leipsic, Arthur Felix, 1902), Dr. Hermann Thiesing, Royal Court Dentist, discusses the twelve anæsthetics which have been used in stomatology. He finds that acain, cocaine, alpha-eucain, holocain, orthoform and orthoform-new are less suited, because of their greater toxicity; nirvanin, auesin, etc., because of insufficient anæsthetic action and other disadvantages; and that beta-eucain should be employed. Dr. Thiesing has also used Wilson's anæsthetic, but has entirely ceased to employ it, having become convinced that better results are obtained with a 1 per cent. beta-eucain solution. Moreover, Wilson's anæsthetic is fifteen times as expensive as such a solution.

Beta-eucain possesses greater anæsthetic power than tropacocain, while the duration and intensity of the anæsthesia and the area affected by it are equal to that of cocaine. Besides being three and three-fourths less toxic than cocaine, beta-eucain possesses the important advantage that its solutions can be sterilized with boiling. The author has never observed œdemas or subsequent pains from the use of boiled beta-eucain solutions, though sometimes, just as with tropacocain, bleedings followed its employment, which, however, have always stopped promptly without aid.

Insensibility of the mucous membrane may be easily produced by the external application of a beta-eucain solution. The injection of a 1 per cent. solution (to which eight-tenths of 1 per cent. sodium chloride have been added) at body temperature is absolutely painless and effects a thorough anæsthesia, lasting twenty-five to thirty minutes.

From his investigations Dr. Thiesing draws

the conclusion that in dentistry only beta-eucain and tropacocain may be considered, and occasionally, if very dilute solutions are to be used, or for application to the unbroken skin, also acoin and cocaine.

He himself prefers beta-eucain, because it is less toxic than tropacocain and has considerably more anæsthetic power. According to the investigations made by various physicians, a 1 per cent. beta-eucain solution produces about the same effect as a 4 per cent. tropacocain solution. The possibility of intoxication is, therefore, much greater with tropacocaine.

Dr. Thiesing considers it advisable to employ beta-eucain solutions of four different strengths for various purposes. He indicates 2-5 *per cent. beta-eucain solutions* for opening abscesses, excising small tumors, extracting loosened (not inflamed) teeth and roots (deciduous teeth) and the four lower incisors, and anæsthesizing the inferior alveolar nerve on the lingula and on the foramen mentale; 1 *per cent. beta-eucain solutions* for extracting the upper incisors, bicuspid and molars, straightening teeth by operation, drilling the alveolæ and removing necrotic root apices; 2 *per cent. beta-eucain solutions* for extracting the lower molars and bicuspid and the four canines, excavating sensitive dentines and extracting the pulp; and 3 *per cent. beta-eucain solutions* for extracting all teeth and roots in acute peri-odontitis.

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**Another Place.**—Bill—"Where've you been?"

Jill—"Down to the doctor's."

"I'll bet he told you to go South."

"No, I didn't go to consult him; I went to collect a bill."

"Oh, well, in that case it was probably not the south where he told you to go!"—*Yonkers Statesman.*

"Doctor," said he, "I'm a victim of insomnia. I can't sleep if there's the least noise, such as a cat on the back fence, for instance."

"This powder will be effective," replied the physician, after compounding a prescription.

"When do I take it, doctor?"

"You don't take it. You give it to the cat in a little milk."—*Ex.*

## Book Notices.

**Therapeutics of Dry Hot Air.** By CLARENCE EDWARD SKINNER, M. D., LL. D., Professor of Therapeutics in New York School of Physical Therapeutics; Physician in charge New Hope Hot Air Sanitarium, New Haven, Conn., etc. New York: A. L. Chatterton & Co. 1902. Cloth. 8vo. Pp. 200. Price, \$2.

While dry superheated air, as a therapeutic measure, has been used for several years, yet to the average practitioner it is a new and unknown quantity. And yet it is one of the most potent and useful agents at our command when indicated. It is not claimed as a panacea; but either alone or in combination with other agents, it greatly increases our power to overcome numerous pathological processes. Many failures with hot air have been due to the fact that it has been used to influence pathological conditions not amenable to its action; other failures have been due to faulty technique in its administration. After describing the apparatus and the technique, morbid conditions in which it is useful are spoken of, such as rheumatism, sciatica, sprains, arthritis deformans, nephritis, local septic infection, pneumonia, peritonitis, pleuritis and synovitis lithæmia, neuralgia, myalgia, varicose ulcers, nervous debility and exhaustion, neuritis, chronic bronchitis, pulmonary tuberculosis, fibrous ankylosis, miscellaneous conditions, etc. The subject commends itself, with this book as a guide for its application; but it must be remembered that too much must not be expected of this new therapeutic application. Full details are given and illustrations are presented to guide the practitioner in his use of the apparatus.

**System of Physiologic Therapeutics.** Edited by SOLOMON SOLIS COHEN, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc. *Volume V.—Prophylaxis—Personal Hygiene.—Civic Hygiene—Care of the Sick.* By Drs. JOSEPH McFARLAND, Philadelphia; HENRY LEFFMANN, Philadelphia; ALBERT ABRAMS, San Francisco, and W. WAYNE BABCOCK, Philadelphia. *Illustrated.* Philadelphia: P. Blakiston's Son & Co. 1903. Cloth. 8vo. Pp. 539.

We are satisfied that relatively few of our readers have appreciated this publication, giving "a practical exposition of the methods, other than drug-giving, useful in the prevention of

disease and in the treatment of the sick." Doctors are too prone simply to ask for a prescription of drugs, and copy that, instead of storing their minds with facts more useful even than prescriptions—looking to the prevention of disease as well as curing it. But if we could persuade the "busy practitioner" to stop a moment and examine this *System of Physiologic Therapeutics*, he would learn much, and be the better doctor because of such learning. The book, as its title page indicates, is divided into three parts. One treats of the origin and prevention of disease, which is subdivided into sections on the origin of disease; the diffusion of disease, the prevention of disease, and the prophylaxis of special infections. If nothing else commended the volume to the attention of the practitioner this last section is worth the price of the work. After some preliminary considerations, alimentary, respiratory and cutaneous infection, circulatory inoculations relating to malaria, yellow fever, dengue, filaria, elephantiasis, African lethargy and relapsing fever are systematically considered, followed by a chapter on venereal infections. Part II considers civic hygiene, especially as it relates to the city, municipal health organizations, food and water supply and disposal of waste and the dead. Part III is taken up with eight chapters relating to domestic and personal hygiene, school hygiene, hygiene of travel, of special periods of life, of the diatheses, the care of the sick room, nursing, etc. One who reads this *System* or important chapters in it will be impressed with its very great utility and importance to the doctor, the nurse and the home circle.

*Progressive Medicine. Volume IV. December, 1902.*

Edited by HOBART EMORY HARE, M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. LANDIS, M. D., Assistant Physician to Out Patient Medical Department of Jefferson Medical College Hospital. Lea Brothers & Co., Philadelphia and New York. 1902. Cloth. 8vo. Pp. 422.

We have had occasion many times to commend this "quarterly digest of advances, discoveries and improvements in the medical and surgical sciences." These quarterlies, added to the standard systematic works, keep the doctor well posted in every department of practice and medical advances. The present volume, with its excellent index to facilitate ready reference, treats of advances in diseases of the

digestive tract and allied organs—liver, pancreas and peritoneum; anesthetics, fractures, dislocations, amputations, surgery of the extremities and orthopedics; genito-urinary diseases, diseases of the kidneys, physiology, hygiene and practical therapeutic referendum. We know of no book or journal that takes its place.

**Anatomy of the Human Peritoneum and Abdominal Cavity.** Considered from the Standpoint of Development and Comparative Anatomy. By GEORGE S. HUNTINGTON, M. A., M. D., Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York city. Illustrated with 300 Full Page Plates, Containing 582 Figures, Many in Colors. Lea Brothers & Co., Philadelphia and New York. 1903. Very large 8 vo. 292 pages of text and index, beside the 300 pages of plates. Library cover.

It would be hard to conceive of an anatomical work of any region more graphic, accurate or useful than the work before us. To the embryologist, anatomist, physiologist, surgeon and physician it gives information—graphic and descriptive—of many facts nowhere else collected in one volume. Indeed, for the most part, the work of the author is practically original and deserves such recognition. The "value of embryology and comparative anatomy in elucidating the difficult, and often complicated, morphological problems encountered in the study of human adult anatomy" are emphasized. "It is further hoped that the broader interpretation, both of structure and function, obtained by ontogenetic and phylogenetic comparison, will impart an interest to the study of adult human morphology." In this day of surgery of the abdominal organs, etc., this work gives a great deal of information from the standpoint of comparative anatomy that must make the surgeon a more intelligent diagnostician and operator. To the physician much information is given from the same standpoint which will enable him oftentimes to understand phenomena as expressed by signs and symptoms. Such a book as this cannot be "reviewed" in the small space allotted to a "book notice." It should be seen and examined to appreciate its worth.

**Seventh Annual Report of the Board of Managers in the Springfield State Hospital of the State of Maryland.** October 1, 1902. Pamphlet.

The superintendent, Dr. Joseph Clement Clark, and his four assistant physicians make

a good showing in this report. Analysis of the ascertainable causes of insanity gives heredity the lead, with intemperance next. Intemperance being often inherited, a great number of the patients are insane through no fault of their own, but from the sins of their forefathers, who neglected to adopt those precautions which would effectually prevent the occurrence of insanity to a large extent—to-wit, intermarriage of and with the mentally diseased and defective.

**The A B C of Photo-Micrography.** A Practical Handbook for Beginners. By W. H. WALMSLEY. 155 pages, 5x7, with 29 photo-micrographs by the author. Cloth, \$1.25 net. Tennant & Ward, New York.

The lack of any American book dealing with this fascinating branch of photographic work, and the need of an elementary introduction to photo-micrography, led the author to prepare this excellent manual. Mr. Walmsley is a recognized authority in photo-micrography, and has had a varied and long experience in the field. He deals with his subject in a plain but comprehensive way, and the beginner who will study the A B C should find his difficulties vanish. The illustrations add largely to the practical value of the book and are, in themselves, most interesting.

**Obstetrical Nursing for Nurses and Students.** By HENRY ENOS TULEY, M. D., Louisville, Ky., Professor of Obstetrics, Kentucky University, Medical Department, etc. Pages 202. Price, cloth, \$1 net. G. P. Engelhard & Co., Chicago. 1902.

This "manual" is an elaboration of the lectures delivered by the author to the pupils of the Training School for Nurses of the John N. Norton Memorial Infirmary and the City Hospital, of Louisville. The book furnishes the nurse with such knowledge of obstetrical cases as is necessary for her to intelligently care for a woman in labor and during convalescence. There are many little points considered which are also helpful as reminders to the physician regarding the mother, infant, etc.—giving between the two covers *multum in parvo*.

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"I'm not a patient, doctor," said the travelling representative as the physician entered. "I'm not a patient doctor, either," replied the M. D., showing him the door.

## Editorial.

### Local Medical Societies in Virginia.

We wish to obtain a complete list of the medical societies of the State that are in affiliation with the Medical Society of Virginia, and through it, with the American Medical Association. We have received responses to our former request from the following societies: Norfolk Medical Society, Newport News Medical Society, Richmond Academy of Medicine and Surgery, Elizabeth City County Medical Society, Lynnhburg Medical Association, Seaboard Medical Association, Southwestern Virginia Medical Society, Petersburg Medical Faculty, Rockingham County Medical Society, Roanoke Medical Society, Chesterfield County Medical Society, and the Church Hill Medical Society. We trust the secretary or some member of other societies in the State will give us postal-card information as to whether or not his society is in affiliation with the Medical Society of Virginia.

### Central State Hospital, Virginia.

An unfortunate misunderstanding of facts and lending an ear to statements made by a discharged negro gave to Dr. William F. Drewry, superintendent, and the Board of Managers a most excellent opportunity of proving how specially commendably this institution has been conducted in the cause of humanity. So that the Legislative Committee of Inquiry, after seeking for complaints and allowing the fullest investigation, was constrained to honorably discharge all officers, etc., of the institution from every charge or insinuation. In fact, the investigation proved the Central State Hospital for insane negroes of Virginia to be one of the very best conducted and managed institutions of the kind in the country.

### Physicians Wanted to Locate in Virginia.

We have on hand requests for four physicians. One is for a *young man* to locate in a very desirable part of Southwestern Virginia. There are very few doctors in the whole county and none, we understand, in this particular village from which we received the request. (L.)

Another is a request from a doctor living in the western portion of Virginia, who has a good practice and no opposition. He would like to

sell his house to whoever takes his place. "Terms to suit the purchaser." (S.)

Another request is from a doctor in the east portion of the State, who is going to leave his present location and wishes some one to take his place. He has nothing to sell. The location will suit a *young man*. (E.)

The other is from the Eastern Shore. The doctor has a nice house (furnished), carriage, horses, barn, outhouses, etc., on a five-acre lot. He wishes to lease these for five years at very liberal rates. (B.)

We also have a request for a *young doctor* to take charge of a practice for the months of April and May, 1903. (W.)

Let us hear from those wishing desirable locations. All three of these requests come from good locations.

### Alcoholic Intemperance.

We wish to call special attention to the communication from Dr. T. D. Crothers, of Hartford, Conn., in this issue. The author is too well known by his good works to call for an introduction to our readers, for he has the confidence and good will of the profession of all parts of the country. His position for many years as Superintendent of Walnut Lodge Hospital for the treatment of alcoholic and opium inebriates, has given him abundant opportunities for observation as to the results of habits of alcoholic indulgences. As we cast our eye over the past and recognize the ruin to fortunes and to reputation and to home and social pleasures done by the habit of alcoholic indulgences, we feel that the communication referred to is a most temperate one upon the subject. Recognizing, as physicians in their daily rounds are compelled to do, the wrecks of health and life caused by alcoholic abuses, it does seem to us that practitioners of medicine should everywhere take a firm position on this subject of temperance. We earnestly ask each of our readers to carefully peruse the communication of Dr. Crothers, and as to his recommendation, "let it be accordingly so done." Note the reports of superintendents of insane asylums all over the world, and we find that as a rule intemperance in alcoholic or opium or other drug addiction is responsible—next to heredity—for the vast amount of insanity in the land. And if the cases of heredity of insanity were analyzed, we would find enough of such cases to be the result

of intemperance in our forefathers to justify the assertion that alcoholic intemperance—either directly or indirectly—is the commonest of causes of insanity and wrecked hopes and happiness. Whatever may be the present importance of the subject, unless some check is promptly given to this habit of alcoholic addition, the matter will grow to be one of more serious importance to the children and grandchildren of the present age.

### The Louisiana State Medical Society

Has a total membership of 420, of which 101 were added at the meeting of June, 1902. The number of doctors in the State is 1,469. The population of the State is 1,381,625. Every reputable physician registered in Louisiana is eligible for membership. All members in good standing receive the *New Orleans Medical and Surgical Journal* free of charge, as it is the official organ of the Society. The next meeting is to be held in New Orleans, April 28, 29 and 30, 1903. Dr. Isadore Dyer, of New Orleans, is president, and Dr. William M. Perkins, New Orleans, is secretary. The *Transactions* of the session 1902 are just received. Among the many good papers in the volume we notice that Dr. Henry Dickson Bruns, of New Orleans, got Dr. Joseph A. White, of Richmond, Va., to add some notes—about two pages—to his paper on "Suppuration of the Anterior Portion of the Eyeball." We trust the Louisiana Society will add enough to its membership in April to run the total considerably over 500, and thus secure two delegates in the House of Representatives of the American Medical Association, to assemble in New Orleans during May.

