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## TREATMENT OF ROTO-LATERAL CURVATURE OF THE SPINE.

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IN dealing with the subject of treatment incidental reference only will be made to the very important matters of etiology and pathological anatomy. It is nearly twenty years since a reaction set in favoring developmental as opposed to restrictive methods of treatment. By developmental methods is meant such means as will tend to increase muscle, size, tone, power, general health, growth, self-reliance, will-power and increased activity; by restrictive methods, such means as will aim at erectness of the body though it be at the expense of growth and development. Two decades ago the treatment both on this continent and in England consisted almost entirely in the use of braces or jackets applied to the body and acting upon the principle of the lever so as to make pressure upon the part which projected farthest beyond the normal, with a view to pushing this part back into place. Frequently, also, there was a suggestion of lifting the upper portion of the trunk by means of crutches pressing upward under the shoulders and resting upon a band passing about the pelvis. Those who have had the largest opportunity to observe the results will know how very unsatisfactory all such treatment was.

The Germans, Swedes and other northern Europeans paid more attention to the whole subject of systematic, physical training and had applied its principles to therapeutic ends. Hence, the work done in those countries had an influence first felt in England and then on this side of the Atlantic, being advocated here most largely and scientifically by men and women who had graduated from the Royal Institute at Stockholm.

While it is true that there are many different causes operating in different patients and even in the same patient, bringing about a lack of symmetry in the trunk, and while it is the fact that in extreme cases even the individual bones are much altered in shape; yet, education is an important factor in the treatment, that is, an education which recognizes the power of habit and the power of the individual to maintain a better attitude through self-effort.

Lateral curvature of the spine always implies a lack of symmetry, the two halves of the body, whether separated by a vertical plane passing antero-posteriorly through the body or by a plane of division which would follow the spine, being quite unlike each other. Not only is there a

lateral deviation, but there is marked rotation or twisting of the vertebral column and bending of the ribs, most marked at the part where the spinal twist is greatest.



Fig. 1. Showing Roto-Lateral Curvature with appliance adjusted, but extension not yet made.

The use of the term "curvature of the spine" to signify a tubercular disease of the vertebræ, has caused confusion and error in diagnosis. The latter affection is a serious disease, having a well defined

pathology, sometimes presenting upon the surface of the body the same appearance in the earlier stages as that seen in ordinary roto-lateral deviation. A recollection of the fact that one is a serious disease to



Fig. 2. Showing extension of the spinal column from the head alone.

which the curvature is only incidental and that the other is but a deformity, should emphasize the importance of making a sharp distinction, thus guarding against an error which might prove seriously detrimental.

The one feature of lateral curvature which impresses the laity is the lack of symmetry, and this is a matter of importance, especially in women. The lack of symmetry will not have advanced far before there



Fig. 3. Showing extension by appliance to the head, with corrective force to the most prominent part of the curvature and heavy weights to the feet.

is an alteration of the figure easily manifest to the eye and difficult to hide by any device which may be adopted in making the clothing. The mild degrees of curvature probably cause but little harm through inter-

ference with the functions of the thoracic organs, but when the change of the form of the chest becomes strongly marked, the movements of the lungs and heart are interfered with and very considerable alteration in the relations of the organs takes place. Dyspnœa and occasionally "fainting spells" result.

Treatment by developmental means divides itself naturally into (1) treatment by forcible means, (2) treatment by educational means. The accompanying illustration will show so plainly what is aimed at in the employment of force that not much will be needed in the way of verbal explanation.

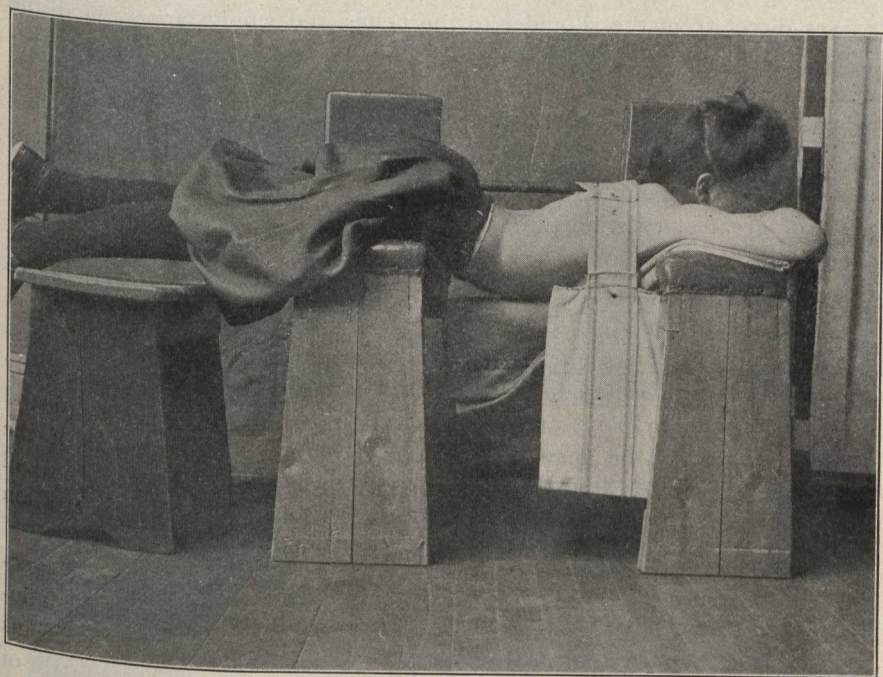


Fig. 4. Showing the horizontal position with pelvis and upper part of the thorax fixed, and a heavy weight acting upon the curvature.

#### THE EMPLOYMENT OF FORCE.

The simplest means to employ is that of extension, supporting the entire body weight by a strap passing under the chin and occiput. Not only is the body weight thus suspended, but the patient is made to swing back and forth for several minutes, the rope of suspension being attached to a hook placed a few feet above the head. Thus arranged the patient may swing through an arc of twenty feet. At first the pressure of the strap passing under the maxilla may cause some discomfort and at this stage the hands may be employed by seizing the cross-bar which passes above the head to help in sustaining the body weight, but soon increased

use will cause the hands to be dropped to the sides, and if a number of patients be allowed to work together and to vie with each other as to the length of time during which the swinging is maintained, they will manifest considerable interest and amusement. Relaxation of the muscles, as complete as possible, should be encouraged so that the full force of suspension may come upon the ligaments situated toward the concavity of the curvature. The employment of straps passing under the shoulders or of the hands to aid in suspension or swinging while suspended by the hands entirely, must fail in exerting nearly so great a stretching force upon the deformed spine because the latissimus dorsi passes direct from the shoulder to the pelvis and would largely bear the weight of the pelvis and legs thus preventing the extensile force otherwise exerted directly upon the spine (fig. 2).

While thus suspended a further corrective force may be employed by the application of power acting at right angles to the line of suspension and at the point of greatest curvature, which will also be at the point of greatest rotation (fig. 3).

While these means are being employed the corrective force may be increased by fastening heavy weights to the feet, ranging from thirty to fifty pounds. Care should be taken to cause the lateral force to act in the direction of the oblique diameter of the thorax, that is, not one passing directly from behind forward nor directly from one side of the body to a corresponding point at the other. If it act direct from behind and forward there will be some loss of power in making correction of the lateral deviation. If it act in a direct transverse diameter the force will tend to cause still greater bending of the ribs and will increase rotation of the spine.

Many other methods have been devised for exerting a direct corrective force, but I have never seen any which can exert so great an influence unless employed while the patient was anesthetised. The means above employed can be so arranged as to be entirely under the control of the patient, who may cease from suspension as soon as her endurance reaches the limit. The force may be increased from day to day, indefinitely, and, being subject to the patient's adjustment, may be repeated several times every day and continued from fifteen to thirty minutes each time. Having employed this means for fourteen years, I have never known it to cause injury to any patient.

In recommending this treatment I assume that a correct diagnosis has been made and, further, that the patient be not allowed to adjust the apparatus until she has been thoroughly instructed and has become well acquainted with the manner of using it.

In fig. 4 is shown another method of employing force, not so effective as the former and yet acting powerfully, especially in connection

with rotation, while the pelvis and the upper part of the thorax are supported and the patient is recumbent, heavy weights, to the extent of endurance, are so arranged as to produce an untwisting force acting upon the spine.

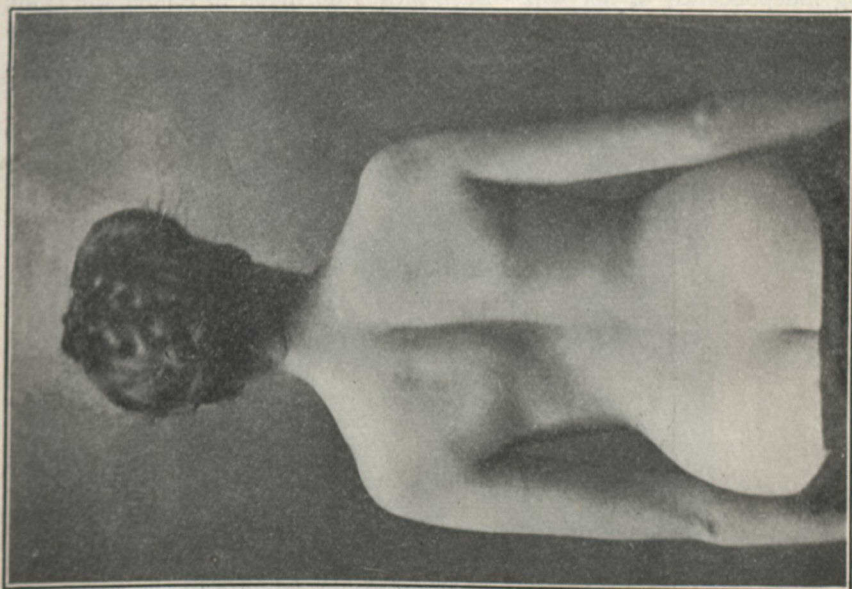


Fig. 6. Showing the same case after treatment.

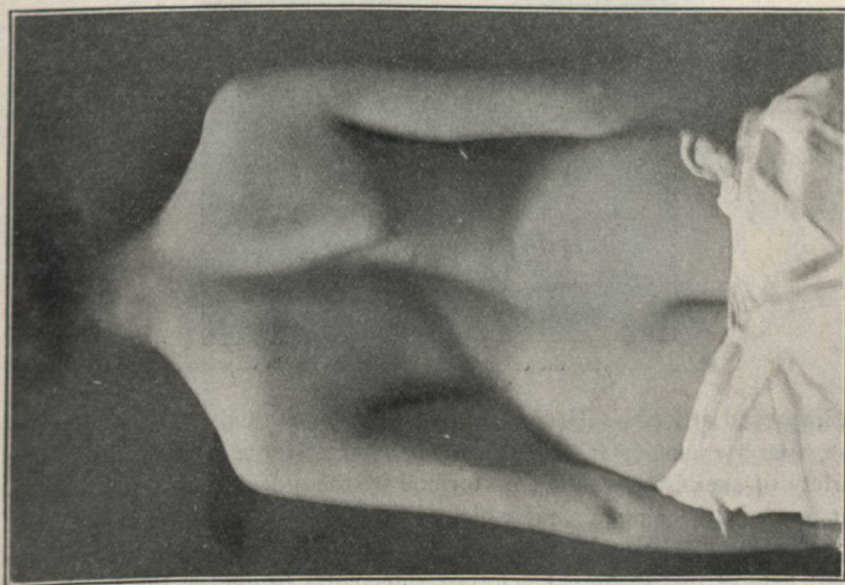


Fig. 5. Showing a case before treatment.

## THE EDUCATIONAL FACTOR.

In employing the means above referred to and in the use of all methods where force is employed to exert a corrective influence, the power is one outside of and quite apart from the patient herself and acting independently of her will. Such means do much to render the spine more supple and to make it possible for the patient to assume voluntarily

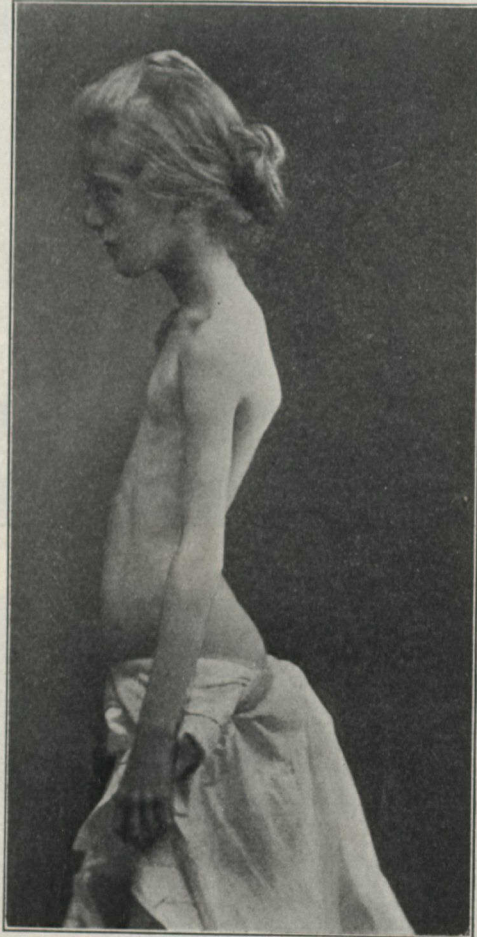


Fig. 7. Showing the condition of a patient without an effort to correct deformity.

an improved attitude. Hence, in following out the daily routine of exercise, free gymnastics follow the employment of force. There is a large variety of exercises, whether performed by the aid of apparatus or without any such accompaniment which will serve the purpose now in view.

The intelligent use of a large mirror, or rather of two mirrors, is a great help at this stage. Unclothed sufficiently to expose the trunk and



pelvis, the patient is shown her ordinary attitude as seen from in front and also from behind. She is then carefully instructed and helped to assume the best position possible for her and allowed to practise before the mirrors until she can readily assume this best position, though she may not be able to hold it for more than a minute. She is now given a wide variety of free gymnastic work, preferably, exercising in a class



Fig. 8. The same case making a voluntary effort in front of a mirror to correct the deformity after training.

with others; and a careful supervision is needed to see that when a normal standing position is taken it shall measure up as fully as possible to the best position that she was able to assume before the mirrors.

This educative work is of the utmost importance. It is essential to have the enthusiastic, cordial co-operation of the patient in order to reach the ideal result. The end sought is much better obtained also if

a number of patients can be made to work together. The various devices of those skilled in pedagogy must be employed in order to sustain the interest and to induce each patient to assume and maintain the best position possible for that individual.

It is not necessary here to lay emphasis upon the benefits resulting from muscular development; but it is important to emphasize the fact that other results should be looked for and obtained which are of vastly greater importance and more valuable in the after life of the patient. Among the chief gains which may be named are an erect bearing, deeper habitual breathing, more prompt response to any stimulus calling forth action, and economy of force and time in the performance of every movement.



Fig. 9. A case of Roto-Lateral Curvature.



Fig. 10. The same case in course of treatment.

To summarize :

1. Absolutely essential that a correct diagnosis be made determining that the deformity present is not due to and symptomatic of organic disease.
2. Developmental methods of treatment much better than restrictive.
3. This treatment ranges itself under : (1) the employment of force ; (2) education.
4. Under such treatment not only is the deformity made better, but importance indirect gains follow.

## CONSTIPATION.\*

By W. J. WILSON, M.D., Physician to the Toronto Western Hospital.

MR. PRESIDENT,—While constipation may properly be looked upon as a symptom and often as a minor condition, yet, on account of its importance, from the fact that it is such a common ailment, is difficult to cure and causes so much distress in infancy, adult life and old age, it was thought that a discussion of its various phases would be of general interest, and benefit to this Society. We may define constipation as a deficient regular action of the bowels. The amount of fæces passed will be less than normal for a greater or lesser period, and followed by a more or less marked diarrhœa.

There may be no subjective symptoms, and the patient may simply complain of fulness or pressure with gurgling.

There may be colicky pains due to irregular contractions. The appetite is poor, tongue coated, a bad taste in the mouth with, perhaps, pyrosis, nausea and belching of gas, and often hæmorrhoids. Patients frequently complain of headaches and dizziness with irregular pulse, palpitation, rapid heart, sleeplessness and despondency. This last, in a predisposed individual, may be a determining factor, in some cases, of temporary mental derangements.

Most of these symptoms may be attributed to absorption, although some of the German authorities deny this, and state that dry fæces can have no such influence. This we may admit after the masses have become sufficiently dry, but it was absorption which produced this dryness.

Stagnation and blocking of the sygmoid, descending and transverse colon produce dilatation of the cæcum and ascending colon with a mass of more or less fluid fæces, gases, germs and thin products—a veritable cesspool of poisonous matters, quite capable of being absorbed. Scybala will be passed covered with more or less mucous. Colitis, with sometimes stercoral ulcers, may result.

The colon may be found full on palpation and even perhaps on inspection, and its contents may pit on pressure. The departures from health found in the cæcum are often accountable for inflammations, in the appendix, due to direct extension of the inflammatory process and germ growth. The whole of the large bowel may be greatly dilated and elongated, with atrophy of the musculature and loss of propelling power.

The cæcum may descend to the floor of the pelvis and extend towards the left, filling the true pelvis. The transverse colon becomes V shaped, with the apex of the V at or near the pelvis. The elongation of the sygmoid will facilitate volvulus.