### The Boston Medical and Surgical Journal

Celebrated its 75th anniversary as a weekly journal February 19, 1903. The *London Lancet* is probably the only other weekly medical journal now in existence with anything approaching such an unbroken record.

### Dr. Julian M. Baker, Tarboro, N. C.,

After an examination of the case, has been bailed, as it appears that he killed Dr. H. Turner Bass, of the same town, about a fortnight ago, in resisting the aggressive attack upon him by Dr. Bass because of some personal differences. The affair is truly regrettable, and yet

from the newspaper accounts Dr. Baker can scarcely be blamed. Dr. Baker is ex-president and ex-secretary of the Medical Society of the State of North Carolina and ex-president of the Board of Medical Examiners of that State. Dr. Bass was a prominent practitioner of Tarboro, and those near to him have the sympathies of his numerous friends.

### The Medical Society of Virginia

Will hold its thirty-fourth annual session at Roanoke, Va., September 15-17, 1903. Dr. William S. Christian, of Urbanna, Va., will deliver the address to the public and profession. The subject of the general discussion will be *Diagnosis of Gastric Affections*—Honorary Fellow, Dr. John H. Musser, Philadelphia, Pa., leader, who will confine his paper to the *Symptomatology*. By invitation, Dr. John C. Hemmeter, Baltimore, Md., will take up *Modern Methods, Other Than Clinical, of the Diagnosis of Gastric Affections*. To Dr. E. C. Hopkins, Richmond, Va., has been assigned *Clinical Methods of Diagnosis, Including a Demonstration of Such Methods*. The President of the Society, Dr. J. N. Upshur, Richmond, has a watchful eye as to every interest of the organization, and if hard work can accomplish the end, the Roanoke meeting may be counted on as one of the very best the Society has ever held. Dr. S. S. Guerrant is chairman of the Roanoke Committee of Arrangements.

### Chimborazo Hospital, Richmond, Va.

The ladies and doctors of the Church-Hill section of this city have made a first-rate start in raising funds for the establishment of a much-needed general hospital in the eastern part of the city. Sufficient has been raised to warrant the announcement that work on the buildings, etc., will be begun in the near future.

### Cigarettes Prohibited in Wisconsin.

On July 1st, the law enacted by the Wisconsin Assembly goes into effect. This law prohibits the manufacture of, or sale of, cigarettes or cigarette paper in that State.

### The American Medical Association

Will meet at New Orleans, La., Tuesday, May 5, 1903. First-class railroad fare via the Southern railway from Richmond and return will be \$26.50. A double berth in Pullman car, Richmond to New Orleans, *one way*, is \$6.50, or

\$13 round trip. Two persons can occupy a double berth, if desired, at the one cost. The time between Richmond and New Orleans is about thirty-one hours. Two trains daily. Tickets on sale May 1st to 4th, limited ten days for return, except if deposited with special agent at New Orleans not later than May 12th, and upon payment of fee of fifty cents, limit may be extended to May 30, 1903.

### Osteopathy, Christian Scientists, etc., in Virginia.

With reference to the position occupied by these people in Virginia, we had hoped by this time to give the law in its entirety. The Senate of Virginia passed a bill permitting the six or seven osteopaths now in the State to remain without examination; and also permit the Kellam Cancer-Cure institution to remain uninterrupted. But it gives no recognition to the Christian Scientists, etc. The Senate bill is now before the Committee of the House of Delegates, before which the Committee of the Medical Society of Virginia has appeared. While concessions have been necessary, still it may be affirmed that hereafter whoever seeks license as doctor, osteopath, "Christian Scientist," etc., will have to pass examination before the Medical Examining Board of Virginia. It will probably be several days before a final decision is reached.

### Messrs. Sharp & Dohme, Baltimore,

Have for years been represented in Richmond, Va., by Messrs. Richard Gwathmey & Co., No. 11 Governor street, who make prompt shipments so that prescriptions may be filled without delay. The Richmond house keeps a large stock of their products, which is replenished by frequent deliveries of fresh stock from Baltimore.

### American Medical Association, New Orleans, La., May 5-8, 1903.

For the above occasion one fare for the round trip will apply via Southern Railway from all points to New Orleans and return. Tickets on sale May 1st, 2d, 3d and 4th, limited to ten days, except upon payment of 50 cents extension of return limit may be had until May 30th.

The "Southern" is the direct through car line from the North and East to New Orleans. Two fast trains each way daily. Elegant equipment. Superb dining car service. For detailed information, apply to any agent Southern Railway, or C. W. Westbury, D. P. A., Richmond, Va.

### End of Annual Volume.

This issue completes the current annual volume of this journal. The title-page, index, etc., will be issued with the first April number.

As to the new volume, to begin April, the increase of the patronage of the journal justifies the announcement that about a hundred reading pages will be added to the next annual volume.

## Obituary Record.

### Dr. George W. LeCato

Died in Richmond, March 13, 1903. It will be recalled that he had a stroke of hemiplegia last fall. Rallying somewhat, he came to Richmond from his home at Wachapreague, Accomac county, Va., to serve as Senator in the Virginia Legislature, but was forced to ask for sick leave. Soon afterwards he returned to the Senate, but in a day or two his condition got worse, and then he took a furlough of some two months or more. Early in March he returned to his post again in the Senate, but in a day or two suffered a partial attack of the hemiplegia. Then embolism of the arteries of the right arm occurred, and the day before his death he seemed to be better. But that night he had another apoplectic stroke, from which he never rallied. His remains were buried in the cemetery near his home in Accomac county, Va.

No word of eulogy need be spoken of Dr. LeCato. He lived in the esteem and affection of all who knew him. He served his people in the Legislature not from choice, but as a patriot—because his people wanted him as their Senator—which position he held for many years. He was an honored member of the profession, and in all that concerned the welfare of the Medical Society of Virginia, he was among its staunchest friends. As a practitioner, he was a leader in his district. And while his contributions to medical literature were not many, still his articles were all eagerly sought and attentively read by the practitioner, who gathered useful lessons from his contributions. As physician or statesman, his acts were all governed by those nobler principles that characterized the able minded, warm hearted Christian gentleman.

### Dr. C. C. Conway.

At a regular meeting of the Piedmont Medical Society, held February 21, 1903, at the residence of Dr. E. M. Magruder, Charlottesville, Va., it was resolved that suitable resolutions of respect to Dr. C. C. Conway, of Rapidan, Va., be prepared.

Dr. Conway was born in Greene county, Va., April 6, 1843. When only 18 or 20 years old he enlisted in Company A, Seventh Regiment Virginia Volunteers, and went with it through the many bloody struggles of the war, winning the love of his comrades and esteem of his officers. At the close of the war he studied medicine under Dr. S. R. Rixey, in Culpeper, Va. Later he entered the Washington University, Baltimore, Md., graduating in 1869. He settled at Rapidan, Va., and there gained for himself a large and lucrative practice. Here he met and married Miss Jones, of Orange county, who still survives him. He joined the Medical Society of Virginia in 1874, and was made one of its vice-presidents in 1879. He was appointed one of the Medical Examining Board in 1885, acting as its vice-president since 1890. Dr. Conway failed to attend only three of the eighteen sessions of the board held during his membership. In all of the duties falling upon him in his various positions Dr. Conway has proved himself a true Christian, a faithful physician, a loving father, a kind neighbor and an upright man.

Whereas our Heavenly Father has seen fit to remove from our midst this fellow-physician and friend, let us bow in humble submission to His will. Let us also commend those of his family to the protecting care of Him who has promised to be the friend of the widow and the orphan.

Resolved, 1. That in the death of Dr. Conway our profession has lost one of its most persistent, conscientious and faithful followers; our society and board one of its most regular and attentive members.

Resolved, 2. That his patrons have lost a beloved and trusted physician.

Resolved, 3. That as a mark of our great sympathy we send to the family a copy of these resolutions; that a copy be sent to the *Virginia Medical Semi-Monthly* and one of the county papers.

E. H. LEWIS,

J. S. DAVIS,

HUGH T. NELSON,

Committee.



# Index to Volume VII.

APRIL, 1902—MARCH, 1903, INCLUSIVE.

EXPLANATIONS.—This Index is divided into two parts—FIRST, Index of Contributors, which also gives the titles of their articles, etc., and SECOND, Index of Subjects, in which the alphabetically-arranged italicized lines represent original articles.

Notices of books, colleges, deaths, journals, personals, and proceedings of societies, etc., are indexed in the INDEX OF SUBJECTS under the respective words **Book Notices, Colleges, Journalistic, Obituaries, Personals, and Society and Board Proceedings, etc.**

## INDEX OF CONTRIBUTORS AND TITLES OF THEIR ARTICLES.

BAIRD, T. M., M. D., Sweet Springs, W. Va. Wholesale Poisoning from the Ptomaine of Milk, 241; Three Cases of Appendicitis .....	395	CROTHERS, T. D., M. D., Hartford, Conn. Dangers from Indiscriminate Use of Morphia, 152; Public Care and Treatment of Inebriety, 306; Alcohol as a Beverage Should Be Discouraged .....	560
BAKER, BARNARD E., M. D., Charleston, S. C. The Diagnosis of Chronic Interstitial Nephritis .....	329	DAVIDSON, JOHN P., M. D., Richmond, Va. Remarks Upon Some Indications for Wearing Glasses .....	464
BAPTIST, H. L., M. D., Ivy Depot, Va. Report of Cases—1. Delivery of Foetus About Four Months Old at About Eighth Month of Gestation—No Placenta. II. Triplets Aggregating 25 Pounds—Three Placentae, With Only Mercuranous Attachment—Post-Partum Convulsions—Veratrum Viride—Recovery .....	380	DAY, JR., GEORGE W., M. D., Richmond, Va. Neuralgia. DEAVER, JOHN B., M. D., Philadelphia, Pa. Gastro-Enterostomy .....	63 553
BARKSDALE, GEORGE, M. D., Ph. G., Richmond, Va. Hay Fever .....	272	DOWLING, C. E., M. D., Sparta, N. J. Acetozone in the Treatment of Gonorrhoea in the Female .....	521
BARNES, A. C., M. D., Philadelphia, Pa. The Methods of Using Arkyrol .....	301	DREWRY, WILLIAM FRANCIS, M. D., Petersburg, Va. Provision for the Criminal Insane .....	457
BASS, C. C., M. D., Columbia, Miss. Treatment of Typhoid Fever with Castor Oil .....	337	DUNN, JOHN, M. D., Richmond, Va. Four Cases of Mastoiditis, Which Serve to Illustrate Two of the Standpoints from Which the Question of Early Operative Intervention in Mastoid Inflammation Should Be Viewed, 7; Abstract from the Current French Ophthalmological Periodicals, and Desultory Comments on the same. Paper No. III. ....	82
BATES, W. H., M. D., New York, N. Y. Question About Water-Drinkers and Eye Diseases .....	162	EASTMAN, JOSEPH RILUS, M. D., Indianapolis, Ind. Laminectomy for Fracture—Dislocation of Fourth and Fifth Cervical Vertebrae .....	354
BAUGHMAN, GREER, M. D., Richmond, Va. Some Theories as to the Causation of Cancer .....	585	ELIOT, LLEWELLYN, M. D., Washington, D. C. The Practical Management of Small-pox .....	60
BEADLES, F. H., M. D., Richmond, Va. Etiology and Treatment of Acne Vulgaris, 373; The Diagnosis of Cutaneous Cancers .....	588	EWALD, L. A., M. D., New York, N. Y. Clinical Observations on the Treatment of Chlorosis and Anemia and Pseudoleukemia .....	57
BISHOP, F. B., M. D., Washington, D. C. Some Facts About Electricity as a Therapeutic Agent .....	435	FULKERSON, P. S., M. D., Lexington, Mo. Conservative Treatment of Appendicitis .....	57
BLANKINGSHIP, O. F., M. D., Richmond, Va. Pulmonary Tuberculosis—Means of Early Diagnosis—Treatment .....	542	GARCIN, RAMON D., A. B., M. D., Richmond, Va. Fatal Secondary Hemorrhage from Umbilicus Eight Days After Birth .....	376
BOUCHER, J. B., M. D., Hartford, Conn. Acute Obstruction of Bowel .....	101	GASTON, J. McFADDEN, A. B., M. D., Atlanta, Ga. Morbid Processes Compared with Sanitary Measures .....	481
BOVEE, J. WESLEY, M. D., Washington, D. C. The Proper Use of Vaginal Pessaries, 352; Pregnancy and Labor Following Complete Nephro-Ureterectomy, 418; The Causes and Treatment of Hydronephrosis .....	486	GOELET, AUGUSTIN H., M. D., New York, N. Y. Indications for, and Technique of, Operation for Nephrop-tosis .....	126
BROWN, JR., ALEX. G., M. D., Richmond, Va. The Present Day Mortality of Pneumonia .....	377	GORDON, WILLIAM S., M. D., Richmond, Va. Some Phases of Albuminuria .....	385
BULKLEY, L. DUNCAN, A. M., M. D., New York, N. Y. Practical Notes on Some of the More Common Diseases of the Skin .....	145	GRANDY, CHARLES R., M. D., Norfolk, Va. Report of a Case of Rattlesnake Bite .....	515
BURCH, L. E., M. D., Nashville, Tenn. Drainage After Abdominal Section .....	42	GRAY, ALFRED L., M. D., Richmond, Va. X-Ray in the Treatment of Superficial Cancers .....	509
CANAN, C. W., B. S., M. D., Ph. G., Orkney Springs, Va. Headaches and Their Treatment .....	410	GREINER, A. B., M. D., Richmond, Va. Malaria and Pregnancy .....	115
CANNADAY, ALBERT A., M. D., Roanoke, Va. Some Practical Points About Diseases of the Eye and Ear .....	467	GRIMM, ALVA S., M. D., St. Marys, W. Va. Some Features of Medical and Surgical Study in London and Berlin .....	109
CHANDLER, GEORGE H., M. D., M. R. C. S. (London) Chicago, Ill. Perfection in Puerperal Poisoning—Can It Be Attained? .....	150	GROOVER, THOS. A., M. D., Washington, D. C. The X-Ray Treatment of Cancer; Report of Cases .....	531
CLARKE, AUGUSTUS P., A. M., M. D., Cambridge, Mass. The Management of Cases of Emergency Arising from Rupture in Ectopic Pregnancy .....	271	HALL, ARTHUR J., M. D., Washington, D. C. A Comparison of Typhoid Fever Mortality in Hospital and Private Practice .....	42

HENING, THOMAS SCOTT, M. D., Winterpock, Va. A Plea for Mothers and Their Offspring.....	420	Aneurism of Scalp, Treated by Ligation of Both Common Carotid Arteries. 2. Chronic Posterior Urethritis, Treated by External Perineal Urethrotomy and Drainage. 3. Lupus, Treated by the X-Ray, 565; Cornual Pregnancy, with Report of a Case.....	523
HENSON, J. W., M. D., Richmond, Va. A Suggestion in the Treatment of Fracture of the Femur, 18; Some Thoughts Suggested by a Case of Urinary Fistula Following a Vaginal Hysterectomy.....		MERCER, WILLIAM F., M. D., Richmond, Va. Primary Intrinsic Sarcoma of the Larynx.....	391
HERSMON, C. C., M. D., Pittsburg, Pa. Influence of Typhoid Fever on the Nervous System.....	176	MICHAUX, JACOB, M. D., Richmond, Va. Absence of Appendix Vermiformis in Two Cases, 242; A New and Original Stitch and Method of Closing the Abdominal Walls and Other Deep Incisions.....	559
HICKLING, D. PERCY, M. D., Washington, D. C. Rectal Feeding.....	9	MORGAN, EDWIN L., M. D., Washington, D. C. Selections from the Materia Medica of Our English Ancestors Several Centuries Ago.....	127, 155
HILLSMAN, B. L., M. D., Richmond, Va. Appendicitis from the Standpoint of a General Practitioner.....	40	MURRELL, THOMAS W., M. D., Richmond, Va. Keloids, 160; The Mechanics of Mercury in Syphilis.....	541
HODGES, J. ALLISON, M. D., Richmond, Va. Paucity of the General Symptoms Manifested in Some Cases of Brain Tumor.....	454	NEFF, JOHN, M. D., Baltimore, Md. A Case of Hematuria.....	115
HOGUE, JR., M. D., M. D., Richmond, Va. Medical Inspection of School Children, 20; A Modified Method for Testing Diabetic Urine, 87; Some Phases of Chronic Nephritis.....	265	NORTON, GEORGE MOSSE, M. D., Savannah, Ga. Some Points in the Pathology of and the Value of Iron in the Treatment of Anemia and Chlorosis.....	184
HOLLADAY, LEWIS, M. D., Orange, Va. Severe Heart Depression After Use of (Small) Immunizing Doses of Diphtheria Antitoxin.....	387	OSLER, WILLIAM, M. D., Baltimore, Md. Case of Leukaemia—A Clinical Lecture.....	540
HOLLAND, G. W., M. D., Eastville, Va. A Case of Poisoning from Pennyroyal.....	319	PAQUIN, PAUL, M. D., Asheville, N. C. Digestive Disorders in Consumption, with Notes on Mixed Infections.....	322
HUNT, PRESLEY C., M. D., Washington, D. C. Remarks on Influenza.....	28	PAYNE, R. L., M. D., Norfolk, Va. Some Phases of Modern Medicine.....	268
IRVINE, ALEXANDER, M. D., Welch, W. Va. Red Dressings to Prevent Suppuration in Wounds.....	126	PEYSER, MARK W., M. D., Richmond, Va. Benzoate of Guaiacal.....	45
JAMES, R. BRUCE, M. D., Danville, Va. An Original Method of Setting and Treating a Fractured Knee Cap.....	379	PORTER, MILES F., M. D., Fort Wayne, Ind. Some Cases of Appendicitis and the Lessons They Teach.....	274
JOHNSTON, GEORGE BRN., M. D., Richmond, Va. Curettement of the Uterus.....	366	PATTER, T. E., M. D., St. Joseph, Mo. Tubercular Peritonitis.....	121
IONES, CLARENCE PORTER, M. D., Newport News, Va. Report of a Case of Secondary Hemorrhage Following Tonsillotomy—Measles.....	318	PLYMPTON, H., M. D., Brooklyn, N. Y. Septicemia and the Curette.....	285
KEFFER, GEORGE F., A. M., M. D., Lafayette, Ind. Case of Locomotor Ataxia Detected in its Incipency by Examination of Patient's Eyes, with Observations Concerning the Disease.....	97	PRESTON, J. W., M. D., Keystone, W. Va. A Case of Coca Cola Poisoning.....	154
KENNEY, W. L., M. D., St. Joseph, Mo. Cancer of Eyelids Treated by X-Ray.....	75	PRESTON, ROBERT J., A. M., M. D., Marion, Va. Cursory Review of the History of the Insane in North America, and of the American Medico-Psychological Association.....	179
KENT, S. T. A., M. D., Ingram, Va. Cretinism, with Report of a Case and Treatment.....	388	PRICE, JOSEPH, M. D., Philadelphia, Pa. Progress We Have Made in Surgery About the Region of the Appendix.....	15
KREISS, F., M. D., Chicago, Ill. Permanent Results, Failures and Relapses Following Bottini's Operation.....	153	RANDOLPH, JOHN, M. A., M. D., Arvonia, Va. Acute Pyelo-Nephritis, 13; Hytero-Asthma; Report of an Illustrative Case, Cured by Tincture of Stramonium.....	514
LANPHEAR, EMORY, M. D., Ph. D., LL. D., St. Louis, Mo. Puerperal Fevers—from a Surgeon's Standpoint.....	77	RAVENEL, MAZYCK P., M. D., Philadelphia, Pa. The Unity and Intercommunicability of Human and Bovine Tuberculosis.....	274
LOFTON, LUCIEN, A. B., Ph. G., M. D., Emporia, Va. Two Unusual Cases in Medicine.....	125	RICKETTS, B. MERRILL, Ph. B., M. D., Cincinnati, Ohio. Surgery of the Heart, 266; Surgery of Penetrating Wounds of Lungs and Heart (Experimental).....	508
LYNCH, JUNIUS F., M. D., Norfolk, Va. The Subcutaneous Injection of Paraffin for the Correction of Deformities, with Report of Cases.....	342	RICKETTS, EDWIN, M. D., Cincinnati, Ohio. Fibroids of the Uterus and Broad Ligaments, 75; Puerperal Appendicitis.....	367
MACNEILL, J. E., M. D., Denver, Colo. Climatic and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases.....	344	ROBERTS, DEERING J., M. D., Nashville, Tenn. History of the Medical Society of Tennessee.....	30
MALLETT, E. PIERRE, M. D., New York, N. Y. The Toxic Effect of Trional.....	108	ROBINS, CHARLES R., M. D., Richmond, Va. The Webster-Baily Operation for Retro-Displacement of the Uterus.....	329
MALSARY, GEORGE E., M. D., Cincinnati, Ohio. A Brief Resume of the Treatment of Tuberculosis.....	217	ROBINSON, WILLIAM L., M. D., Dauville, Va. Some Cases of Recurrent Intestinal Obstruction Deceptive in Symptomatology and Unique in Causative Agency.....	468
MARSHALL, THOMAS R., M. D., Manila, P. I. Report on Asiatic Cholera from the Santa Mesa Cholera Hospital.....	193	ROSS, GEORGE, M. D., Richmond, Va. Treatment of Internal Hemorrhoids Without Knife.....	124
MARTIN, R. S., M. D., Stuart, Va. Some Abdominal Cases in Women Lately Operated On, 55; What Can Be Done to Regulate the Number of Young Men Studying Medicine, 163; Some Benefits of Thorough Organization of the Medical Profession, with Mention of Some of the Most Prevalent Causes of Sickness, Race Decay, and Their Prevention.....	289, 318	RUTH, C. E., M. D., Keokuk, Iowa. Antistreptococcal Serum in Septic Conditions.....	413
MAYFIELD, CLIFTON, M. D., Washington, D. C. Relapse in Typhoid Fever.....	2	SHANDS, A. R., M. D., Washington, D. C. The Importance of Early Diagnosis and the Treatment of Pott's Disease, 25; Gant's Femoral Osteotomy.....	274
McGUIRE, STUART, M. D., Richmond, Va. Cancer Cases, 48; Union by Primary Intention, 73; Drainage After Abdominal Section, 361; Clinical Lecture—A. Circoid		SHAW, JOHN W., M. D., Washington, D. C. Necrosis of the Tibia as a Result of Typhoid Fever.....	348

SNIDER, O. HENLEY, A. M., M. D., Atlanta, Ga. Burns, Scalds and Their Treatment .....	10	VANDERVEER, ALBERT, M. D., Albany, N. Y. Gastrectomy, with Report of Two Cases.....	339
SOTHORON, ELMER, M. D., Washington, D. C. A Unique Case of Priapism .....	437	VAUGHAN, GEORGE TULLY, M. D., Washington, D. C. A Case of Volvulus, with Torsion of the Entire Mesentery .....	304
STANLEY, CHARLES E., M. D., Middletown, Conn. Alcoholic Psychoses—Clinical Aspects and Differential Diagnosis .....	105	VENABLE, C. S., M. D., Charlottesville, Va. Aid of the Microscope in Diagnosis of Diseases of the Skin.....	461
STOAKLEY, WILLIAM S., M. D., Cheriton, Va. Obsessive, 161; Ptomaines in Buttermilk.....	276	WALKER, GEORGE S., M. D., Staunton, Va. Sympathetic Insanity in Twin Sisters.....	1
STURGIS, F. R., M. D., New York, N. Y. Diagnostic Points of Difference Between Spermatorrhoea and Seminal Pollutions .....	349	WATTS, C. WALKER, M. D., Fayette, Mo. Auto-Infection, Auto-Phagisma, and Auto-Intoxication .....	90
TAYLOR, HUGH M., M. D., Richmond, Va. Dependent Drainage in Acute Extensive Intra-Pelvic and Intra-Peritoneal Infection in Men by Incising the Perineum, Separating the Rectum from the Prostate and Bladder, and Puncture of the Recto-Vesical Pouch of the Peritoneum .....	299	WESTERVELT, DOUGLAS, M. D., Shreveport, La. Gonorrhoeal Rheumatism .....	5
TAYLOR, JOHN J., M. D., Streator, Ill. Rheumatic Neuritis, or Tabes Dorsales—Case for Diagnosis.....	364	WHEAT, LEWIS, M. D., Richmond, Va. Case of Xeroderma Pigmentosum .....	390
TOMPKINS, CHRISTOPHER, M. D., Richmond, Va. A Pica for the More Frequent Use of Accouchement Force.	396	WHITE, JOSEPH A., A. M., M. D., Richmond, Va. A New Operation for the Correction of the Deformity Known as Saddle-Back Nose .....	177
TOWNSEND, TERRY M., M. D., New York, N. Y. Gonococcal Auto-Reinfections from the Seminal Vesicles .....	389	WHITNEY, E. L., M. D., Baltimore, Md. The Application of Some of the Secretions of the Liver to the Treatment of Diseases of That Organ.....	44
TUCKER, ALFRED B., M. D., New York, N. Y. New Method of Operation for Laceration of Perineum, and for Rectocele and Cystocoele .....	409	WIGHT, T. H. TOYNBEE, M. D., Richmond, Va. Formula for a New Modification of Ehrlich's Triple Stain..	438
TURNER, W. D., M. D., Fergusson's Wharf, Va. Determination of Sex .....	331	WILLIAMS, ROBERT F., M. A., M. D., Richmond, Va. Experiment with Light in the Treatment of Pulmonary Tuberculosis .....	158
UPSHUR, JOHN N., M. D., Richmond, Va. The Causes and Complications of Gout .....	517	WILTSHIRE, JAMES G., M. D., Baltimore, Md. Case of Enterolith, with Specimen .....	111
		WINNER, J. L., M. D., Baltimore, Md. Case of Afebrile Pneumonia .....	114

# INDEX OF SUBJECTS.

(Italics indicate subjects of Original Communications.)

<b>A</b> bbott's calcium sulphide astringent, 130; — saline laxative ..... 369	Amenorrhea in unmarried .... 276	pancreatic enema after — operations, 9; puerperal —, 367; treatment of ..... 15
<i>Abdominal cases in women</i> , 55; new method to close — incisions, 559; drainage after — sections (also <i>Laparotomy</i> ) ..... 42, 361	American insane, history of, 179; — Medico-physiological Association, 179; — Medical Association (also <i>Societies</i> , etc.) ..... 575	<i>Appendix absent in two cases</i> , 242; surgery of ..... 15
Abortifacient, Pennyroyal, dangerous ..... 319	Ammonol, 476; uses of ..... 19	<i>Argyrol, methods of using</i> , 301; — for septicemia ..... 563
Abortion attempted, 562, 564, 565; — due to quinia during malaria ..... 116	Ammonium carbonate for tuberculosis, 228; — iodide for tuberculosis ..... 229	Aristol for tuberculosis ..... 231
Aboulia ..... 161	Amputations under local anesthesia ..... 565	Arn shorter than other, One ..... 551
Abscess, antistreptococcic serum for ..... 413	Amyl nitrite for angina pectoris, 483; — for epileptic aura ..... 232	Army and navy changes, 479; U. S. — examinations ..... 476
Absorptive power of peritoneum ..... 42	Anacahuite for tuberculosis ..... 228	Aromatics inhibit growth of tubercle bacillus ..... 218
<i>Abstracts from current French ophthalmological periodicals, etc.</i> ..... 82	Analgesics for epilepsy ..... 233	Arsenic for tuberculosis ..... 227
<i>Accouchment force, Plea for</i> ..... 396	Anatomy, history of ..... 243	Arsenite of copper for tuberculosis ..... 231
Acetanilid for epilepsy, 233; — for neuralgia ..... 65	Anemia, iron for, 184; treatment of ..... 57	Arterial tension during pregnancy ..... 418
Acetozone intestinal antiseptic, 310; — for gonorrhoea in female ..... 521	Anesthesia of drum membrane, 521; — of X-ray ..... 257	Arterio-sclerosis, 329; — and chronic interstitial kidney ..... 424
Acid, hydrocyanic, see <i>Hydrocyanic acid</i> ; — picric, see <i>Picric acid</i> ; — uric, see <i>Uric acid</i> , etc.	Anesthetic, beta-eucalin and other local and dental ..... 570	Arthritis, alcoholic, 133; gonorrhoeal (also <i>Rheumatism</i> ) —, 5; X-ray for ..... 422
<i>Ace vulgaris, Etiology and treatment</i> , 373; <i>practical notes on</i> — 147; X-ray for ..... 422	Aneurism, new treatment, 233; clipoid — of scalp treated ..... 505	Arthrotoomy of hip joint, etc. .... 132
Acin a dental anesthetic ..... 571	Angina pectoris, amylnitrite for ..... 483	Artificial anus for cancer ..... 52
Actinolyte for arc light baths, 159	Aniline colors which inhibit growth of tuberculosis ..... 218	Asafetida for tuberculosis, 228; — for colic ..... 483
Adeno-tumor of thyroid ..... 548	Ankle tuberculosis cured ..... 551	Ascites, tubercular ..... 121
Adonis vernalis for heart weakness ..... 233	Anti-abortifacient, potassium chlorate for ..... 118	Asclepias for tuberculosis, 228, 229
Adrenalin for hay fever, 279; — for hemorrhage ..... 547	Anthriscus cerefolium for tuberculosis ..... 228	Aseptic and antiseptic surgery, 74
Aesculapius, mythology of ..... 127	Antiferments, antiseptic, etc., for bowels ..... 232	<i>Asiatic cholera in Manila</i> ..... 193
Afebrile pneumonia, case ..... 114	Antikamnia and heroin for winter cough, 381; — for coughs, influenza, etc., 471; laxative — and quinia ..... 250	Aspirin, a bowel antiseptic ..... 232
Africa, South, typhoid fever in ..... 21	Antipyrin for epilepsy ..... 233	Asthma (also <i>Hay fever</i> ) differentiated, 273; hystero — cured by stramonium ..... 514
Ajaol for tuberculosis ..... 222	Antiseptic, bowel, acetozone, 310; sublimine —, 425; intestinal — in typhoid fever, 4; — surgery ..... 74	Associations, see <i>Societies</i> , etc.
Alabama court decision about practice, 261; — medical legislation ..... 476	<i>Antistreptococcic serum for septic conditions</i> , 413; — — for septic fever ..... 55	Asylum for insane (also <i>State hospitals</i> ), first in world and in U. S. .... 181
Albumen, phospho., for tuberculosis ..... 226	Antitoxin diphtheria, 269; — — causes cardiac depression, 387; large doses of —, 234; how does — act? ..... 74	Ataxia, locomotor, X-ray for ..... 422
<i>Albuminuria, some phases of</i> , 385; causes of —, 265; — in pregnancy ..... 418	Anus, artificial, for cancer ..... 52	Auramin inhibits growth of tubercle bacillus ..... 218
Alcohol as beverage should be discontinued, 560; — for tuberculosis ..... 227	Aortic valve disease due to streptococcus ..... 65	Aura of epilepsy ..... 232
<i>Alcoholic psychoses, differential diagnosis</i> , 105; — arthritis, 133; — habit, 306; — intemperance ..... 574	Apothecaries, ancient ..... 156	Auricle, septic thrombus in right (also <i>Ear</i> ) ..... 66
Alexander operation for retroverted uterus ..... 320	<i>Appendicitis, cases</i> , 395; <i>Conservative treatment of</i> —, 87; — from general practitioner's standpoint, 40; <i>Lessons from cases of</i> —, 274; differentiation between — and typhoid fever, 399; — in King Edward, 190; — symptoms, but no appendix, 242; English methods in —, 110; is — always a surgical disease? 120;	<i>Auto-infection, auto-phagism, auto-intoxication</i> , 90; — — in typhoid fever, 3; — reinfection from seminal vesicles ..... 369
Alexins are germicides ..... 73		Avena water for tuberculosis ..... 229
Allimentation (also <i>Diet</i> ) for tuberculosis ..... 226		Avensis anagallis for tuberculosis ..... 229
Alpecia, notes on ..... 149		