\*Read at the Toronto Medical Society, 4th January, 1906.

Another pathological condition described by Dr. Arbuthnot Lane, of London, is the formation of adhesions between the peritoneal coat of the large bowel and the parietal peritoneum, so as to produce a fixation and contraction of part of the cæcum, ascending and descending colon, and sigmoid, and adhesions between the transverse colon, as it forms the V, with the ascending colon on the right, and the descending colon on the left, thus converting the two flexures of the colon into more or less fixed acute angles.

Before going farther, we should adopt some form of classification and the most convenient one is into the three forms, atonic, spastic and mechanical.

The atonic form is the most common and may be induced by many causes, such as deficiency of fluids, neglect of calls to stool, faulty diet, irregular meals, loss of sensitiveness of the rectum, debility, sedentary habits, abuse of purgatives, diseases of the stomach, brain, spine and some general diseases.

The *spastic variety* is most frequently associated with neurasthenia and hysteria, and with such painful conditions as fissure, ulcer, piles, or inflammatory affections of the pelvic organs. It is often associated with hyperchlorhydria. Mixed conditions of atony and spasm may be found in the same patient.

Among the mechanical causes are pressure from tumors or displaced organs, volvulus, hernia, stricture, adhesive bands, the contractions and fixations mentioned by Arbuthnot Lane, and enlargement and rigidity of the rectal valves.

In the *diagnosis* of constipation we must not merely take the patient's word for the condition, but go into minute particulars and make a careful physical examination. We must consider all the conditions of the patient's life and habits, before coming to a conclusion as to the probable cause of the constipation.

In the atonic form the abdomen is lax, the motions dry, hard and infrequent, and often in the form of scybala, with more or less mucus on their surface. At irregular intervals there is diarrhoea, due to the irritation of the retained masses. We find this atonic form often associated with enteroptosis or some form of debility.

In the *spastic variety* the tendon reflexes are apt to be more marked than in the atonic form. The abdominal muscles are more tense and palpation of the abdomen is more difficult. Portions of the intestines may be felt as hard, tender cords, while other sections are irregularly distended with gas and painful. The motions are small, like the little finger, or are ribbon-shaped, and putty-like in consistency.

There is a good deal of straining at stool with the feeling that the movement has not been satisfactory, even when the rectum is empty.

It will also be noted in these cases that the motion will at times be full sized, thus excluding stricture. In the spastic form we must, as in the other varieties, look for the causative conditions; and here we find, as before mentioned, the neurotic element coming strongly to the front.

Hysteria, neurasthenia, meningitis, or some chronic ailment, may exist. Lead poisoning produces a spastic condition of the small intestines.

We have not made a complete diagnosis of our case until we have investigated, not only the intestinal tract, but practically the whole body.

Constipation may be caused by congestions, due to diseases of the heart, lungs, liver, or kidneys. In diabetes obstinate constipation is the rule, due largely to withdrawal of water. Anæmia and chlorosis are frequently causative conditions.

The most potent factors in the causation of constipation are the diet and habits of the individual.

In the infant, we find it caused by a lack of fats in the milk. In the adult, by a dislike of fats, by too limited a supply of water, the intestinal moisture being thus kept constantly at a minimum.

Many people run to fads in diet and avoid many articles which they fancy are either not nutritious enough, or think they do not agree with their systems. Fats, fruits, vegetables and water are partaken of either sparingly, or some of them not at all; and a very easily digestible diet is sought after, with the result that not sufficient waste matter is furnished to stimulate peristalsis and make a sufficient bulk of fæces.

Others will neglect the calls of nature, until the rectum has lost its normal sensitiveness, and the desire for a motion is partially or wholly lost. Add to this the abuse of purgatives, and we have the unfortunate patient drifting steadily from bad to worse, and frequently to a point beyond cure.

In treatment, where possible, an out-of-door life is advisable. Regularity of living, including meals, rest and exercise, and avoidance of worry and strain should be enjoined. A convenient time should be selected for going to stool. Immediately after breakfast answers well with most people. A full mixed diet should be taken, avoiding fads and including a sufficiency of vegetables, fruits and fats, and in fats we include butter, cream, gravies and fat meats. Olive oil is often beneficial, either on salads or in any other form.

Liquids, and especially water, should be taken in sufficient quantities. A good glass of water at bedtime, and again first thing in the morning, is often beneficial. Cider, buttermilk, and koumiss are useful adjuncts.

Olive oil enemata, after the patient retires for the night are very useful. We begin with one to two ounces and gradually increase to four or five ounces, and then at the same rate reduce the amount used. If taken before the patient is in bed, it is more difficult to retain.

We have found this treatment useful, both in the atonic and spastic forms of constipation.

Massage in the atonic forms is very useful. Where this cannot be procured we may give directions for a limited kneading of the large intestine, following its course from right to left. A metal ball of 3 to 5 lbs. weight and covered with some soft material may be used by the patient before arising every morning, passing it around the abdomen in the same line as recommended for the massage.

Massage of the abdomen has, however, been found not well suited to the spastic cases, and, when indicated for the general condition of such patients, should be used on all parts except the abdomen.

Mineral waters are often useful, but must be used with discretion. The atonic, dilated stomach will not stand the weight of the large quantities of water often recommended and again the water must be carefully selected for the individual case, *e.g.*, the acid waters would not be suited to the cases with hyperchlorhydria. A word more might be said about purgatives. They are much abused and as commonly used do much harm. In many cases, they are unavoidable, but should be carefully selected and used for a limited time only. Laxatives are frequently of use while we are toning up the system, and directing our patient to depend more on hygiene and diet.

Electricity may in some cases be used to good advantage especially in conjunction with massage. It may be applied through a rectal electrode with a sponge on the abdomen, moved in the line of the large bowel. In some cases electroclisis may be used to advantage.

We must, of course, in every case bring the patient's general condition to the highest point possible by tonic and hygienic measures, and use our ingenuity in adapting the best measures to the individual case.

Surgical treatment will be required in certain cases, such as those due to the mechanical causes of constipation previously mentioned, and in the treatment of ulcers and painful conditions of the anus.

In the severe cases mentioned by Arbuthnot Lane in his work on the surgical treatment of constipation, that surgeon sidetracks the whole large bowel by cutting off the ileum near the valve, and inserting it into the upper rectum or lower sigmoid. We have had no experience with this method, and, while we think it would cure the conditions for which it was devised, we think, in this country at least, cases that cannot be relieved by less radical measures must be very rare.

## APPENDICITIS—A SHORT HISTORICAL REVIEW.

By W. J. MACDONALD, M.D., St. Catharines, Ont.

OF paramount importance over all other acute abdominal lesions must be considered the effects of inflammation in the Appendix Vermiformis Cæci. Twenty years ago patients suffered from extreme tenderness in the right lower quadrant of the abdomen, a fixed pain in the right iliac fossa, preceded or accompanied by nausea and vomiting, and a well defined tumor ending either in resolution or suppuration. This, the "Inflammation of the Bowels" of the old school, was always treated medically, thus of necessity resulting in a very high death rate. To-day the responsibility of the result of all such inflammations is shared by the surgeon, who, by timely interference, is successful in removing with the appendix, the entire focus of the disease, and preventing a widespread infection.

Theses written about the middle of the eighteenth century have recently been unearthed which give fairly accurate accounts of the dangerous inflammation which may affect this organ, but for the nineteenth century has been reserved the full and complete demonstration of this condition. Prior to the year 1800 we have but three recorded cases, published respectively in 1759, 1766 and 1790, while during the next fifty years they are few and widely scattered. The pathology was vague, the seat of the lesion was disputed, and thus it was that this phlegmon has been erroneously characterized as *typhlitis*, inflammation of the cæcum, *perityphlitis*, inflammation of the parts adjacent, due to perforation of the cæcum, or *paratyphlitis*, inflammation of the retro-cæcal cellular tissue. For nearly one hundred years after the publication of the first case the progress was slow, and very little advancement was made, mainly due to the fact that the appendix was not recognized as the seat of the primary lesion. True it is that some of the earliest writers of the nineteenth century gave brilliant promise of establishing a sound pathology and treatment, but unfortunately they did not possess the courage of their convictions, and a waiting world was doomed to wait for yet another fifty years.

Dupuytren, a master-mind, and the greatest surgical authority of his day, believed the seat of all these right abdominal inflammations to be the cæcum itself. He instilled this theory into the minds of his pupils, he published essays in support of his belief, and under his supervision two of his pupils, Husson and Dance in 1827, published a systematic treatise "On Phylegmonous Tumors of the Right Iliac Fossa," widely promulgating his views. In 1835 he passed away, but his influence remained and protested strongly against the acceptance of many papers soon to be published. With the passing of Dupuytren, the voice of the

greatest opponent to the true pathology was stilled, but it took the world a long time to recover from his influence, and thus it was that many masterly works were relegated to the myths of the past, and for nearly half a century remained in semi-oblivion.