<b>B</b> acillus colonis in spinal fluid, 496; — — in puerperal infection, 79; — diphtheria often not found in tracheal diphtheria, 65; Inhibitors of — tuberculosis, 569; — typhus in gall bladder, 4; Urotropin for — typhus in urine and sputum ..... 569
Bacterium therapy for tuberculosis ..... 219
Belzers disease and cancer ..... 539
Baldy-Webster operation for retroversion of uterus ..... 330

Balsam of Peru for tuberculosis ..... 223  
 Beaumont, Address on William Belladonna for epilepsy, 233; — for tuberculosis. .... 230  
 Benzeneol for tuberculosis. .... 228  
 Benzozate of quaiacol. .... 45  
 Benzozate of sodium for tuberculosis ..... 229  
 Benzoic acid for tuberculosis. .... 230  
 Benzosol (also Benzozate quaiacol) for tuberculosis. .... 221  
 Benzoyl-acetyl peroxid, see Benzozone; also Acetozone: — quaiacol, see Benzozate of quaiacol.  
 Benzozone for cholera. .... 193  
 Berlin, medical and surgical study in ..... 110  
 Beta-eucain local and dental anesthetic. .... 570  
 Beta-naphthol for tuberculosis, 218; Camphorated — — for tuberculosis. .... 225  
 Bichloride of Mercury, see Mercury bichloride.  
 Bicornis, uterus ..... 530  
 Bile, functions of, 44; — retention, 484; — duct obstructed by cancer. .... 51  
 Biliary calculi escaping into duodenum ..... 112  
 Billroth's duodeno-gastrotomy. .... 555  
 Black cohosh for tuberculosis. .... 229  
 Bladder drainage, Advantages of, 326; Gall —, see Gall Bladder; Myo-sarcoma of —, 45; needle swallowed cut out of — ..... 113  
 Bleeding, suprarenal extract to stop ..... 318  
 Bleorrhethics cause pyelonephritis. .... 13  
 Blood, pathology, 185; — serum of dog, goat, etc., for tuberculosis, 219; — in urine, see Hematuria; skin-grafting in — ..... 201  
 Blue, Methylene, inhibits growth of tubercle bacillus. .... 218  
 Boards of Examiners, Illinois, etc., 212; Reciprocity between medical — ..... 293  
 Book Notices.  
*Albert's Bacteriology*—Sixth Edition ..... 239  
*Appt. of Brazil*—La Poste Eubonique dans la Republic Argentine et au Paraguay ..... 402  
*Conson & Blake*—Manual of Otolgy—Third Edition ..... 285  
*Holtz*—Kathemet Texts ..... 286  
*Wood-Gibson and Russell's Physical Diagnosis*—Third Edition ..... 256  
*Brover & Bannister*—Practical Manual of Insanity ..... 46  
*Pruback*—Compend of Human Physiology—Eleventh Edition ..... 402  
*Wood-Gibson and Russell's Physical Diagnosis*—Third Edition ..... 352  
*Atwell*—International Clinics—Twelfth Series—Vol. I, 69; 143; Eleventh Series—Vol. IV, 269; Twelfth Series, 1902—Vol. II, 254; Vol. III, 382; Vol. IV ..... 523  
*Cheyne & Baugbard*—Manual of Surgical Treatment—Vol. VI ..... 136  
*Chicag Publishing Co.*—Physician's Protective Visiting List ..... 404  
*Clement*—Seventh Annual Report of

Board of Managers in the Springfield State Hospital of the State of Maryland, October, 1902. .... 572  
*Cohen*—System of Physiologic Therapeutics—Vol. VI, Dieto-Therapy and Food in Health, 69; Vol. IX, Hydrotherapy, Thermotherapy, Heliotherapy, and Phototherapy. Balmology and Chromotherapy; Saline Irrigation and Infusions, 258; Vol. V, Prothylaxis—Personal Hygiene—Civic Hygiene—Care of the Sick. .... 571  
*Chubb*—Outline of Material of Materia Medica and Pharmacology—Third Edition. .... 552  
*Cushing*—Text-book of Pharmacology and Therapeutics—Third Edition. .... 351  
*Datostau*—Clinical Hematology—A Practical Guide to the Examination of the Blood, with Reference to Diagnosis ..... 165  
*Dacynopt*—Diseases of Women—Fourth Edition ..... 206  
*Doty*—Manual of Instruction in the Principles of Prompt Aid to the Injured—Third Edition ..... 205  
*Dudley*—Principles and Practice of Gynecology—Third Edition ..... 233  
*Eckley*—Manual of Dissections and Practical Anatomy ..... 472  
*Eggshard & Co.*—Standard Medical Directory of North America, 1902. .... 24  
*Foltz*—Diseases of the Eye (Eclectic Manual No. 4) ..... 136  
*Fraser*—Diseases of Surgical Cases—Eighth Edition ..... 239  
*Gevishik*—Text-book of Anatomy by American Authors—Second Edition. .... 382  
*Gordon*—Recollections of the Old Quarter ..... 432  
*Graham*—Diseases of the Nose, Throat, and Ear ..... 334  
*Grimbold & Gallaudet*—A Pocket Text-book of Dermatology. .... 403, 451  
*Hollen*—The Public and the Doctor. .... 381  
*Hurt*—Text-book of Practical Therapeutics—Ninth Edition, 284; Practical Diagnosis ..... 357  
*Horr & Landis*—Progressive Medicine—Vol. I, 47; Vol. II, 258; Vol. III, 287; Vol. IV ..... 572  
*Hughes*—Veneral Diseases—Third Edition ..... 318  
*Hughes*—Practical Medicine Series of Year Books, Vol. IV, Gynecology, 21; Vol. III, Ear, Eye, Nose and Throat, 68; Vol. V, Obstetrics, 206; Vol. VI, General Medicine, 23; Vol. X, Pediatrics and Orthopedic Surgery, 250; Vol. VII, Materia Medica and Therapeutics; Preventive Medicine, 283; Vol. IX, Physiology, Pathology, Bacteriology, Anatomy, 332; Vol. XI, General and Veneral Diseases; Nervous and Mental Diseases, 358; Second Series, Vol. I, General Medicine, 429; Vol. II, General Surgery, Vol. III, Eye, Ear, Nose and Throat. .... 472  
*Hunter*—Diseases of the Intestines—Their Special Pathology, Diagnosis and Treatment—Vol. II, 283; Diseases of the Stomach—Third Edition. .... 357  
*Henry*—A Physician's Practical Gynecology ..... 259  
*Hinsdale*—Transactions of the Climatological Association for the Year 1901—Vol. XVII ..... 92  
*Hunter*—Outlines of Anatomy—A Guide to the Methodical Study of the Human Body—Second Edition ..... 106  
*Holt*—Diseases of Infancy and Childhood—Second Edition ..... 236  
*Howard*—The Perverts ..... 259  
*Waddington*—Anatomy of the Human Thoracic and Abdominal Cavities. .... 372  
*Jennings*—Manual of Ophthalmology ..... 165  
*Joseph*—Manual of Childbed Nursing—Fifth Edition ..... 203  
*Johns Hopkins Hospital Reports*, Vol. X, Nos. 3, 4, 5, 285; Nos. 6, 7, 8 and 9 ..... 523  
*Kemper*—Diseases of Infancy and Childhood ..... 286  
*Kraft-Ebing*—Psychopathla Sexualis. .... 91  
*La Ferre*—Physical Diagnosis—Diseases of the Thoracic and Abdominal Organs ..... 286

*Leuf*—Gynecology, Obstetrics, Menopause ..... 502  
*Lewis & Hynson*—Practical Treatment of Stammering and Stuttering. .... 552  
*Mathews*—How to Succeed in the Practice of Medicine ..... 448  
*Mattison*—The Special Method in Morphism ..... 449  
*McMurrich*—Development of the Human Body—A Manual of Human Embryology ..... 401  
*Moore*—Typhoid Fever ..... 333  
*Mundy*—Eclectic Practice in Diseases of Children ..... 192  
*Neff*—A Brief Manual of Prescription Writing in Latin or English. .... 92  
*Oertel*—Medical Microscopy ..... 523  
*Palitzer, Bollin & Heller*—A Text-Book of Diseases of the Ear—Fourth Edition ..... 471  
*Pusey & Wright*—Treatise on Diseases of the Eye, Nose, Throat and Ear. .... 428  
*Polley*—Handbook of Materia Medica, Pharmacy and Therapeutics—Ninth Edition ..... 383  
*Power*—Eighteenth Annual Report of the Bureau of American Ethnology—1896-'97, Part II, 286; Seventeenth and Nineteenth Annual Reports, ditto, 1898 and 1897-'98 ..... 523  
*Quain's Dictionary of Medicine*—Third Edition ..... 135  
*Reese & Leffmann*—Text-Book on Medical Jurisprudence and Toxicology—Sixth Edition ..... 448  
*Reynolds & Newell*—Practical Obstetrics ..... 401  
*Roberts*—Surgical Treatment of Disfigurements and Deformities of the Face ..... 47  
*Rorkell*—Anatomy ..... 552  
*Rossiter*—Story of the Living Temple. .... 48  
*Savage*—Ophthalmic Myology ..... 47  
*Scheff & Gallaudet*—Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing and Medical Law ..... 355  
*Schamus, Thayer & Ewing*—Text-Book of Pathology and Pathological Anatomy ..... 383  
*Schmidt*—Genito-Urinary and Veneral Diseases ..... 402  
*Sims*—Text-Book of Physiological Chemistry, 165; Clinical Diagnosis. .... 166  
*Skinner*—Therapeutics of Dry Hot Air ..... 571  
*Smith*—Lessons and Laboratory Exercises in Bacteriology, Arranged for Use of Students ..... 551  
*Spaulding*—Transactions of the First Annual Meeting (1901) of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics ..... 70  
*Stekel*—Text-Book of Dietary Practice—Vol. XXI—Supplement ..... 449  
*Szjarmovszky & MacCallum*—Text-Book on Histology and Microscopic Anatomy of the Human Body, including Microscopic Technique ..... 358  
*Tanner & Leffmann*—Memoranda on Poisons—Ninth Edition ..... 428  
*Taylor*—Physician's Pocket Account Book ..... 381  
*Thayer*—Compend of General Pathology, 33; of Special Pathology. .... 285  
*Thompson*—Practical Dietetics—Second Edition ..... 258  
*Trout & Co.*—International Medical Annual—Twentieth Year, 47; Syphilis—A Symposium ..... 92  
*Trout & Co.*—Practical Text-Books for Nurses and Students ..... 573  
*Trotter*—Treatise on Diseases of the Anus, Rectum and Pelvic Colon. .... 333  
*Tyson*—Guide to Practical Examination of Urine ..... 401  
*Van Slatkoff*—Regional Minor Surgery ..... 71  
*Van Slatkoff & Noy*—Cellular Toxins, or the Chemical Factors in the Causation of Disease—Fourth Edition. .... 283  
*Wainwright*—The A. B. C. of Photomicrography ..... 573  
*Wharton*—Minor Surgery and Baudouin—Fifth Edition ..... 136  
*Woolsey*—Applied Surgical Anatomy—Regionally Presented ..... 332  
 Boric acid for tuberculosis. .... 230