At length there appeared in the *American Journal of Medical Science* for October, 1886, an article from the pen of Dr. Reginald Fitz of Boston on "Perforative Inflammation of the Vermiform Appendix," which on this side of the Atlantic established a new era. Fitz, one of the most advanced thinkers of his day formulated a new pathology and treatment which was universally accepted, because it was essentially correct, and which proved the groundwork and basis of the magnificent superstructure which has been built thereon, the cherished life-saving operation of to-day.

1759—*Mestivier*. This, the first case on record, was published in France in the *Journal Général de Médecine et de Chirurgie*. Some doubts have heretofore existed as to whether the patient was a man, or a woman in the eighth month of pregnancy, as stated by Edebohls in his "Review of the History and Literature of Appendicitis," but in his admirable monograph on "The Vermiform Appendix and its Diseases," 1905, Howard Kelly states the identity of the patient has been fully established in a man of forty-five who presented himself for relief from a fluctuating tumor to the right of, and a little below the umbilicus. An incision evacuated about one pint of pus, following which the wound healed rapidly, but the patient gradually lost strength and died in a short time in the Hospital St. Andre de Bordeaux. The identity of the patient however is only a secondary consideration to the post-mortem report which is more to the point, for in this, the first recorded case, we have set forth the true pathology of the disease, though for the next century research was being continually led astray through the belief that the inflammatory condition in the appendix was secondary only to inflammation in and around the cæcum.

The cæcum is described as being covered with several gangrenous patches, while in the appendix was discovered an ordinary pin, rusty and corroded. There was no history of a pin ever having been swallowed, but even so, the recorder of the first case states it must have been contained in the appendix a long time, and finally summarizes his observations by stating it was "undoubtedly this which had irritated the different coats of which the organ is composed, and had given rise to all the patient's symptoms, and finally causing the death which ensued."

1812—*Parkinson*. <sup>22</sup>The Parkinson of London belongs the credit of being the first to recognize a perforation in the appendix as the direct cause of a fatal peritonitis. His case, reported in England, was of a boy of five years, who died after two days' illness of abdominal pain,



vomiting, weak pulse and a distended and tender abdomen. The autopsy revealed a general peritonitis and a perforation in the appendix. To this latter condition, the author, in his report of the case, directly attributes the cause of the peritonitis ending in death.

1813—*Wegeler*. One of the most notable of the early contributions to the literature was this paper published by Wegeler in the *Journal de Médecine et de Chirurgie* while sojourning in France. At the time, it attracted widespread attention, mainly from the fact that an attempt is made to discuss the probable effect of foreign bodies in the appendix as an etiologic factor in the subsequent disease. His patient, a young man of eighteen years, was attacked with slight colicky pains which continued more or less severe for three days, supervening on which was a sudden, sharp and continuous pain limited to the right iliac fossa, which on pressure became intense. The abdomen was distended. Preceding the attack there was slight diarrhoea, while constipation was now complete. Hiccough persisted and vomiting was continuous, the vomit at first porraceous finally became fæcaloid. The following day the extremities became cold and the features pinched resulting in death that night.

The autopsy revealed a gangrenous cæcum, which morbid process, the writer states, had commenced in the appendix "which was red, voluminous and contained several calculi, the largest weighing about a gramme." These calculi he considered of biliary origin, which had been changed in composition by the action of the intestinal secretions. He goes on further to state that, although these foreign bodies were present, he did not consider them the primary cause of the trouble, but by their presence accentuated an already serious process.

1824—*Louyer-Villermay*. This paper is mainly taken up with the discussion of two cases which are reported at length, and observations on the conditions found at autopsy. Like some of his predecessors, he attempts to establish in the appendix the primary lesion, and gives a perfect pathological picture, though also, like some of his predecessors, he frankly admits he cannot understand how an organ of such small size and limited importance, could produce such disastrous results.

In his first case he reports a man of thirty-five, enjoying vigorous health, attacked suddenly with intense pain in the right abdomen, with nausea and vomiting. The pain was much intensified on pressure, and a peculiar symptom was a retracted and painful right testicle. In this case we find the first mention of any testicular symptoms in a case of appendicitis, and even in a review of all the subsequent literature, this symptom is uncommon. In severe cases, it is, however, sometimes strikingly prominent. Medical treatment was of no avail, he became gradually worse and died on the fourth day.

The second case was in a man of thirty-seven enjoying equally robust health. He, too, was suddenly attacked with intense pain, which, instead of being confined to the lower abdomen, as in the first case, was most severe in the region of the umbilicus. The following day this region became quite sensitive to the touch, and slight abdominal distension was noticeable, more marked in either hypochondriac region. The region of tenderness shifted to the right iliac fossa, and with the onset of vomiting he passed away thirty-six hours from the commencement of the attack.

In both cases the autopsy was held twenty-four hours after death. In the first case the gangrenous appendix was separated from the bowel and floating in about five ounces of pus, while in the second the organ was totally gangrenous as far as its attachment to the cæcum, the bowel in fact being quite healthy to the point where it merged into the dark violet color of the appendix. In either case the intestines were distended, while the other abdominal organs were healthy, except in each, a slight inflammatory condition in the mucosa of the stomach, which the author attributes to "sympathetic irritation produced by vomiting." Villermay's paper failed of acceptance, mainly from the fact that he himself did not appear to have perfect confidence in his own convictions.

1827—Melier. At page 317 of the *Journal de Médecine de Chirurgie et de Pharm.* for 1827 is to be found an article from the great French student, Melier, entitled "Memoir and Observations on certain Diseases of the Appendix Vermiformis." This study is based on a personal experience of four cases, the first three being cases of perforation followed by general peritonitis, while the fourth was one of relapsing appendicitis. Two of these cases had been primarily diagnosed as simple indigestion and internal strangulation respectively. In the three perforative cases he calls special attention to the existence of more or less general abdominal pain, accompanied by a fixed and more severe pain in the right iliac fossa.

In commenting on the first case which came under his notice he says: "The patient was subject to attacks of colic; he had had an attack of this kind for several days; he had partly recovered from these pains, when all at once in the midst of the lull, an intense pain came on in the lower part of the belly, followed by symptoms of general peritonitis and death in eighteen hours." He goes on further to interpret the cause of such accidents, and says: "I explain in this way the divers accidents and their successions. Fecal matters had accumulated in the appendix, which became dilated, then obstructed, by degrees inflamed, then gangrenous, lastly perforation occurred. The first accidents, *i e.*, the colicky pains, were probably due to the distension and inflammation of the appendix. Its rupture gave rise to the effusion which itself seems to have been the cause of the peritonitis."

He goes on further to differentiate between the striking symptoms presented in acute inflammation of the appendix, and those produced by fecal engorgement of the cæcum, for which latter condition he proposes the term *Stercoral Fever*. He, moreover, proposes to differentiate between the acute and chronic forms of the same disease. His fourth case, one of the relapsing type, was seen by Dupuytren in consultation who opened a fluctuating tumor in the right iliac fossa, and evacuated a considerable quantity of pus. The wound continued to discharge for about a year, when the patient developed acute general peritonitis and died. The autopsy revealed a large abscess cavity, to the walls of which the cæcum and appendix were attached, and a perforation of the latter organ opening directly into the cavity. In the opinion of the author this condition was produced by the retention of a foreign body in the appendix producing an acute inflammation, which, on becoming adherent the peritoneum, perforated, as a result of which an abscess formed in the adjacent cellular tissue.

Finally, to Melier is due the credit of being the first to suggest operative interference in disease of appendiceal origin, for he finishes this remarkable contribution by saying: "If it were possible to establish with certainty the diagnosis of these affections, we can see the possibility of curing the patient by an operation. We shall, perhaps, some day arrive at this result."

1830—Goldbeck. In his graduation Thesis, "On a Peculiar Inflammatory Tumor in the Right Iliac Region," Goldbeck, in 1830, reports a fatality due to perforation of the appendix, but regards this as an isolated case, for in many more autopsies, personally conducted, he found an intact appendix in persons dying with similar symptoms to that in which there was a perforation. He, too, strong in the faith of Dupuytren, believes in the cecal origin of the trouble, and overlooks or ignores any part played by the appendix whatever. He believed this right iliac tumefaction to be directly due to cecal impaction of fæces, inflaming the bowel wall and finally developing pus formation in the surrounding loose connective tissues. To this inflammatory condition he gave the name *peri-typhilitis*, a name which, even in the present day, is extensively in use. In discussing why these tumors are always right sided, he comes to the conclusion that the position of the cæcum somewhat favors fecal impaction, that at this point, the junction of the small and large intestine, the bowel is less movable than elsewhere, thus impeding the progress of the matter in the early excremental stage, and finally the intestinal contents here commence to travel upward in direct opposition to the laws of gravity. Instead of the pus assuming a circumscribed aspect on the left side, he believes the strong resisting power of the surrounding peritoneum and mesocolon forces it to either burrow under

the ilium and point to the exterior on the right side, or burrow through the connective tissue in the region of the rectum, and, opening there, establish a rectal fistula.