- Bottini's operation, Permanent results, failures and relapses.* 153; Cases of —, ..... 163
- Bovine and human tuberculosis Intercommunicable ..... 274, 212
- Bowel (also *Intestinal*) action, semi-monthly, 125; Acetozone, a — antiseptic, 310; — Antiseptics, 232; Acute — obstruction (also *Intussusception, volvulus, etc.*), 101; — obstruction due to enterolith, 111; — obstruction, 303, 468; Pancreatic enema for — obstruction ..... 9
- Brachycephalic skull ..... 8
- Brain tumor, Paucity of symptoms, 435; — diet for tuberculosis ..... 220
- Breast cancer, Case ..... 52
- Bright's disease, chronic (also *Kidney, Interstitial*) ..... 325
- Broad ligaments, Fibroid of ..... 75
- Bromides for epilepsy ..... 232
- Bronchial gland extract for tuberculosis ..... 219
- Bronchitis and grippé, 29; Benzocel for —, 45, 46; Petroleum for — ..... 439
- Bronzed spots ..... 540
- Brunel's sue pulmonaire for tuberculosis ..... 219
- Burgundy pitch for tuberculosis ..... 230
- Burns, Scalds, and their treatment, 10; — due to X-ray, 421, 531
- Buttermilk, Ptomains in ..... 276
- C**actina pellets for irregular heart action ..... 15
- Cadavers, Scarcity of ..... 408
- Cæsarean section necessitated by ventro-suspension ..... 320
- Caffein citrate for cephalalgia ..... 15
- Calcium chloride for tuberculosis, 224; Analysis of — phosphate calculi, 67; — sulphide anti-saprophytic ..... 130
- Calculus (also *Biliary*; also *Gall-stones*; also *Renal*) analysis, 67; — but no renal tissue, 66; — and hydronephrosis, 490; — and tuberculosis ..... 220
- Camphorated beta-naphthol for tuberculosis, 225; Camphor for colic, 183; — inhalations for tuberculosis, 222; — and oil for tuberculosis ..... 225
- Cancer cases, Diagnosis and treatment, 49; Diagnosis of —, 538; Theories of causation of —, 532; Colostomy for —, 52; — of eyelids treated by X-ray, 75; Gastro-enterostomy for — of stomach, 553; Pancreatic enema for — of stomach, 339; X-ray for —, 254, 421, 531, 539*
- Canella for tuberculosis ..... 223
- Cantharidates for tuberculosis ..... 220
- Capsule of Tenon, Rabbit's eye inserted ..... 85
- Carbolic acid, 218; — — for tuberculosis ..... 230
- Carbonate guaiacol, see *Guaiacol*
- Carbonic acid gas for tuberculosis ..... 224
- Carcinoma, see *Cancer*
- Carotids ligated for scalp aneurism ..... 505
- Carpus dislocation ..... 550
- Cascara evacuant ..... 135
- Castor oil for typhoid fever ..... 337
- Cataporesis, mercuric, for pellucid diseases ..... 164
- Cataract, Traumatic ..... 84
- Catarrah (also *Cold*) Argyrol for post nasal ..... 303
- Catheter, Sterilization of ..... 257
- Catheterism cause of pyelonephritis, 13; Purposes of uretero —, etc. .... 255
- Catholic saints against disease ..... 157
- Cauliflower penis ..... 54
- Cave air, Limestone, for lung diseases ..... 332
- Celera ..... 501
- Central State Hospital of Virginia vindicated, 573; — — 408
- Cephalalgia, Caffein citrate for ..... 15
- Cerebro-spinal meningitis (also *Meningitis*) and diphtheria ..... 384
- Cervical gland disease, Ferromatose for, 59; Laminectomy for fractured — vertebra, etc. .... 354
- Cervix uteri cancer ..... 53
- Cetramine inhalations for tuberculosis ..... 222
- Charbon and tuberculosis ..... 219
- Charlatany, Legislation needed about ..... 292
- Charleston Exposition ..... 48
- Chaulmoogra oil for tuberculosis ..... 228
- Cherry, Wild, for tuberculosis ..... 229
- Chiory for tuberculosis ..... 228
- Child, due to granny, Death of, 420, 431; Horseshoe kidney in — five months old, 66; — labor ..... 316
- Children, School, Medical inspection of ..... 20
- China, Cholera in ..... 164
- Chinosol for tuberculosis ..... 229
- Chloral, Somnos better than ..... 118
- Chlorine for tuberculosis ..... 230
- Chloroform for cough, 483; — for tapeworm, 424; — for tuberculosis ..... 231
- Chlorophenols for tuberculosis ..... 230
- Chlorosis and anemia and pseudo-leukemia, Clinical observations and treatment, 57; Iron for — ..... 184*
- Chloralsol for tuberculosis ..... 230
- Chologogue, Bile salts as ..... 44
- Cholecystotomy through lumbar incision ..... 278
- Cholera in China, 164; — in Manila, 119, 193; Probable microbe of — infantum, 263; — typhoid ..... 194
- Chondroma of lungs, Pneumonotomy for ..... 509
- Christian science in New York, 405; — — in Virginia ..... 524
- Cigarettes, Dangers of, 313; — prohibited in Wisconsin ..... 575
- Cimicifuga for tuberculosis ..... 229
- Cinnamic acid and cinnamon for tuberculosis ..... 223, 224, 231
- Circoid aneurism of scalp treated ..... 505*
- Citrate of caffein, see *Caffein citrate*
- Clark's method of abdominal drainage ..... 43
- Class ooccus germ of scarlatina, 441
- Climate for tuberculosis ..... 225
- Climate and electric peculiarities of Colorado favoring recovery in pulmonary diseases, etc. .... 344*
- Cloves oil for tuberculosis ..... 223
- Clubfoot, Lorenz method ..... 447
- Coca as heart stimulant, 400; — cola poisoning ..... 154
- Cocain as dental anesthetic, 571; — injected in nerves for local anesthesia, 565; — for neuralgia, 483; — habit ..... 315
- Coccus causative of scarlatina, Class ..... 441
- Coccygeal sinus, Hair in ..... 68
- Cohosh for tuberculosis ..... 229
- Coccolana bark for tuberculosis, 229
- Code of ethics discussed, 94; Proposed — —, 137, 207, 526
- Cod liver oil for tuberculosis ..... 227
- Cold (also *Catarrah*) and grippé, 28
- Colic, Asafetida and camphor for ..... 483
- Colleges, Examinations to enter medical ..... 170
- Colleges and Hospitals.**
- Baltimore Medical College ..... 215
- Barnes Medical College ..... 216
- Centenary Hospital ..... 167
- Central State (Va.) Hospital ..... 573
- Charlotte Williams Hospital ..... 72
- Chimborazo Hospital ..... 875
- Cincinnati College of Medicine ..... 263
- College of Physicians and Surgeons of Baltimore ..... 215
- Columbian University, D. C. .... 71, 215
- Dr. R. S. Martin's Sanitarium ..... 168
- Georgetown University School of Medicine ..... 215
- Jefferson Medical College ..... 72, 214
- Medical College of Virginia ..... 69
- Medico-Chirurgical College of Philadelphia ..... 212
- Memorial Hospital, Winchester ..... 214
- National College of Law ..... 216
- New Orleans Polyclinic, 214, 231, 246, 275, 311, 319, 348, 364, 390, 429, 449, 661, 541
- New York Polyclinic Medical College and Hospital ..... 213
- Presbyterian Eye, Ear and Throat Hospital, Baltimore ..... 479
- St. Luke's Hospital ..... 168
- University College of Medicine, Richmond, Va., 72, 93, 216, 463 ..... 450
- University of Maryland, Med. Dept., 68, 144, 215
- University of Virginia, Med. Dept. .... 216
- Washington Post-Graduate Medical School ..... 284
- Western Pennsylvania Medical College, 214
- Woman's Medical College of Pennsylvania ..... 214
- Colon bacillus in spinal fluid ..... 496
- Colonies for epileptics ..... 316, 497, 475
- Colorado for pulmonary diseases, etc. .... 344
- Colostomy for cancer ..... 52

Colotomy, Keen's inguinal.....	547	subcutaneously, 342; Lorenz method for —, 444; Walrus fin —.....	550	Drug habit, Dangers of.....	313
Columbo for tuberculosis.....	229	Delirium, alcoholic.....	106	Ducts of Muller.....	530
Comedones, Removal of.....	374	Delusional insanity, alcoholic..	107	Duodeno-gastrotony, Billroth's and Woffler's.....	555
Comfrey for tuberculosis.....	229	Dental anesthetic, Beta-eucain, etc.....	570	Duodenum and gall-bladder fistula.....	52
Commissioner of State hospitals.....	473	Dependent drainage for pelvic and peritoneal infection.....	299	Duotol for tuberculosis.....	221
Congenital dislocations, 550; — of hip, 131; — elevation of scapula.....	131	Dermatitis seborrheica, 146; X-ray —.....	531	Dysmenorrhoea in unmarried.....	276
Conjunctivitis, Argroyl for.....	302	Dermatology, see <i>Skin diseases</i> .		Dyspepsia, Ferro somatose for nervous, 58; — of tuberculosis.....	321
Consultations discussed, 95; — with irregulars.....	526	Dermoid of lungs, Pneumotomy for.....	509		
Consumption (see <i>Tuberculosis</i> ). Digestive disorders in, 322; Prize for cure of —, 504; Restrictions of retarded —.....	204	Determination of sex.....	331		
Constipation (also <i>Bowel obstruction</i> ) for two weeks.....	125	Dhobie itch.....	264		
Contagious diseases among school children.....	20	Diabetes and local anesthetics, 565; Bile salts for —, 45; Modified test for urine of —, <i>Diagnosis of chronic interstitial kidney</i> , 329; <i>Importance of ery — and treatment of Pott's disease</i> .....	25		
Convulsions (also <i>Eclampsia</i> ) Puerperal.....	380	Didelphys uterus.....	530		
Copper arsenite and — salts for tuberculosis.....	231, 229	Diet for epilepsy, 232; — for tuberculosis.....	220, 226		
Cordiformis, Uterus.....	530	<i>Digestive disorders in consumption, etc.</i> .....	322		
Cord, Hemorrhage from umbilical.....	376	Dilator of cervix in accouchement force.....	396		
Corneal opacities, Thiosinamin for.....	220	Dioleylecithin for tuberculosis.	226		
<i>Corneal pregnancy, Case.</i> .....	529	Dioscorides, the anatomist.....	244		
Corrosive sublimate, see <i>Mercury bichloride</i> .		Diphtheria antitoxin, 269; Doseage of —, 234; — and heart depression, 387; — and cerebro-spinal meningitis, 384; — and vaccination, 260; bacillus often not found in tracheal —, 65; Walking cases of — in schools.....	20		
Coughs, Antikamma for, 471; Chloroform for —, 483; Petroleum for —, 439; Treatment of winter —.....	381	Disinfection for hands, Sublimine, 398; Formaldehyde —, 62			
County medical societies.....	208, 291	Dislocation of cervical vertebra, 568; Congenital — of hip, 121; Congenital — of hips, shoulders, elbows, etc., 550; — of knee and tibia, 549; Lorenz method in — of hip, 567; Laminectomy for — of vertebra.....	354		
Cowpox and tuberculosis.....	219	Displacements of uterus, Treatment.....	569		
Coxa vara treatment.....	132	Dissection of human body, First.....	243		
Cramps, Ginger for.....	483	Doctor in America, First, 182; — in legislation, 311; Political power of —, 293; Origin of title of —, 264; Envy, etc., of —.....	292		
Creosal and Creosotal for tuberculosis.....	221	Doctors annually graduated, 263; — in U. S., 430; — in Virginia.....	291		
Creosote intestinal antiseptic in typhoid, 4; — for tuberculosis.....	542, 220	Dog, Mediastinum of, 544; Injured lung of — gets well, 544; Blood serum of — for tuberculosis.....	219		
<i>Cretenism, Case and treatment</i> .....	388	Dogwood for tuberculosis.....	229		
Criminal responsibility of epileptic, 356; Provision for — insane.....	457	<i>Drainage after abdominal section</i> , 42, 361; <i>Dependent — in intra-pelvic and intra-peritoneal infection in men, etc.</i> , 299; Advantages — of bladder Dressings of wounds, Red.....	126		
Croton oil for tuberculosis.....	230	Drosera for tuberculosis.....	229		
Croton oil for urinalysis.....	330				
<i>Curettement of uterus</i> , 366; — and septicemia.....	295				
Cyanide of gold, see <i>Gold cyanide</i> .					
Cystitis, Argroyl for, 303; Benzozol for —, 45; — may cause pyelitis, 13; Drainage of bladder for —, 327; Spermato —.....	372				
Cystocele, new operation for.....	409				
Cystoscope for uretero-catheterism.....	355				
Cystotomy for prostatic diseases.....	163				
Cystic ovary, Case.....	55, 56				
Cyctodiagnosis.....	496				
Cytologic examination.....	496				
<b>D</b> andelion for tuberculosis.....	229				
Deafness and mastoiditis.....	8				
Deaver's gastro-enterostomy.....	557				
Debility, Prescription for senile.....	321				
Deformity corrected by paraffin					
				Ear, Purulent flow from, 7; Argroyl for — diseases, 302; Practical points about — diseases, 467; Anesthesia of — drum.....	521
				Echfol for scarlatina.....	246
				Eclampsia, Puerperal.....	280
				<i>Ectopic pregnancy, Management of rupture in</i> .....	271
				Eczema, Microscopic diagnosis of, 462; Notes on —, 145; X-ray for —, 422.....	539
				Education, medical, 213; — preliminary to study of medicine.....	192
				Elbows ancllosed, Congenital.....	550
				<i>Electricity as therapeutic agent</i> .....	435
				Electric peculiarities of Colorado climate.....	344
				Electrolysis for keloids.....	161
				Emphysema and tuberculosis.....	224
				Empyema, 545; — of antrum.....	303
				Endocarditis of aortic valve, Streptococic.....	65
				Enema, nutritive pancreatic.....	9
				English materia medica centuries ago, 127, 155; — surgery, 109	
				Enteric fever, see <i>Typhoid</i> .	
				Enteritis of consumption.....	324
				<i>Enterolith, Case, with specimen</i> .....	111
				Enterostomy, Gastro.....	553
				Envy among doctors.....	292
				Epilepsy centuries ago, treatment, 128; — related to eye muscle, 281; Treatment of —, 232	
				Epileptic colony, see <i>Colonies</i> ; Responsibility of criminal —, 356; Separate — from insane, 407	
				Ephyphsis of tibia destroyed.....	132
				Epithelioma (also <i>Cancer</i> ), X-ray for —.....	254, 422, 532, 539
				Equino-valgus and varus.....	550
				Erasistrus early anatomist.....	243
				<i>Ertich's triple stain new formula</i> , 438; — myelocytes.....	541
				Erysipelas, Argroyl for, 304; Antistreptococic serum for —, 414, 415, 416; — of puerperal perineum, 78; — and tuberculosis.....	219
				Essential oils inhibit growth of tubercle bacillus.....	218
				Ethics, see <i>Code of Ethics</i> .	
				Ethylene diamine citrate of mercury, see <i>Sublimine</i> .	
				Eucaïn-Beta, local and dental anesthetic.....	570
				Eucalyptus for tuberculosis, 223, 224	
				Euscasin for tuberculosis.....	227
				Examining Board of Virginia, see <i>Society, Board Proceedings, etc.</i> ; — boards for stu-	

- dents, 173; Reciprocity between — boards ..... 293  
 Exercise for tuberculosis ..... 225  
 Exophthalmic goitre, operable... 277  
 Exposition, Charleston ..... 48  
 Extract, bronchial glands, for tuberculosis, 219; — suprarenal gland for hay fever... 274  
 Extra uterine pregnancy, see *Ectopic*.  
 Eye and ear diseases (also *ophthalmology*), *Practical points About*, 467; Argylol for — diseases, 302; Water drinking for — diseases, 162; — muscles and epilepsy, 281; — strain and glasses, 465; Magnet to remove foreign bodies from —, 567; Rabbits — inserted in capsule of Tenon... 85  
 Eyelid cancer, X-ray for ..... 75
- F**  
 Facial paralysis and mastoiditis ..... 8  
 Fashion affects female health... 316  
 Fats distasteful to consumptives (Feeding (also *Diet*) by rectum, 9; Too soon — of typhoid patients ..... 4  
 Femoral osteotomy, Gant's ..... 374  
 Femur fracture, new treatment. 18  
 Ferro-somatose, therapeutics .. 57  
 Fever, Hay, see *Hay* —; Scarlet —, see *Scarlatina*; Typhoid —, see *Typhoid fever*; Yellow —, see *Yellow fever*; Puerperal — from surgical standpoint, 77; Septi — ..... 55  
 Fibroids of uterus and broad ligaments, 75; Case of — of uterus, 56; Hysterectomy for — of uterus ..... 55  
 Finson's red light for variola... 126  
 Fistula, urinary, after vaginal hysterectomy ..... 297  
 Foetus 4 months old born at 8th month ..... 380  
 Food laws, Pure ..... 416  
 Foot deformity, Lorenz method. 433  
 Foreign body in eye, Magnet to remove, 567; — body in lungs. 546  
 Formaldehyde disinfection .... 62  
 Formalin for septicemia ..... 563, 564, 565  
 Fowler's gastro-enterostomy, 557; — method of abdominal drainage ..... 43  
 Fractured femur, *Suggestions in treatment of*, 18; Laminectomy for — vertebra, 354; — vertebral column (also *Kyphosis*), 133; New method of setting — knee cap ..... 379  
 Fraudulent diplomas ..... 502  
 Fruit for tuberculosis, 226; Moth-catcher to protect —, 71  
 Fuschin inhibits growth of tubercle bacillus ..... 215
- G**  
 Galen as anatomist ..... 214  
 Gall-bladder and duodenal fistula, 52; Pancreatic enema for —, 9; — removed by lumbar incision, 278; Typhoid bacilli in —, ..... 4  
 Gallstone colic, treatment, 484; — entering duodenum ..... 112  
 Galvano-cautery for prostatic obstruction ..... 153  
 Gangrene of lungs, Pneumonotomy for ..... 509  
 Gant's obstetric dilator ..... 396  
 Gant's femoral osteotomy ..... 374  
 Garlic oil for tuberculosis ..... 223  
*Gastroctomy, Two cases* ..... 339  
 Gastric (also *Stomach*) cancer case, 51; Gastroctomy for — cancer, 339; Pancreatic enema for — cancer, hemorrhage, ulcer, 9; Diagnosis of —, 253  
 Gastritis, Chronic catarrh, 324; Pancreatic enema for chronic —, 9; Diagnosis and treatment of —, ..... 67  
*Gastro-enterostomy* ..... 553  
 Gastro-intestinal diseases, Somatose for ..... 57  
 Gastroptosis ..... 558  
 Gavage for tuberculosis ..... 226  
 Gelsemium for tuberculosis ..... 229  
 Geutian violet inhibits growth of tubercle bacillus ..... 218  
 Geosote for tuberculosis ..... 222  
 German surgery ..... 110  
 Ginger for cramps ..... 483  
 Gland disease, Ferro-somatose for, 59; Bronchial — extract. 219  
 Glasses, *Indications for wearing* 464  
 Glaucoma discussed ..... 82  
 Glycerin for tuberculosis, 227; Gray's — tonic ..... 277  
 Glycerinized vaccine glass points ..... 120  
 Glycogen due to bile salts ..... 44  
 Glycosuria, Bile salts for ..... 45  
 Goat serum for tuberculosis ..... 219  
 Goitre (also *Thyroid gland*), 277; X-ray for — ..... 422  
 Gold and hydrocyanic acid inhibit growth of tubercle bacillus, 218; — chloride for alcoholic insanity, 108; — cyanide for tuberculosis ..... 225  
 Gonacril for tuberculosis ..... 223  
*Gonococcal auto-reinfections from seminal vesicles*, 369; — reinfection of urethra, 247; — puerperal infection ..... 79  
 Gonorrhoea (also *Urethritis*), Argylol for, 303; Differentiation of — and vesicular auto-reinfection, 371; Acetozone for — in female, 521; Irrigation treatment of —, 134; Relapse of —, 247; Differentiation of — ..... 248  
*Gonorrhoeal rheumatism*, 5; Argylol for — ophthalmia ..... 302  
*Gout, Causes and treatment*, 517; — of kidney, 329; — and tuberculosis ..... 220  
 Governor of Virginia, Doctor for ..... 294  
 Graduates, medical, annual number, 263; Too many ..... 169  
 Grafting skin in blood, 204; Wound for skin cancer —, 49
- Granny, Danger of ..... 420, 431  
 Grapes for tuberculosis, 226; Moth-catcher to protect —, 71  
 Gravel and tuberculosis ..... 220  
 Graves' disease ..... 549  
 Gray's glycerin tonic ..... 277  
 Grippe (also *Influenza*) and cold, 28; — and mastoiditis... 8  
 Guaiacol benzoate, uses of, 45; — carbonate for tuberculosis, 542; — for tuberculosis, 221, 222; — for tubercular peritonitis ..... 123  
 Gualaperol for tuberculosis ..... 222  
 Gualaquin for tuberculosis ..... 222  
 Guethol for tuberculosis ..... 222  
 Gude's pepto-mangan ..... 187  
 Gunpowder stains, Removal of  
 Gunshot wound (also *Wound*) of lung ..... 545
- H**  
 Hair in sinuses about coccyx, 68; — restoratives ..... 150  
*Hay fever*, 272; adrenalin for —, 279; Argylol for —, ..... 303  
 Headache and its treatment, 410; — and eye strain, 465; Caffein citrate for —, ..... 15  
 Health, Fashions injurious to, 316; — reports, 477; — of soldiers in Philippines ..... 264  
 Heart (also *Auricle*) depression after use of diphtheria antitoxin, 387; — dilatation and grippe, 29; — disease and interstitial kidney, 424; — disease and tuberculosis, 224; Anodynes for — insufficiency, 483; — surgery, 266, 511; Coca — tonic ..... 400  
 Heat for ivy itching ..... 246  
 Heinen for tuberculosis ..... 250  
 Hemaboloids, arseniated ..... 442  
 Hemaglobinuria, malarial, treatment ..... 252  
 Hematocele and ectopic pregnancy ..... 271  
 Hematuria, Case of, 135; Unilateral renal —, 280; — in pyelonephritis ..... 14  
 Hemicranin for headache ..... 441  
 Henlock, water, for tuberculosis ..... 229  
 Hemorrhage from umbilicus days after labor, 376; — Secondary to tonsillotomy, 518; Adrenalin for —, 547; surgery for — from stomach (also *Gastric*), 554; Uterine — due to fibroids ..... 76  
 Hemorrhoids, internal, treated without knife ..... 124  
 Hemostatic, supra-renal extract is best ..... 318  
 Hemothorax ..... 545  
 Hepatic, see *Liver*.  
 Herbs of Kansas, Medicinal, 355; — Robert for tuberculosis ..... 225  
 Hernia, external, caused bowel obstruction, 101; — of lung, 509, 545; Case of omiental —, 57  
 Herophilus early anatomist... 243