This paper, along with Menier's, published about the same time, and strongly advocating the same views, exerted a tremendous influence in diverting further investigation from the right line, laid down a few years previously by Louyer-Villermay and Melier, and for nearly half a century we find all research work directed to the cæcum, in an endeavour to establish in it the starting point of these right sided phenomena.

1838—*Albers*. In his lengthy paper appearing in 1838, Albers of Bonn characterizes a limited inflammation of the cæcum as a disease separate and distinct in itself. To this affection he gives the name typhlitis, and ascribes to this condition the bulk of all acute inflammatory conditions to be found in the right iliac region. Four distinct varieties are recognized and described, viz..

1. *Stercoral typhlitis* "due to stagnation of fæcal matters in the cæcum, and to the irritation caused by these matters."

2. *Simple typhlitis*, "in relation with the divers agents of irritation which may provoke inflammation of the intestinal mucosa, the effects of this irritation localizing themselves in the mucous membrane of the cæcum."

3. *Perityphlitis* "caused by the propagation of the inflammation of the intestinal membrane to the external coat of the cæcum and the surrounding parts."

4. *Chronic typhlitis*, "whose accidents present themselves under the aspect of an affection with slow and prolonged course."

Thus it is that Albers is responsible for the description of typhlitis which has appeared in the majority of our treatises on the practice of medicine down to within the last decade. He describes typhlitis as terminating either by resolution or perforation. Should the perforation occur posteriorly, it is followed by the formation of an abscess in the retrocæcal cellular tissue, if anteriorly it gives rise to general peritonitis and death.

In spite of strong opposition, this theory of Albers rapidly gained favor with the profession. I say *theory* because his was only a theory, his deductions, one and all, lacking pathological proof. When his patients recovered it could not be definitely disputed that they suffered from simple typhlitis, or one of its allied affections; but when they died, the autopsy table always revealed a condition contrary to the diagnosis made. In not a single case was the cæcum perforated anteriorly or posteriorly, while the appendix remained free from disease, and intact; no, in *every case* the primary lesion was discovered in an either perforated or gangrenous appendix.

Most notable among the opponents of Albers were Addison, Bright and Grissole. The latter, in an article in the *Archives de Medicine* on "Tumeurs phlegmoneuses des fosses iliaques," most persistently opposed the views of Albers and his confreres, whose pathological division he believed to be entirely astray, purely speculative, and never borne out by post-mortem demonstration. He emphasizes the fact that in a large number of autopsies, wherein the patients had died of the typhlitis of Albers, he had in every case found the malady associated with a diseased appendix.

But stronger in their opposition than even Grissole, were the two former, Addison and Bright. In their well-known *Elements of the Practice of Medicine*, they present a clinical and pathological picture of the disease, which would well adorn a page of any medical journal of to-day. After enumerating the prodromic symptoms, they describe the attack as being ushered in by chills, pain and vomiting, which frequently follows over-eating or over-exertion. They further discuss the abscess formation, and state that in every case of pus, localized in the right iliac fossa, a tentative diagnosis of appendiceal, and not cæcal, disease may be made.

1843—*Rokitansky*. In his classical work on *Pathological Anatomy* Rokitansky in 1843 described for the first time the condition now known as catarrhal appendicitis, which he believed to be the result or irritation due to fæcal concretions, and contrasted it with the more dangerous forms terminating in perforation or gangrene. He also referred to the influence and protection afforded by inflammatory adhesions in case perforation should subsequently occur, but for all this, his faith held fast to the old school, still believing that such inflammation and perforation may occur in the cæcal wall.

1846—*Volz*. In an inaugural address published in 1846, Adolph Volz introduces what became known as the opium treatment in peritonitis. Peritonitis, he avers, is always due to some injury to some abdominal organ, the most frequent organ being the appendix, and the most frequent injury being a perforation. After enumerating thirty other cases of fatal perforation of the appendix due to concretions, he describes the finding of concretions in three apparently healthy appendices, in cases where the patients had died from some other cause, and submits a careful chemical analysis of these bodies, whether they be of soft, medium or hard consistency, showing them to be chiefly composed of organic matter and salts.

The name of Volz is chiefly remembered as the first advocate of absolute intestinal rest in the treatment of appendiceal disease and its immediate results. The rest he produced by the administration of opium in one grain doses every half hour until the pain was completely relieved, and the respirations reduced to fourteen or even twelve, and reported

several recoveries in cases thus treated; cases which on subsequently dying from other causes, presented the opportunity of demonstrating the existence of unmistakable signs of a previous acute peritonitis. Following the general adoption of this treatment, a remarkable rise in the percentage of recoveries was noticeable throughout many of the European hospitals, a percentage which has proved so satisfactory that in many of the more conservative institutions, it is still in constant use.

1848—*Hancock*. As far as can be ascertained, Hancock of London was the first to operate for disease of the appendix as such, having made his diagnosis and operated before any fluctuation could be detected. His patient, a woman in the eighth month of pregnancy, was suddenly seized with sharp pain in the right side, accompanied by vomiting. Premature delivery followed, after which the pain became more severe. A hardness gradually developed in the right iliac fossa, but no fluctuation was discernable. The patient was manifestly sinking, and a laparotomy was proposed and performed, with the object of providing an avenue of escape for any products of disease of the appendix. The incision was made over the tumor, and a considerable quantity of sero-purulent fluid escaped. The patient progressed fairly well, and on the fifteenth day two faecal concretions, manifestly from the appendix, presented in the wound, after which the patient rapidly regained her accustomed health.

1850—*Gay*. What is, I believe, the first instance in which a diseased appendix has been exposed to view through an ante-mortem abdominal incision, was reported by Gay to the Pathological Society of London in 1850, in a paper entitled "Internal strangulation between the appendix vermiformis, which had become adherent to the ilium, and a band of false membrane." His patient, a man of forty-two, had had some thirty attacks of severe abdominal pain, always passing off, however, after a free evacuation of the bowels. The last attack not passing away as heretofore, Gay opened the abdomen with the purpose of relieving the obvious obstruction, which was found to be in a loop produced by an inflammatory attachment of the tip of the appendix to the ilium, through which some fifteen inches of small bowel had passed and become strangulated. The strangulation was relieved, but the patient died.

1856—*Lewis*. The first notable American contribution to the literature of appendiceal disease, "A statistical contribution to our knowledge of abscess and other diseases consequent upon the lodgment of foreign bodies in the vermiform appendix, with a table of forty cases," was in 1856 published in the *New York Medical Record* by Lewis of New York. This paper was presented mainly with the purpose of illustrating the previous slow evolution of all knowledge pertaining to this trouble, and his classification is particularly good.

In describing the progress of the disease from the initial point to the final general peritonitis, he displays a clear conception of the actual facts. This process he declares to be of intense interest to the physician, from the extremely rapid and frequently fatal course it runs, and to the patient, whose life may be so suddenly placed in extreme peril. He describes the lodgment of a foreign body, a fæcal concretion or otherwise as the case may be, in the appendicular lumen, which substance may remain indefinitely, without causing the slightest symptom, but which, by frequent irritation, may excite a local inflammation in the mucous membrane of the organ, producing a thickening of the coat and ultimately ulceration. This ulceration may perforate, and by setting up a general peritonitis, terminate fatally. Again this foreign body may so compress the circulation at the orifice of the lumen, as to occasion gangrene of a portion, or the whole, of the appendix.

Lewis is one of the first to call attention to the fact that in disease of this nature, pain is not usually at first located in the region of the cæcum, but frequently in some other portion of the abdomen, usually around the umbilicus, and that it only becomes localized in the right iliac fossa as the disease progresses. Vomiting, too, he describes as being attributable to an over-loaded stomach, rather than a direct result of the disease, the tumefaction in the right abdomen as the result of the most intense localized inflammation, and concludes by giving a most unfavorable prognosis.

1867—Parker. The next contribution of note I find to be also from the pen of an illustrious American, Dr. Willard Parker of New York, who, in March, 1867, reported the successful treatment of four cases of appendiceal abscess by timely incision and evacuation of the pus. It is interesting to note he expressly characterizes these abscesses as appendiceal in origin, the primary lesion having been an acutely inflamed appendix, walled off by protective adhesions, which, in turn, on perforation of the appendix, prevented free distribution of the contents, and a circumscribed abscess ensued. With the opinion of Leudet expressed in the *Archives generale de Medicine* in 1859, he is thoroughly in accord, the opinion thus expressed being that "perforation of the ileocecal appendix is in itself more common than all other perforations of any part of the intestine whatever; it at least equals in frequency all perforations of the digestive canal taken collectively."

Of Parker's four operations the first three were performed after the abscess had become well developed, while the fourth was undertaken before the presence of pus could be discerned, it being, in fact, to promulgate this early operation that the present article was published. He argues that early free incision will provide escape for the pus in the event of an abscess forming, while in the absence of pus formation it relieves

the tension and makes the patient infinitely more comfortable. From the fact that the opening of an abscess pointing externally will save the life of the patient, he argues that early incision will tend to point the forming abscess in the right direction, with the path of exit already assured. The incision recommended is one commencing about one inch above the anterior superior spine of the ilium, and proceeding for some five or six inches on a direct line toward the symphysis pubes. Parker's advice was all the more timely and opportune because of the advent of antiseptics in the following year, 1868, and at least partly to this, the possibility of reducing the risk of life to a minimum, was this treatment so widely accepted, and became universally known as the Willard Parker Operation. Following the acceptance of this method of operative treatment the mortality rapidly decreased, having in 1882, fifteen years after its introduction, fallen from forty-seven to fifteen per cent.

1880—*With*. From time to time exhaustive papers had been written in the attempt to fix the primary lesion in the cæcum, even the notable exceptions, Volz, Lewis and Parker admitting the cæcal origin in large numbers of cases, and it was not until 1880, when With of Copenhagen, published his advanced ideas in a paper entitled "Peritonitis Appendicularis," and was the first to deny pointedly the origin of peritonitis in typhlitis, that the cæcum was not universally recognized as the seat of all inflammatory conditions in the right iliac region, which had been variously termed typhlitis, perityphlitis or paratyphlitis as the case may be.

With's paper was based on his observations on the appendix in some three hundred consecutive autopsies, and in this number he found appendicular disease to a greater or less extent in one hundred and ten cases. In some of these cases death had been directly due to perforation and general peritonitis. The publication of With's paper, outspoken and plain as it was, though not receiving the credit it deserved, was one of the earliest factors in formulating a pathology sound to the present day.

Appearing about the same time, though entirely independent of With, we find a paper on "Perityphlitis" by Matterstock. He describes his title as a mis-nomer, because he does not believe in the cæcal origin of cases of right sided, localized peritonitis. In one of his opening sentences he strikes the key note of his thought, by saying, we are now constantly obtaining a better knowledge of the nature of disease of the vermiform appendix, and the more our attention is focused on the morbid processes affecting this tiny organ, hitherto overlooked, the more frequently do we find it to be the chief if not the only cause of the rapidly fatal illness which we call perityphlitis."

1884—*Mikulicz-Kronlein*. In an address delivered in 1884 Mikulicz reported a case of laparotomy which he lost by failure to remove the appendix. His patient became suddenly ill with severe right abdominal



pain and vomiting which lasted some three days. A general anæsthetic was given and a tumor distinguished in the ileocecal region. On making a diagnosis of intussusception, the abdomen was opened in the middle line from umbilicus to pubes, and search made for the intussusception which failed to materialize. A considerable quantity of purulent fluid escaped, and in the region of the cæcum the intestines were matted together with plastic lymph. The appendix was not examined by sight, consequently the starting point of the peritonitis remained undiscovered; the abdomen was cleansed and closed. The patient died on the fifth day.

The autopsy revealed an inflamed appendix, acutely bent on itself, adherent to the cæcum and perforated in several places. From the result of this case he argues that in all cases of right sided inflammation of an acute character, which do not readily yield to medical treatment, the appendix should be sought, and if perforated, should be either removed or the opening into the cæcum closed by sutures. In case of perforation of the stomach or intestines, the opening must be closed to save life, and the same reasoning should hold good in an appendiceal perforation.

The first to perform the operation advised by Mikulicz was Kronlein of Germany, who, during the same year, and shortly after the publication of Mikulicz's address, operated unsuccessfully on a boy of seventeen. This, as far as I can learn, is the first recorded case of operation on the appendix. Kronlein saw his patient in a private house on the third day of his illness, and diagnosed either perforation of the appendix or acute obstruction in the ileocecal region. An exploratory laparotomy proved the former diagnosis to be correct, and the appendix was ligated and severed close to the cæcum. The abdominal cavity was cleansed with a weak solution of carbolic acid, and the abdomen closed without drainage. The patient died.

1886—Hall, June—Fitz, October. To Dr. R. J. Hall of New York is due the credit of being the first to operate on the appendix in the United States, even although his operation was not undertaken with his object in view. A diagnosis of strangulated hernia having been made, an incision was carried down to the neck of the hernia sac, which, on being opened, allowed the escape of a large quantity of sero-pus. Close to the wall of the opening was observed a mass covered with an exudate of lymph, which, on being carefully examined, proved to be the vermiform appendix coiled on itself, and perforated close to the base. A cat-gut ligature was applied above the perforation and close to the cæcum, and after breaking up the adhesions the organ was severed close to the ligature, the stump being disinfected with a 1-1000 solution of bichloride.

The original incision was now extended upward to facilitate a thorough abdominal exploration. Numerous adhesions were encountered and broken up, and free vent given to several small sacculated quantities

of pus. After thoroughly cleansing the peritoneum and instituting abundant drainage, the abdomen was partially closed. The patient made a good recovery. This operation was performed in May, and reported in the *New York Medical Journal* in June of the same year.

*Fitz October.* The American epoch-making treatise was that published by Dr. Reginald Fitz of Boston, "On Perforative Inflammation of the Vermiform Appendix," in the *American Journal of Medical Science* for October, 1886. In this paper he collected 209 cases of typhlitis and perityphlitis, and 257 cases of perforative appendicitis, and showed that the symptoms were identical in each class of cases. He established the fact that when perforation does occur, the ensuing peritonitis is not always general, but may be localized and circumscribed in the form of a purulent collection, or appendiceal abscess. He studied carefully the characteristics of the tumor thus formed, the inevitable consequences if the abscess is left to itself, and the safest method of evacuating the pus, and again later he expresses the radical view that the conditions described by the terms *typhlitis peri or para-typhlitis, appendicular peritonitis or perityphlitic abscess* are all varieties of one and the same affection, inflammation of the appendix vermiformis, or appendicitis.

The different clinical pictures presented during the course of this disease he describes as in great part due to the various anatomical distributions of the appendix, and the term "appendicitis" is introduced merely to emphasize his contention that in the appendix itself is to be found the primary lesion in every case, and consequently to the appendix itself is to be directed all treatment, whatever that treatment may be.

After reviewing the early operative procedures, and especially that of Willard Parker who advises surgical interference *after the fifth day*, he comes to the conclusion that if we are going to reap the greatest benefit by surgical interference, it must be resorted to at an early period. He calls attention to the great number of deaths *before the fifth day*, in which case they are lost without any effort being put forth to save. His own concluding words ring forth strong and clear. He says: "If after the first twenty-four hours from the onset of severe pain, the peritonitis is evidently spreading and the condition of the patient is grave, the question should be entertained of an immediate opening for exposing the appendix and determining its condition with reference to its removal. If any good result is to arise from such treatment, it must be applied early."

1887—*Treves, February 16. Morton, April 27th. Sands, December 30th.* The question of priority of operating on the appendix is naturally a delicate question to discuss. I have before me some letters in which the writers claim to have removed the appendix at a much earlier period,

but these cases were never published, consequently we must show deference to the men who placed their cases on record at the time.

Kronlein, as we have already seen, diagnosed a perforation in the appendix and removed the organ in 1884, while the next case on record is reported in England. In a paper read before the Royal Medical and Chirurgical Society on September 19th, 1887, Treves of London reports having, on the 16th of February previously, opened the abdomen with the intention of "deliberately seeking for and removing the appendix," in a case of relapsing typhlitis. The case was operated on during the quiescent period, and the appendix found to be considerably bent on itself and adherent to the cæcum. The organ was not removed however, the operation consisting of merely separating the adhesions and allowing the organ to remain, or as Treves says, "correcting the distortion. In this paper a plea is made for the removal of the appendix in the interval, in selected cases of relapsing typhlitis, which, however, was not well received at the time.

*Morton, April 27th.* The first successful recorded appendectomy deliberately undertaken with the intention of removing the offending organ, is reported in the *Transactions of the College of Surgeons of Philadelphia* in 1887. In Kronlein's case the patient died, while in Treves the appendix was not removed. On April 27th, 1887, Dr. Morton operated on a young man of twenty-six during an acute attack, supervening on a chronic condition which had existed for the previous four years. He diagnosed a perforated appendix and advised its removal. Through an incision ten inches long he evacuated a large abscess and washed out the abdominal cavity. The appendix was discovered to be densely adherent by its tips to neighboring bowel, greatly enlarged and perforated. After a silk ligature had been placed around the base and close to the cæcum, and another as close to the tip as possible, the organ was cut away between them. A large piece of omentum which had projected into the abscess cavity was also tied off. After curetting the walls of the abscess cavity, and again washing the peritoneum with water at 110°F, a rubber drainage tube was carried to the lowest part of the pelvis and the abdomen closed. The patient speedily recovered.