Hiccough, Case of persistent, 561, 564

Hip dislocated congenitally, 550, 131; — deformities, Lorenz method, 567; A — rest, 551; Gant's osteotomy for — disease, 374

Historic medicine, 127, 155

History of Medical Society of Tennessee, 30; — of insane in North America, etc., 179, Medical — of States, 48

Hoffman's extract of bronchial glands for tuberculosis, 219

Horse serum for tuberculosis, 219; — shoe kidney from infant, 66

Hospital accommodations for insane, 407; Central (Va.) —, 408, 573; Chimborazo —, 575; — appropriations, 22; — commissioner, 473; — for inebriates, 306; — for tubercular cases, 334; — salaries, 22

Hulle de Gabian for tuberculosis, 229

Humanity in care of prisoners, 22

Human tuberculosis due to bovine, 274

Humerus congenitally short, 568

Hydrocele, Tongaline for, 86

Hydrocyanic acid inhibits tubercle bacillus, 218

Hydronephrosis, Causes and treatment, 486; — cause of pyelonephritis, 13

Hydrophobia in Michigan, 473

Hydrozone in ear disease, 522; — to remove gunpowder stains, 18

Hygiami for tuberculosis, 226

Hygiene of epilepsy, 232; Value of —, 484

Hypnotic Somnos, 118

Hypophosphites for tuberculosis, 227

Hysteria, Ferro-somatose for, 58

Hysterectomy, German method, 111; — for fibro myoma of uterus, 55; Case of vaginal —, 53; Urinary fistula after vaginal —, 297

Hystero-asthma cured by stramonium, 514

Ichthialbin and ichthyol for tuberculosis, 223

Idiocy and cretinism, 389; — and intemperance, 361

Illinois definition of practice, 21

Immunity of grippe due to vaccination, 29

Impaction, Bowel, 101

Impotence due to seminal pollutions, 351

Incisions, New method to close abdominal, 559

Inebriety, Public care and treatment of, 306; Amount of —, 105

Infection auto, 90; Dependent drainage for pelvic and peritoneal —, 299

Influenza (also Grippe), Re-

marks on, 28; Antikannia for —, 471; Sociologic relations of —, 332

Inguinal colotomy, Keen's method, 547

Insane, Provision for criminal, 457; Accommodations in hospitals for —, 407; History of — in North America, 179; Salaries of — hospital superintendent, 22

Insanity, alcoholic, 105, 107; Sympathetic — in twin sisters, 1

Insomnia, Passiflora for, 438; Somnos for —, 118; to relieve —, 482

Inspection, medical, of school children, 20

Insurance and albuminuria, 387

Intemperance (also Inebriety) alcoholic, 574

Intention, primary, union by, 73

Interstitial kidney (also Kidney), and arterio-sclerosis, 424; Diagnosis of — nephritis, 329; suppurative — kidney, 15

Intestinal (also Bowel, Duodenum, etc.) obstruction deceptive in symptomatology and unique in cause, 468; — antiseptis in typhoid fever, 4; Somatose for — diseases, 57; — grippe, 29; — obstruction, 101; Pancreatic enema for — obstruction, 9

Intoxication, auto, 90

Intussusception, causes and treatment, 101, 103

Inunctions for tuberculosis, 230

Iodine for tuberculosis, 230, 231

Iodipin for tuberculosis, 231

Iodoform for intestinal antiseptis in typhoid, 4; — for tuberculosis, 123, 229

Iron for anemia and chlorosis, 184; Permanganate —, 187

Irrigation treatment of gonorrhoea, 134

Itch (also Pruritus), Dhoobie, 264; Heat for Ivy —, 246

Ivy itching, Heat for, 246

Jails, humanity in, 22

Jamestown weed, see Stramonium.

Jaunica, Yellow fever in, 24

Jaundice due to cancer of gall duct, 52

Jealousy among doctors, 292

Joints, see Ankle, hip, shoulders, etc.

Journalistic, etc.

American Gynecology, 212

Boston Medical and Surgical Journal, 574

Georgia Journal of Medicine and Surgery, 51

Journal of Advanced Therapeutics, 284

Old Dominion Journal, 412

Quarterly Journal of Inebriety, 476

The Bulletin, 476

Kansas medical herbs, 355

Keen's inguinal colotomy, 547

Keloids, Causes and treatment, 160; X-ray for —, 422

Kerosene prophylactic for malaria, 164

Kidney (also Renal; also Nephritis; also Nephro-ureterectomy), calculi but no renal tissue, 66; Movable — not always operable, 558; — diet for tuberculosis, 220; Diagnosis of chronic — diseases, 329; Distended —, 486; Enteroolith mistaken for floating —, 111; Horseshoe — in infant, 66; Interstitial —, 266; Suppurative interstitial —, 13; Interstitial — and arterio sclerosis, 424; — of interstitial nephritis, 329; — troubles and grippe, 20

King's evil, Ancient treatment of, 156

Knee-cap, Original method of setting fracture of, 370

Knee contraction, Lorenz method for, 443; — snapping and subluxated, 549

Koch's non-transmission theory of bovine and human tuberculosis disproved, 212

Kronlein's operation of orbitotomy modified, 86

Kyphosis (also Spondylitis), 133

Labor after complete nephro-ureterectomy, 418; Dangers of granny in —, 420, 431; Dilatation of cervix induces —, 396; Quinine expedites —, 117; Trauma of pelvic tract after —, 281

Laceration of perineum, rectocele, cystocele, etc., New operation for, 403

Lagrippe, puerperal infection, 80

Laminectomy for fractures, etc., of vertebra, 374

Laparotomy (also Abdominal section), drainage after, 42, 364; Pancreatic rectal feeding after —, 9

Laryngeal diphtheria, antitoxin in large doses for, 234

Laryngitis, Argylol for, 303

Larynx, Primary sarcoma of, 391

Lavage for tubercular dyspepsia, 326

Laws (see Legislation) on medical practice, 240, 261, 290

Laxative, Abbott's saline, 369

Legislation (also Laics) about pure food, 316; — on osteopathy, vaccination, vivisection, etc., 268; Doctor in —, 311; Alabama medical —, 476; South Carolina —, 478; Medical Society Va., Committee on —, 336

Lens luxated, 84

Leukemia, Clinic on (also Pseudo-leukemia), 540

Licensing boards (also Boards, etc.), Reciprocity between, 293

Liebreich's cantharidal solution, 220

Life Insurance and albuminuria, 387

- Ligament, broad, see *Broad ligament*.
- Ligation of common carotids for scalp aneurism ..... 505
- Light in treatment of lung tuberculosis ..... 158
- Ligno-sulphite for tuberculosis ..... 225
- Limestone cave air for lung diseases ..... 332
- Lime workers and tuberculosis ..... 224
- Liver cancer, Case ..... 50
- Liver (also *Hepatic*) cancer case, 51; — diet for tuberculosis, 220; Pancreatic enema after operations on —, 9; — Secretions (also *Oraiono therapy*) for — diseases ..... 44
- Locations in Virginia for doctors ..... 573
- Locomotor ataxia detected early by examination of eyes, etc., 97; Arc light bath for —, 158; X-ray for —, ..... 422
- London, Medical study in ..... 109
- Longevity, American ..... 38
- Long's statue, Dr. Crawford W., 261, 311
- Lorenz method in hip cases, etc., 131, 132, 567, 549; Reception to Dr. —, ..... 443
- Rocke's gastro-enterostomy ..... 555
- Umbilical incision to remove gall-bladder ..... 278
- Lung diseases, Colorado for, 344; Limestone cave air for —, 332; Surgery of penetrating wound of —, 508; Injuries of —, 544; Hernia of —, 545; X-ray to locate foreign bodies in —, 546; Gangrene of — ..... 509
- Lungwort for tuberculosis ..... 229
- Lupus and cancer, 539; Thiostamin for —, 220; X-ray for —, ..... 421, 506
- Luray Cave for lung diseases ..... 332
- Luxation (also *Dislocation*) of lens ..... 84
- Lymphoma of lungs, Pneumotomy for ..... 509
- Lysol ..... 218
- M**
- Macrotin for tuberculosis ..... 229
- Magnet to remove foreign bodies from eye ..... 567
- Malaria and pregnancy, 115; — and mosquito, 164, 452; Large dose of quinia for —, 125; Treatment of hemoglobinuria of —, ..... 252
- Malt for tuberculosis ..... 227
- Mammillations stomach in tuberculosis ..... 324
- Mandell's solution for tuberculosis ..... 231
- Mania, Narco (also *Inebriety, Insanity, etc.*), 152; Sympathetic — in sisters ..... 119
- Manila, Cholera in ..... 119
- Massage for tuberculosis ..... 225
- Vasodilators. Cases illustrating standpoints for determining early operations, 7; — and grippe ..... 29
- Matas' treatment of aneurism ..... 233
- Materia Medica of English centuries ago ..... 127, 155
- Maypop, see *Passiflora*.
- McGinre's statue, Dr. Hunter, 430, 475
- Measles conducive to secondary hemorrhage ..... 318
- Meat juice, Valentine's ..... 261
- Mediastinum of dog ..... 544
- Medical and surgical studies in London and Berlin, 109; — Infection of school children, 20; — Societies in Virginia, 573; Requirements of — education, 213; — herbs of Kansas, 355; — history of States, 48, Benefits of — organizations, 289; — practice laws, 240, 261; What is — practice? 358; History of — Society of Tennessee ..... 30
- Medicine. How regulate study of, 169; Some phases of modern —, 268; Historic —, 127, 155; Preventive —, ..... 484
- Medico-psychological association, History of American ..... 179
- Meningitis, Cerebro-spinal, and diptheria, 384; Antistreptococci serum for cerebro-spinal ..... 417
- Menorrhagia due to uterine fibroids, 56; — in unmarried ..... 276
- Menstrual disorders in unmarried ..... 276
- Menthol for tuberculosis ..... 222, 231
- Mercury in syphilis, mechanics of, 511; Sublimed versus — bichloride, 425; Ethylenediamine — citrate, see *Sublimine*; Vapors of — inhibit growth of tubercle bacillus, 218; Cataphoresis of — for metritis ..... 164
- Mesenteric, Volvulus with torsion of ..... 304
- Methylene-blue for malaria, 117; — for tuberculosis, 231; — inhibits growth of tubercle bacillus, 218; — to test renal permeability ..... 330
- Methyl alcohol for tuberculosis ..... 228
- Metric system ..... 263
- Metrorrhagia of uterine fibroids ..... 56
- Metritis, Cataphoresis for ..... 164
- Michigan, Hydrophobia in ..... 473
- Microbe of cholera infantum, Probable ..... 263
- Microscope in diagnosis of skin diseases ..... 461
- Midwife, Dangers of ordinary, 420, 431
- Milk diet for tuberculosis, 226; — ptomain poisoning ..... 241
- Mineral springs of Colorado ..... 345
- Mitral regurgitation treatment, 67
- Modified method for testing diabetic urine ..... 87
- Morbid processes and sanitary measures ..... 481
- Morphia, Dangers of indiscriminate use of ..... 152
- Mortality from pneumonia ..... 377
- Mosquito, malaria, yellow fever, etc. .... 164, 450
- Moth-catcher to protect grapes, sweet corn, etc. .... 71
- Mountain climate of Colorado ..... 346
- Mouth, Care of, in tuberculosis ..... 228
- Muller's ducts ..... 530
- Myelocytes, Ehrlich's ..... 541
- Myomatous fibroid of uterus ..... 55
- Myosaroma of bladder ..... 45
- Myrrholin for tuberculosis ..... 221
- Myrtol inhalations for tuberculosis ..... 222
- Myxedema and thyroid ..... 519
- N**
- Naphtha for tuberculosis ..... 228
- Naphthalin intestinal antiseptic in typhoid ..... 4
- Naphthol, Beta, — for tuberculosis ..... 218
- Narcomanias ..... 152
- Nasal (also *Nose*) trouble and grippe ..... 25
- Navy and army changes ..... 473
- Necrosis of tibia after typhoid fever ..... 248
- Needle swallowed cut from bladder ..... 113
- Negro predisposed to keloids ..... 160
- Nephritis, Some phases of chronic, 265; Benzozol for acute —, 46; — cause of typhoid, 277; Pyo —, see *Pyonephritis*; Diagnosis of chronic interstitial —, 329; Interstitial — and arteriosclerosis ..... 424
- Nephropexy, Indications for ..... 126
- Nephropneumosis, Indications and technique of operations for ..... 126
- Nephro-ureterectomy, Labor after complete ..... 418
- Nervous dyspepsia, Ferro-somatosose for, 58; — grippe, 28; Influence of typhoid fever on — system ..... 176
- Nervousness, Passiflora for ..... 438
- Neuralgia, 63; Cocain for —, ..... 183
- Nenrasthenia and grippe, 29; Coca for —, 409; Resemblance of nitrate regurgitation and —, 68; So-called — after gastritis ..... 67
- Neuritis, rheumatic, or tabes dorsalis? ..... 364
- New York, Christian science in ..... 405
- Nitrogen monoxide for tuberculosis ..... 230
- North America, History of insane in ..... 179
- North Carolina, law about nurses ..... 479
- Nose (also *Nasal*) diseases, Argryol for, 502; Paraffin subcutaneously to correct — deformities ..... 177, 342
- Nuclein solution for septic fever, 55; — for tuberculosis, 219
- Nurses, North Carolina law about trained ..... 479

**Obituaries, etc.**

Amis, Dr. John B. . . . . 480  
 Anderson, Dr. Lineas B. . . . . 432  
 Charles, Dr. Joseph . . . . . 432  
 Conway, Dr. C. C. . . . . 528, 576  
 Davis, Dr. Wm. E. B. . . . . 528  
 Horner, Dr. Frederick . . . . . 144  
 LeCato, Dr. George W. . . . . 576  
 Reed, Dr. Walter . . . . . 450  
 Strickler, Dr. Charles M. . . . . 384  
 Virchow, Prof. Rudolf. . . . . 264  
 Wheat, Dr. Lewis P. . . . . 456, 480, 504

**Obsessions**

Obsessive palsy, 567; — preparation . . . . . 81

**Obstruction of bowel, Acute, 101; — — (also Intestinal) symptoms, etc.** . . . . . 168

**Oesophageal paralysis, etc., Pancreatic enema for** . . . . . 9

Ohio medical examination laws . . . . . 171

Oils, essential, inhibit growth of tubercle bacilli . . . . . 218

Old man's skin . . . . . 390

Omental cancer, Gastrectomy for, 339; Case of — hernia. . . . . 57

Opacities of cornea, Thiosinamin for . . . . . 220

Ophthalmia neonatorum, Argpyrol for . . . . . 302

Ophthalmological subjects . . . . . 82

Opium (also *Morphia, etc.*) habit . . . . . 315

Orbitotomy, Kronlein's modified . . . . . 86

**Organization of medical profession, Benefits, 289; New — of Amer. Med. Assn., 94; Power of —** . . . . . 37

Organo-therapy of liver diseases, 44; — — of tuberculosis . . . . . 219

Orthopedy of Lorenz . . . . . 443

Osteoma of lungs, Pneumotomy for . . . . . 509

Osteopathy and medical practice, 359; — in Virginia, 477, 524; — and legislation, 268; Needed legislation about — . . . . . 292

Osteotomy, Gant's femoral. . . . . 374

Otitis and grippe, 29; Argpyrol for — . . . . . 303

Ox-gall for biliary calculi. . . . . 113

Oxygen for tuberculosis. . . . . 225

Ovarian cyst, Case . . . . . 55, 56

Oyuntment of Paracelsus, Starry, 129, 155

Ozone for tuberculosis . . . . . 225

**P**

Palladium chloride for tuberculosis . . . . . 229

Palsy, obstetric . . . . . 567

Pancreatic emulsion for tuberculosis, 226; — enema nutritious . . . . . 9

Paranoid, Alcoholic . . . . . 106

Paracelsus, Starry oyuntment of, . . . . . 129, 155

**Paraffin subcutaneously to correct deformities, 242; — in injections to straighten noses.** . . . . 177

Paralysis (also *Facial paralysis*), general, 106; Treatment of infantile — . . . . . 134

Paratoludin for tuberculosis. . . . . 248

Paratyphoid . . . . . 164

Paresis, Alcoholic . . . . . 106

Passiflora or Passion flower for nervousness, etc. . . . . 438

Patella (also *Knee-cap*), New way of setting fractured. . . . . 379

Pathology of blood . . . . . 155

Pay of physicians to poor. . . . . 502

Peanut oil for tuberculosis. . . . . 223

Pelvic diseases in unmarried, 276; Dependent drainage for — infection in men, 299; — peritonitis, 79; Trauma of — tract after labor . . . . . 281

Penis, case of cancer of. . . . . 54

Penitentiaries, Humanity in. . . . . 22

Pennyroyal poisoning . . . . . 319

Peppermint essence for tuberculosis . . . . . 222

Pepto-mangan . . . . . 187

Peptonized beef and salt solution for rectal feeding . . . . . 10

Perineal cystotomy, Cases, 163; — drainage for peritonal infection, 299; — erysipelas, 78; — urethrectomy for chronic urthritis, 505; New operation for — laceration. . . . . 409

Peritonal infection in man, Dependent drainage for, 299; — tuberculosis in women, 280; Power of — absorption. . . . . 42

Peritonitis, Pancreatic enema for, 9; Pelvic —, 79; Tubercular — . . . . . 294

Pernicious anemia, Treatment. . . . . 183

**Personals, etc.**

Antigia Chemical Co. . . . . 96

Baker, Dr. Julian M. . . . . 574

Crothers, Dr. Thos. D. . . . . 477

Fitch, Dr. W. E. . . . . 71

Garnou, Dr. L. H. . . . . 408

Garnault, Dr. Paul . . . . . 212

Gildersleeve, Dr. J. R. . . . . 168, 261

Harrison, Dr. George Tucker . . . . . 160

Hoge, Jr., Dr. M. D. . . . . 129

Laidley, Dr. Leonidas H. . . . . 72

LeCato, Dr. George W. . . . . 360, 455, 476

Long, Dr. Crawford W. . . . . 167, 261, 311

Lorenz, Dr. Adolf . . . . . 456

Lydston, Dr. G. Frank . . . . . 408

McAire, Dr. Hunter . . . . . 430, 475

Martin, Dr. R. W. . . . . 294

Newton, Dr. McGuire . . . . . 468

Ostler, Dr. William . . . . . 526

Parker, Dr. Wm. H. . . . . 435

Pfizer, Dr. Joseph . . . . . 212

Reed, Dr. Walter . . . . . 450

Ricketts, Dr. Edwin . . . . . 144

Sharp & Dobme . . . . . 383, 573

Waltton, Dr. J. C. . . . . 504

White, Dr. Joseph A. . . . . 168, 261

Wiley, Dr. George E. . . . . 408

Phloridzin to estimate renal function . . . . . 330

Phosphate calcium calculi analysis . . . . . 67

Phosphergot for tuberculosis. . . . . 228

Phospho-albumin for tuberculosis . . . . . 226

Phosphorus for tuberculosis. . . . . 227

Phototherapy of variola. . . . . 126

Phycomelia . . . . . 568

Physicians to poor, Pay of, 502; — wanting locations in Virginia . . . . . 572

Picric acid solution for burns, etc. . . . . 12

Pilo-nodal sinuses often contain hair . . . . . 68

Pimpriple scarlet for tuberculosis . . . . . 229

Piperidine guaiacolate for tuberculosis . . . . . 222

Piscidia for tuberculosis. . . . . 229

Pistol, Toy . . . . . 455

Titling of variola prevented by red light . . . . . 126

Plaster-of-paris treatment of fractured femur, 19; — — jacket for spondylitis . . . . . 28

Placenta absent at birth of premature fetus, 380; Two — but one membrane . . . . . 380

*Plea for mothers and their offspring* . . . . . 420, 431

Pleurisy, tubercular, septic, 498, 499; — root for tuberculosis. . . . . 229

Pneumonectomy . . . . . 509

**Pneumonia, Present mortality from, 377; Case of afebrile —, 114; — and grippe, 29; — frequent after gastric surgery, 558; Benzozol for —, 45, 46; Prevalence of —, 404; — of tuberculosis, 542; Septic —** . . . . . 546

Pneumotomy . . . . . 508

Pneumoplexy and pneumorrhaphy . . . . . 510

Pneumothorax . . . . . 545

**Poisoning, pennyroyal, 319; Coca cola —, 154; wholesale — from ptomain of milk** . . . . . 241

Political power of doctors . . . . . 293

Pollutions, seminal, and spermatorrhea . . . . . 319

Poor, Pay of physicians to. . . . . 502

Population increase in U. S. . . . . 180

Post-partum convulsions, see *Puerperal*.

Potassium chlorate anti-abortifacient, 118; — — for tuberculosis, 229; — sulphocyanate for tuberculosis, 229; — iodide for gonorrhoeal arthritis . . . . . 6

Potts' disease (also *Spondylitis*), Early diagnosis and treatment . . . . . 25

Powder stains removed by hydrozone . . . . . 18

Practice laws of States, 290; — — of South Carolina, 478; — What is — of medicine? . . . . . 358

Practitioners of medicine in U. S., 430; — tax ought to be removed . . . . . 385

- Proceptors before matriculation. 170
- Pregnancy (also *Ectopic*; also *Tubal*) and labor after complete nephro-ureterectomy, 418; Cornual —, 529; Extra uterine —, 529; — and malaria, 115; Tubal — diagnosed before rupture . . . . . 251
- Preventive medicine . . . . . 484
- Prisapium, *Unique case* . . . . . 437
- Primary intention, Union by . . . . . 73
- Prisoners, Be humane to . . . . . 22
- Prize for cure of tuberculosis . . . . . 504
- Proctitis, treatment . . . . . 251
- Progress made in surgery about region of appendix* . . . . . 15
- Prostate enlarged, Bladder drainage for . . . . . 327
- Prostatic auto-infections, 371; — gonococci reinfect urethra, 247; Bottini's operation for — obstruction . . . . . 153
- Prostatitis, Guaiacol benzoate for . . . . . 16
- Protargol for septicemia . . . . . 563
- Prunus Virginiana for tuberculosis . . . . . 229
- Pseudo-leukemia, Treatment, 57; Alcoholic — paresis . . . . . 106
- Psoriasis, Microscopic diagnosis of, 462; Notes on —, 150; X-ray for — . . . . . 539
- Psychological Association of America, History of . . . . . 179
- Psychoses, Alcoholic . . . . . 105
- Putomains in buttermilk*, 276; — of milk poisoning . . . . . 241
- Puerperal appendicitis*, 367; Forms of — fevers, 77, 96; Veratrum for — convulsions, 380; Case of — septicemia, 563; Calcium sulphide for — fever . . . . . 130
- Pulmonaria officinale for tuberculosis . . . . . 229
- Pulmonary (also *Lung*) grippé, 28; Light experiments in — tuberculosis . . . . . 158
- Pyelo-nephritis, Acute* . . . . . 13
- Pylorus cancer of, Case, 51; Gastro-enterostomy for obstructed — . . . . . 553
- Pylorectomy, Cases for . . . . . 554
- Pyo-nephritis and calculi . . . . . 66
- Pyoktannin for tuberculosis . . . . . 231
- Pyrocin for tuberculosis . . . . . 222
- Pyuria in pyelo-nephritis . . . . . 13
- Q**
- Quaillaia for tuberculosis . . . . . 229
- Quinia, Large doses*, 125; — for hemoglobinuria, 252; — causes abortion, 116, 118; — in labor . . . . . 117
- Quinolinol . . . . . 70, 278, 474
- Quinolol for tuberculosis . . . . . 223
- R**
- Rabbit's eye inserted in capsule of tenon . . . . . 85
- Rádio-therapy (also *X-ray*), 421; — success for cancer . . . . . 75
- Rape, medical examinations for . . . . . 204
- Rattlesnake bite, Case of* . . . . . 515
- Reciprocity between State Boards . . . . . 293
- Recrudescence in typhoid fever. 3
- Rectal feeding*, 9; Case of — cancer, 52; To relieve — pain. 483
- Rectocele, New operation for . . . . . 409
- Rectum (also *Proctitis*), ulcers of . . . . . 251
- Red dressings to prevent suppuration in wounds*, 126; — granular, kidney . . . . . 329
- Recd. Dr. Walter, Biography of* . . . . . 450
- Regurgitation, Mitral . . . . . 67
- Reichman's disease . . . . . 555
- Relaps of typhoid fever* . . . . . 2
- Renal (also *Kidney, etc.*) calculi, but no kidney tissue, 66; — calculi cause pyelo-nephritis, 13; nephropexy for — diseases, 126; unilateral — hematuria . . . . . 280
- Responsibility of epileptic criminal . . . . . 356
- Retrodisplacement of uterus, 56, 57; Operation for — — — — — 320
- rheumatic neuritis or tabes dorsalis, which?* . . . . . 364
- Rheumatism (also *Arthritis*), acute, Antistreptococci serum for, 418; Gonorrheal —, 5; Sero-therapy and salicylates for — . . . . . 250
- Ribs fractured injure lung, 545; Post-typhoid affection of — . . . . . 399
- Rickets, Ancient treatment, 156; — and cretinism . . . . . 389
- Robert, Herb, for tuberculosis . . . . . 229
- Rockefeller's prize for consumption cure . . . . . 504
- Rodwax for tuberculosis . . . . . 229
- Röntgen ray, see *X-ray*.
- Rupture of pregnant tube . . . . . 251
- S**
- Saddle-back nose, New operation for correction*, 177; Paraffin subcutaneously to correct — nose . . . . . 342
- Salaries of insane hospital superintendents . . . . . 22
- Saluts against disease . . . . . 157
- Salicylates (also *Soda salicylate*) for rheumatism . . . . . 250
- Saline laxative, Abbott's, 369; — transfusion for cholera . . . . . 193
- Salol, bowel antiseptic . . . . . 292
- Salt interferes with effect of bromides, 232; Normal — solution for cholera . . . . . 193
- Salve, Xeroform . . . . . 256
- Sanitary measures and morbid processes . . . . . 481
- Sanatoria for tuberculosis . . . . . 226
- Saunetto for male sterility . . . . . 276
- Santonin for epilepsy . . . . . 233
- Saprophytic puerperal infection . . . . . 78
- Sarcoma of larynx, Primary intrinsic*, 391; Myo — of bladder, 45, Gastrorectomy for — of stomach, 339; X-ray for — . . . . . 421
- Sayre's jacket for spondylitis . . . . . 28
- Scalds, burns, etc., Phenol solution for . . . . . 10
- Scalp, Circoid aneurism of . . . . . 505
- Scalping as done by Indians . . . . . 38
- Scapula congenitally elevated . . . . . 481
- Scarlatina, Germ of, 441; Echinol for — . . . . . 246
- School children, Medical inspection of, 20; Needed — reforms . . . . . 315
- Sciatica, Tongaline for . . . . . 74
- Sclerosis (also *Locomotor ataxia*), X-ray for, 422; Arterio — and interstitial kidney . . . . . 424
- Serotula, Ancient treatment of . . . . . 156
- Seaboard Air Line Railway . . . . . 524
- Seborrheic eczema of Unna . . . . . 146
- Secretions of liver for treatment of diseases of that organ* . . . . . 44
- Sedative, Soinnos . . . . . 118
- Semi-monthly bowel evacuations* . . . . . 125
- Seminal pollutions differentiated from spermatorrhea, 349; Gonococcal reinfection from — vesicles . . . . . 369
- Senile debility, Prescription for . . . . . 276, 321
- Septic conditions, antistreptococci serum for, 413; — fever after ovarian operation, 55; — thrombus in auricle, 66; — uterus, 529; — pneumonia . . . . . 546
- Septicemia and the curette*, 295; Case of puerperal —, 563; — due to lung injury . . . . . 546
- Serum, antistreptococci in septic conditions, 413; — therapy of rheumatism, 250; — therapy of tuberculosis . . . . . 218, 219
- Sesame oil for tuberculosis . . . . . 227
- Sex determination . . . . . 331
- Shoulder (also *Scapula*) congenitally dislocated . . . . . 550
- Silver and hydrocyanic acid inhibit tubercle bacillus, 218; — vitelline, see *Argyrol*; — innocuous for tuberculosis . . . . . 230
- Sinus about coccyx, Hair in . . . . . 68
- Skin diseases, Notes on same*, 145; Case of — cancer, 49; Microscope to diagnose — diseases, 461; — tuberculosis, see *Lupus*; — grafting in blood . . . . . 204
- Skull, Brachycephalic . . . . . 8
- Sleep, Value of . . . . . 482
- Small-pox (also Variola), Practical Management of*, 60; — in Antwerp and Brussels, 62; — Richmond, 454; Vaccination to prevent — . . . . . 316
- Snake bite, Rattle, 515; — root for tuberculosis . . . . . 229
- Snapping of knee . . . . . 549
- Soap bark for tuberculosis . . . . . 229
- Societies, County medical, 291; Local — in Virginia, 573; Local — . . . . . 206
- Societies, Boards, etc.
- American Association of Obstetricians and Gynecologists . . . . . 193
- American Association of Urologists . . . . . 24
- American Congress of Tuberculosis, 48, 144
- American Electro-Therapeutic Association . . . . . 264