*Sands, December 30th.* For some time Dr. H. B. Sands of New York had inculcated into the minds of his students the necessity of early surgical intervention in cases of general septic peritonitis due to perforation of the appendix. His method of treatment as taught, was either the entire removal of the organ, or the closure of the perforation, as would be done in perforation of any other portion of intestine. His first case in which he put his theory to the test was published on June 16th, 1888, while the operation had been performed on December 30th, previously.

This patient was a young man who had been ill for nearly two days with severe pain in the lower abdomen accompanied by nausea and vomiting. The abdomen was tympanitic, and tender over the right iliac fossa. Having made a diagnosis of "acute septic peritonitis due to perforation of the appendix," abdominal section was advised and immediately performed. A free incision was made from a point two inches to the right of, and one inch below the umbilicus, to another point three quarters of an inch above the middle of Pourpart's ligament. Lying free in the peritoneal cavity was a large enterolith, while the peritoneum, visceral and parietal, in the neighborhood of the cæcum was bathed in pus and lymph. A perforation was discovered in the appendix at a point near its base, and this, after the edges had been trimmed with scissors, was closed by three silk ligatures. The abdominal cavity was flushed with hot water which was followed by a 1-1000 solution of bichloride, and the upper part of the wound closed. No rubber drainage was instituted, the evacuation of any inflammatory products being provided for by gauze packing down to the point where the perforation had been closed.

We have now briefly recorded four of the earliest cases treated by early laparotomy; Kronlein who removed the appendix, Treves who "corrected a distortion," Morton who removed the perforated organ, and Sands who closed a perforation. From this time forward the cases successfully treated by laparotomy became so numerous, that individual cases cease to attract attention.

1889—*McBurney*. The history of this subject now becomes chiefly centered in the perfecting of an early diagnosis, and the evolution of the various methods of Technique.

In a paper published in 1889, Dr. *McBurney* of New York dwells especially on the various points in the determination of an early diagnosis, and in describing the location of maximum tenderness, since become known as "*McBurney's point*," emphasizes one of the most important of the early diagnostic signs. He says: "The exact locality of the greatest sensitiveness of pressure has seemed to me to be usually one of importance. Whatever may be the position of the healthy appendices found in the dead-house—and I am well aware that its position when inflamed varies greatly—I have found in all of my operations that it lay, either thickened, shortened or adherent, very close to its point of attachment to the cæcum. This, of course, must, in the early stages of the disease, determine the seat of the greatest pain on pressure, and I believe in every case the seat of greatest pain, determined by the pressure of one finger, has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium, on a straight line drawn from that process to the umbilicus. This may appear to be an affectation of accuracy, but, so far as my experience goes, the observation is correct."

A strong plea is put forth in favor of early operation. The difficulty of diagnosing the stage to which the disease has progressed, is manifest. A perforation may occur early or late, and even in the mildest case, may occur with such slight acceleration of symptoms as to occasion no suspicion of its occurrence. With the danger of an exploratory incision reduced to a minimum through the recently perforated antiseptic precautions, the author observes there can be but one answer to the question, "What is the best treatment?"

1893—*Talamon*. In the opening paragraph of his memorable monograph on appendicitis published in 1893, Dr. Charles Talamon, physician to Tenon Hospital, Paris, says: "The researches of the last ten years seem to have definitely established that the seat of the evil is not primarily in the cæcum or in the surrounding cellular tissue, but in the appendix vermiformis. The word typhlitis, which means inflammation of the cæcum, is then doomed to disappear and give place to the name of *appendicitis*."

In this work the author in a masterly manner deals with the pathological conditions of the appendix itself, the etiology of such pathological conditions, the symptoms, diagnosis and treatment, and presents what is probably the first connected treatise on the subject. Scybala, he believes in the vast majority of cases, coupled with the action of microbes, to be the direct cause of the trouble, by irritating the mucous membrane of the appendix and thus giving a foothold to the numerous bacteria inhabiting the intestines, which in turn arouses an acute inflammation terminating in perforation or gangrene. The effect of constipation in producing appendiceal lesions he believes to be very much over-rated by previous authorities, calling attention to the fact that 257 cases of fatal perforative appendicitis collected by Fitz, in only 15 was the initial cause adjudged to constipation.

In a long and admirable chapter on the symptoms and diagnosis, he discusses in detail the now classic signs of the disease, and presents a clinical picture almost perfect in every respect.

From time to time admirable essays have been published, which have added more to our knowledge of this now well-known malady, notable among which may be mentioned that of Greig Smith, Surgeon to the Bristol Royal Infirmary, published in 1897, while among the more recent monographs of note are to be found those of Dr. John B. Deaver of Philadelphia in 1900, Dr. George R. Fowler of New York in 1902, and Dr. A. J. Ochsner of Chicago.

1905—*Kelly*. The latest contribution to the literature is the great work just published, 1905, by Howard Kelly of Baltimore. The history, pathology, etiology, symptoms, diagnosis and treatment are admirably

discussed. Like the majority of American surgeons, he considers appendicitis a purely surgical complaint, and observes that: "The ideal time for operation in acute appendicitis is within the first few hours, and not later than the first twenty-four hours, when the organ can be readily detached from the surrounding structures, and before the formation of an exudation or of an abscess with adhesions among the bowels." The advantage of such early operation he summarizes as follows on page 503: "It is safest, the operation is more easily done, the patient is spared days of suffering, the liability to recurrent attacks is obviated, and an early operation obviates the risk of hernia, which is so common in suppurative cases." In the history of appendicitis, Kelly's monograph will ever rank as a classic.

#### THE MODERN TREATMENT OF PROSTATIC OBSTRUCTION.\*

By T. SHAW WEBSTER, M.B., M.D., C.M.

MR. CHAIRMAN and Gentlemen,— The hope of giving so masterly an exposition of this prominent subject as to disarm criticism has not been entertained, but if I succeed in opening a profitable discussion then have I done that which is vastly more important.

The first paragraph in Deaver's exhaustive work on prostatectomy reads thus: "It is a remarkable thing that any part of the human body liable to such important pathological changes as the prostate gland should have acquired a conspicuous place in surgery within such comparatively recent years. . . . It is only within the short space of a decade that its operative surgery has been deemed of sufficient magnitude to require exposition in monographs of any size. Hypertrophy of the prostate producing obstruction to urination is the cause of the greatest suffering which men are called upon to bear. In a typical case where cystitis is established the agonies endured by the patient are often beyond description. Fortunately the attention which surgeons have given to this subject in the last few years have resulted in the evolution of its treatment so that to-day we can offer these sufferers a safe and sure plan of treatment which results not only in the relief of the painful condition, but in its actual cure and in the permanent correction of the anatomic condition which was the cause of the symptoms."

This quotation from the pen of Parker Syms gives us a "Multum in parvo" statement of the progress of prostatic surgery in recent years.

During this active period many palliative measures have been tried, but all have been abandoned for radical removal of the pathological growth. Among these may be mentioned:

\*Read at the Meeting of the Clinical Society of Toronto Western Hospital, 16th January, 1906.

1. Dilatation with sounds.
2. Catheterization.
3. Castration.
4. Vasectomy.
5. Ligation of the iliac arteries.
6. Electricity.

Dilatation and the daily use of the catheter sooner or later produced cystitis—the bane of prostatics. Deaver states that “Catheterism must be considered at the present day an insufficient remedy except in those who are on the threshold of the grave.”

Castration seldom relieved and had an appalling death-rate, no less than 18 per cent.

It was given considerable vogue by the advocacy of J. W. White, but soon followed its analogue Tait's ovariectomy for uterine fibroid into oblivion.

Vasectomy and ligation of the iliacs were nearly always useless, sometimes fatal, and these attempts to relieve did not survive the experimental stage.

Before McGill of Leeds advocated and succeeded in supra-pubic operative work we had nothing to offer prostatics, except these miserable make-shifts and their attendant dangers.

The surgeon in consultation agreed with this treatment and as a prognostic opinion might fittingly quote: “Let's talk of graves, and of worms and epitaphs.”

According to Eugene Fuller “at the present time most writers on the subject concern themselves with little aside from the operative removal of the obstruction.”

Bottini's galvano-caustic incision held a position midway between palliative and curative measures. It had many ardent supporters for a time, chiefly because general anæsthesia was unnecessary for its performance, cocainization of the bladder being sufficient.

By it only a partial removal of the obstruction was attempted. It merely made canals for the passage of urine.

There were many recurrences of retention and considerable mortality. Sometimes palliative, sometimes followed by incontinence, its results were extremely uncertain.

It also had the great disadvantage of being a viewless operation.