American Medical Association, 71, 72, 94, 137, 264, 526.....	575	State hospitals, Commissioner of, 473; — laws on practice of medicine.....	240, 261	Symphytum officinale for tuberculosis.....	229
American Proctologic Society.....	167	States, medical history of.....	48	Syphilis, mechanism of mercury in, 511; Microscopic diagnosis of — of skin, 464; Notes on — of skin.....	148
Association of Medical Officers of Army and Navy of the Confederacy.....	23	Statute of Crawford W. Long, 261, 311; — of Hunter McGuire.....	475	Syphiloderm of cancer.....	538
Association of Surgeons of the Southern Railway Co.....	163	Sterility in male and female, 257, 276. Vaginal section for —.....	235	T	
Baltimore Medical and Surgical Association.....	54	Sterilization of catheters.....	257	Tables (also <i>Locomotor ataxia</i> ) dorsalis or rheumatic neuritis, which? 364; X-ray for.....	422
Church Hill Medical Society.....	70, 233	Stitch and method of closing abdominal and other deep incisions, New.....	559	Tachycardia and thyroïdism.....	549
Congress of American Physicians and Surgeons, 1903.....	407	Stomach (also <i>Gastric, etc.</i> ) (Gastro-enterostomy for diseased, 553; Ginger for — cramps, 483; — dilatation in consumption.....	223	Tanazol for tuberculosis.....	221
Illinois State Board of Health.....	212	Stramonium tincture for hysteria-asthma.....	511	Tapeworm, Chloroform for.....	424
Louisiana State Medical Society.....	544	Strangulation of bowel.....	101	Taraxacum for tuberculosis.....	229
Medical and Surgical Society of District of Columbia.....	336	Streptococic aortic valve disease, 65; — infection of tuberculosis and typhoid resemble, 65, 66; — puerperal.....	78	Tar for tuberculosis.....	230
Medical Examining Board of Virginia, 72, 96, 143, 166, 168, 196, 408, 429, 478, 491.....	23	Strychnia nitrate for alcoholic insanity.....	108	Tax on doctors, Remove.....	335
Medical Society of Missouri Valley.....	23	Students, medical, examination of, before matriculation.....	170	Temperance (also <i>Inebriety</i> ).....	314
Medical Society of Virginia, 167, 206, 229, 262, 287.....	575	Study of medicine, Education requisite for.....	192	Tennessee Medical Society, History of.....	30
Medical Society of State of West Virginia.....	23	Styralcol for tuberculosis.....	221	Tenon's capsule, Rabbit's eye inserted in.....	85
Mississippi Valley Medical Association, 72, 360.....	360	Sublimine as hand disinfectant, 398; — versus corrosive sublimate.....	425	Terpin inhalations for tuberculosis.....	222
New York Academy of Medicine, 443, 549.....	567	Substitutions of drugs, 282; — of pharmacists.....	168	Tetany and dilated stomach.....	555
Oregon Medical Society.....	360	Sue pulmonaire for tuberculosis.....	219	Thanatol and Thiocol for tuberculosis.....	222
Rappahannock (Va.) Valley Medical Association.....	432	Sulphide of calcium, see <i>Calcium sulphide</i> .....		Thiosinamin for tuberculosis, etc.....	220
Richmond Academy of Medicine and Surgery.....	430	Sulphur, Death from.....	247	Throat diseases, Argoyrol for, 302; — — and mastoiditis.....	7
Southern Surgical and Gynecological Association.....	360, 406, 429	Sulphur preparations for tuberculosis.....	225	Thrombus, septic, in auricle.....	66
Southwestern Virginia Medical Society, 429.....	429	Sundew for tuberculosis.....	229	Thyme for tuberculosis, 223, 231; Thymol for tuberculosis.....	223
Tazewell County Medical Society.....	212	Superintendents of asylums, Salaries of.....	22	Thyroid extract for cretinism, 389; Surgery of — gland, 277; — tumors.....	547
Tri-State Medical Association of the Carolinas and Virginia.....	403, 455, 503	Suppression of urine in malarial hemoglobinuria.....	252	Thyroïdism.....	549
Fri-State Medical Society of Alabama, Georgia and Tennessee.....	70	Suppuration of wounds, Red dressings to prevent.....	126	Thyroïditis due to nephritis.....	277
Virginia Conference of Charities and Corrections.....	454	Supra-public cystotomy, Cases, 163; — drainage for uremic conditions.....	327	Thymus gland extract for thyroïdism.....	549
Virginia Press Association.....	525	Suprarenal capsule for typhoid fever, etc., 46; — extract for hay fever, 274; — gland is hemostatic.....	318	Tibia, Lower epiphysis destroyed, 135; — necrosed after — fever, 348; Sbnluxated —.....	549
Society of Tennessee, History of medical.....	30	Surgery of heart, 266; — of penetrating wounds of lung and heart, 508; — in London and Berlin, 109; — of appendix, 15; — of wounds centuries ago.....	129	Tobacco heart.....	314
Soda salicylate for pyelonephritis.....	15	Surgical patients, General considerations of.....	282	Tongue cancer, Case of, 50; — of gastric ulcer.....	254
Sodique, Phenol, see <i>Phenol sodique</i> .....		Sweet corn, Moth-catcher to protect.....	71	Tongaine for hydrocele, 86; — for Sciatica.....	74
Sodium benzoate for tuberculosis.....	229	Sycosis, X-ray for.....	422	Tonsillitis and mastoiditis.....	7
Solanum carolinensis for epilepsy.....	233	Sympathetic insanity in twin sisters, 1; ointment of Paracelsus.....	129, 155	Tonsilotomy, Secondary hemorrhage due to.....	318
Soldiers in Philippines, Health of.....	264	Synechia anterior.....	84	Toothache, Ancient treatment of.....	153
Solutol.....	218			Tracheal diphtheria, Bacillus often not found in.....	65
Somatose for gastro-intestinal diseases.....	57			Trachoma, Argoyrol for.....	302
Somnolency and brain tumor.....	434			Transfusion for cholera, saline.....	193
Sonnous hypnotic and sedative.....	118			Traumatism of pelvic tract after labor.....	281
South Africa, Typhoid in.....	21			Treatment of typhoid fever with <i>Castor oil</i> , 337; Importance of early — of Pott's disease.....	25
South Carolina medical legislation.....	478			Trépaning for Scalping.....	35
Spermatic cystitis.....	372			Trianal, Toxic effect of.....	108
Spermatorrhea and Seminal pollutions, Differential diagnosis.....	349			Triplets aggregating 25 pounds.....	380
Spermin for tuberculosis.....	228			Tropacocain, dental anesthetic.....	571
Spinal disease, see <i>Spondylitis</i> ; also <i>Locomotor ataxia</i> ; Colon bacillus in — fluid, 496; — Injections of cocaine dangerous.....	566			Tropon for tuberculosis.....	226
Spline, Severe traumatism of.....	426			Tubal pregnancy diagnosed before rupture.....	251
Spleen enlarged in leukemia.....	541			Tubes of X-ray work.....	75
Spondylitis, Importance of early diagnosis of.....	25			Tubercle bacillus, Inhibitors of.....	218
Sputum of tuberculosis, Destroy, 217; Urotropin for bacillus typhosus in —.....	569			Tubercular peritonitis, 121; — pleurisies.....	498
Stabs of lungs.....	545				
Stains of powder, Removal of.....	18				
Staphylococcal puerperal infection.....	79				
Starry ointment of Paracelsus, 129, 155, 157.....					

- Tubercula for tuberculosis, 164.
- Tuberculosis, pulmonary, Early diagnosis*, 542; *Resume of — treatment*, 217; *Unity and intercommunicability of human and bovine —*, 274; *Diet and remedies for —*, 220; *Causes and prevention of —*, 313; *Limestone cave air for —*, 332; *Hospitals for —*, 334; *Colorado for —*, 344; *Peritoneal — in woman*, 280; *Spontaneous cure of —*, 218; *Frequency of —*, 217; *Bovine — transmissible to human beings*, 154, 212; *Restrictions for retarded —*, 204; *Experiments with light in —*, 158; — of skin, see *Lupus*; *American Congress of —*, 48; *Diagnosis of miliary — from typhoid and streptococcal infection*, 66; *Benzosol for —*, 45; — and *grippe*, 29; — and *spondylitis*, 25; — cause of *pyelo-nephritis*, 13
- Tuberculous ankle joint cured.* 551
- Tumor of brain, Few symptoms of*, 433; — of lungs, 509; *Thyroid —*, 547
- Turbines involved in hay fever* 274
- Turpentine inhalations for tuberculosis* 222
- Typhoid fever, influence on nervous system*, 176; *Comparison of — mortality in hospitals and private practice*, 62; — *cholera*, 194; — and *guaiacol*, 46; *Improved therapy of —*, 310; *Urotropin for — bacillus in urine, sputum, etc.*, 569; — in *South Africa*, 21; *Relapse in —*, 2; *Tibia necrosed of —*, 348; *Miliary tuberculosis and — streptococcal infection resemble*, 65, 66; — *poisoning*, 500; *Diagnosis of —*, 473; *Rib diseased after —*, 399; *Castor oil for —*, 337; *Differentiation of — and appendicitis* 399
- U  
*Ulcer of stomach, see Gastric ulcer*; *Treatment of — of rectum* 251
- Umbilical hemorrhage week after labor* 376
- Urnium uterus* 530
- Union by primary intection* 73
- Urea for tuberculosis* 220
- Uremic conditions, Bladder drainage for* 327
- Uterectomy, Nephro-, Labor after complete* 418
- Urethritis, Gonorrhoeal, and arthritis*, 5; *Urethrotomy for*
- chronic posterior —*, 505; *Posterior — due to reinfection*, 247
- Uretero-catherism, Purposes, etc., of* 355
- Urethronomy and drainage for chronic urethritis* 505
- Uric acid for tuberculosis* 220
- Urinalysis of chronic kidney diseases* 329
- Urinary fistula after vaginal hysterectomy*, 297; — *suppression in malarial hemoglobinuria* 242
- Urine bloody, see Hematuria*;
- Urotropin for bacillus typhosus in —*, 569; *Modified test of —*, 87; — of *pyelo-nephritis* 13
- Urinemia of pregnancy* 418
- Urotropin for typhoid bacillus in urine and sputum* 569
- Uterine cervix, cancer case*, 53; — *Pessaries for — displacements*, 352; *Case — fibroids*, 56, 75; — *hemorrhage due to fibroid*, 76; *Mercuric cataphoresis for — inflammation*, 164; *Case — retroflexion*, 56, 57; *Operation for — retroversion*, 520; *Case — cancer.* 54
- Uterus, Curettement of*, 366; — *bicornis, cordiformis, didelphus, unicornis*, 530; — *septus*, 529; *Treatment posterior displacements of —*, 569; *Fibromyoma of —*, 55
- V  
*Vaccination*, 62; — and *grippe immunity*, 29; — and *legislation*, 268; *Importance of —*, 262, 474; — and *diphtheria*, 260; *Compulsory* 316
- Vaccine points, Glycerinized glass* 120
- Vaginal hysterectomy caused urinary fistula* 297
- Vaginitis specific, see Gonorrhoea in female*.
- Vaginal section for sterility* 236
- Valentine's meat juice* 261
- Vander Veer's method of abdominal drainage* 44
- Variola (also Small-pox) treated by red light*, 126; *Treatment of — centuries ago* 129
- Ventro-suspension for retroverted uterus* 320
- Veratrum viride for puerperal eclampsia* 350
- Vertebra, cervical, dislocated, Treatment*, 568; *Fourth cervical — dislocated* 551
- Vertebral column fractured*, 133; *Laminectomy for fracture or dislocation of — column* 354
- Vesallus an anatomist* 215
- Vesico-vaginal fistula after hysterectomy* 297
- Vesicular auto-reinfection and gonorrhoea, Differentiation* 371
- Vesiculitis, Gonorrhoeal* 370
- Veterinary practice, Ancient* 157
- Violet gentian inhibits growth of tubercle bacillus* 218
- Virginia local medical societies*, 573; *Central State Hospital of —*, 573; *Physicians wanting locations in —*, 573; *Number of doctors in —*, 291; — *Press Association* 524
- Visiting list, 1903*, 107; *Medical news, —*, 384; *Protective* 404
- Vivisection and legislation*, 268; — *Value of —*, 527
- Volturnus with torsion of mesentery*, 304; *Causes, symptoms and treatment of —*, 101, 102, 103
- Vomiting, intractable, pancreatic enema for* 9
- Von Hacker's gastro-enterostomy* 555
- W  
*Walrus-fin deformity* 550
- Water drinking for eye disease*, 162
- Webster-Baldy operation for retrodisplacement of uterus* 320
- Winter cough, Treatment* 381
- Wisconsin, Cigarettes prohibited in* 575
- Wolfler's duodeno-gastomy* 555
- Womb, see Uterus*.
- Woodwool pads in obstetrics* 130
- Worms, Chloroform for* 424
- Wound, Method of healing*, 73; — *surgery centuries ago*, 129; *Red dressing to prevent suppuration*, 126; *Heart —*, 267; *Lung —*, 545; *Surgery of — of lungs and heart* 508
- X  
*Xeroderma, pigmentosum, Case*, 390; *X-ray for —*, 539
- Xeroform salve* 256
- X-ray treatment of cancer*, 531, 539; — *for lupus*, 506; — *burn*, 531; — *dermatitis*, 531; — *for epithelioma*, 532, 539; — *for psoriasis*, 539; — *for xeroderma pigmentosum*, 539; — *for eczema*, 539; — *to locate foreign bodies*, 546; — *for cancer of eyelid*, 75; — *anesthesia*, 257; — *therapy*, 254; — *for tuberculosis*, 231; — *therapeutics* 421, 475
- Y  
*Yellow fever and mosquito*, 450, 164; — — *at Panama*, 456; — — *in Jamaica* 24
- Z  
*Zinc chloride for tuberculosis*, 224