The pioneer of perineal prostatectomy, Goodfellow of San Francisco, did the first deliberately planned operation of this class by median incision in 1890, and had 78 cases to report to the American Medical Association in 1904.

After the skin has been incised in the median line he does nearly all the work with the index finger, making counterpressure over the

bladder. In this way he enucleates the prostate "en masse" and leaves the incision open for drainage.

He has the lowest mortality yet published; 2 in 78 cases.

Freyer did the same enucleation from above and used supra-pubic drainage.

Both these operators found the finger-nail sufficient to shell out the prostate.

The perineal route has been elaborated by the French school, notably by Albarran and Proust and many American surgeons among whom might be mentioned Parker Syms, New York; Lydston, Ferguson, Murphy and M. R. Barker, Chicago; and Young of Baltimore.

These eminent surgeons have perfected the technique of operating so that only the hindrance to urinating is removed and the virility of the patient is preserved by leaving intact the urethra and ejaculatory ducts.

They have also invented special instruments, the most helpful of which are the tractors for bringing the prostate into view.

These are inserted into the bladder through an opening made in the membranous urethra and are so constructed that the gland can be drawn down and removed in full view of the operator. Young's is excellent, but Barker's may be an improvement on it.

#### ANÆSTHESIA.

Prostatics are always men of advanced age. Many of them have arterio-sclerosis, renal complications and cardiac disease.

Cystitis has made some almost insane from loss of sleep and continual pain.

A general anæsthetic under such circumstances is fraught with many dangers.

Of late Goodfellow and Young have used spinal cocainization with very satisfactory results. One-third of a grain of dry sterile cocain is placed in a glass syringe and dissolved in spinal fluid which has been withdrawn. This, when injected into the canal, is not followed by the unpleasant sequelae which resulted when aqueous solutions were used, but it is still too dangerous for general use.

Martin B. Tinker anæsthetises the main trunks of the perineal nerves by passing a hypodermic needle about an inch in front of and internal to the tuberosity of the ischium. He uses Beta-Eucain 1 in 500 with adrenalin 1-120,000 injecting small quantities before the needle as it is pressed forwards.

These methods offer a means of greatly reducing the danger in debilitated cases.



## INDICATIONS FOR PROSTATECTOMY AND THE CHOICE OF OPERATION.

When to operate is of vastly greater importance than how to operate.

Both the suprapubic and perineal methods have been immensely successful and the death-rate is about the same in both, the former 6½ per cent., the latter 4 per cent.

Reginald Harrison, F.R.C.S., London, estimates the mortality at about 10 per cent. and says: "Probably it is rather less with the perineal operation. I have no doubt this percentage might be considerably reduced in many instances by an earlier operation."

The general practitioner to whom these cases first go for relief and cure must advise for or against immediate operation. On him falls the responsibility of seizing the golden opportunity before complications set in. Will he recommend an early benign operation or palliative measures first and after they have ceased to relieve a dangerous late operation?

Formerly prostatectomy was the last resort the forlorn hope and alas too often such is still the case. The more progressive surgeons, however, are recommending the same course as has been followed in cases of cancer or appendicitis or ectopic gestation. As time goes on their number increases and their convictions become deeper.

Parker Syms says in answer to the question, when shall we operate?

1. Frequency—when a patient is suffering from obstruction which necessitates very frequent urination to a degree which entails exhaustion he requires relief.

2. Catheter—when the obstruction requires the habitual use of the catheter the patient is safer to have a radical operation performed than to enter on or to continue in the so-called catheter life.

3. Cystitis—when the patient suffers from repeated attacks of acute cystitis or when he suffers from a marked degree of chronic cystitis he will be safer if radically operated on.

4. Stone—when bladder stone is caused by prostatic obstruction I feel that the patient should have a radical prostatic operation, because if mere crushing of the stone is resorted to stone will reform unless the obstruction to the outflow of urine is removed and because the radical operation is so safe that it adds little or nothing to the risk which a patient runs beyond the danger of the anæsthetic.

Last September at the meeting of the Medical Society of the State of Pennsylvania Dr. H. M. Christian of Philadelphia read a paper on Conservative treatment of the enlarged prostate.

Prostatectomy he viewed as in the domain of major surgery and felt that it was justifiable only when there was acute or chronic cystitis, when catheterism was painful or difficult, or when the occupation of the patient prevented it.

In the discussion which followed Dr. H. R. Gaylord of Buffalo felt there was great danger of infection and probably the production of malignant disease by the continued use of the catheter. Dr. Rich. H. Gibbons of New York urged operative interference in all cases and said it should be done as soon as a collar was discovered about the urethra. Dr. Wm. Rodman of Philadelphia felt that the operation should be the rule rather than the exception, especially if the patients were not over 55 or 60 years of age and urged that it be done early.

Murphy says the indications for operation are:

1. Prostatic enlargement to a pathological degree.
2. Painful and frequent urination.
3. As a cure for catheter life.
4. As a cure for cystitis.
5. For the relief of pressure on the rectum.
6. Prolapsus in the aged with perineal irritation.

Watson of Boston says patients should be given the benefit of radical operative treatment at a much earlier stage of the malady than has been customary to apply it.

Goodfellow, who has the longest experience of all perineal operators, emphatically declares "The indications for operation are symptoms of obstruction. There are no contraindications to operation unless the condition of the patient is such that no operation of any kind is warranted."

On another occasion he said: "I must utter a word of caution. Instrumentation of the urethra and bladder have been productive of great harm and the greater experience I gain leads me to say that unless great urgency exists an instrument should not be entered into the virgin bladder. In this I refer especially to the cystoscope and kindred instruments."

Shall we decide to attack this monstrous demon from above through the bladder or from below through the perineum? It lies below and outside of the bladder in fact in the perineum, therefore, the preference seems to be in favor of the direct perineal route.

There are some cases of elongated middle lobe that can be more easily excised from above and in case the hypertrophied gland is complicated by very large calculus it seems better to make a suprapubic opening and do a supraprostectomy after removing the stone.

On the other hand Young and others have removed very large middle lobes through the perineum and by incising the prostatic urethra on one side he removed a calculus measuring  $4\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$  cm.

Young's technique seems to be the acme of surgical science and the perfection of surgical art suitable for all cases. In rare cases the perineal incision could be supplemented by a suprapubic opening.

Dr. Jas. Price Lewis of Boston gave cultured expression to this subterfuge as follows: "On occasions wherein the choice of operation is in doubt a perineal opening may well be made through which the exact conditions can be more readily determined. If, after such an examination, extraction of the prostate through the incision is decided against, the customary suprapubic incision may be made, using the other for drainage only. By whichever of these various means the individual surgeon learns by experience he can best accomplish the purpose that one is the best for him personally to use, but other things being equal the perineal route is undoubtedly the method of choice."

The consideration of this versatile endeavor to strike a theoretical compromise will seldom be found expedient in the performance of practical work.

#### WHEN NOT TO OPERATE.

If tuberculous disease affects the prostate, areas of softening can usually be detected in the irregularly enlarged organ and evidence of coexisting disease may be found in other parts of the body. Operation is contraindicated in such cases.

Syphilis sometimes invades the prostate and those in whom there is a suspicion of its presence should be given appropriate medication and its effect noted before resorting to radical operation.

#### MALIGNANCY.

Cancer of the prostate is more frequent than is usually supposed. Billroth did the first total prostatectomy for a cancerous growth.

In 100 cases of supposed benign hypertrophy Albarran found 14 cases more or less invaded by carcinoma.

Young concludes that it occurs in 10 per cent. of the cases of prostatic enlargement, and after an extensive study of these cases determined that cancer of the prostate remains for a long time within the confines of the lobes, the urethra, bladder and especially the posterior capsule of the prostate resting inviolate for a considerable period. Extraprostatic invasion nearly always occurs first along the ejaculatory ducts into the space immediately above the prostate between the seminal vesicles and the bladder. He devised an operation by which he removes the prostate vesicles and trigone and then anastomoses the urethra into the bladder incision. Four cases so treated made good recoveries with satisfactory functional results. Remembering these facts we should be very emphatic in our pronouncement for early operation in men over fifty years of age who have a markedly indurated prostate producing obstruction.

## THE EVILS OF DELAY AND THE ADVANTAGES OF EARLY OPERATION.

The foolishness of delay in operating is illustrated by the following case.

T. J., stock-farmer, aged 58 years, until present illness began had not been ill since childhood.

About the beginning of 1900 began to have painless frequency of urination which increased until the summer of 1903, at which time he was compelled to rise 4 or 5 times during the night to pass urine and more frequently in the day time.

In June, 1903, while at work felt a severe pain in the bladder and penis and consulted Dr. J. W. McIntosh, who diagnosed stone and referred him to me in August. At this time his bladder retained twelve ounces of residual urine and he suffered severely, but no increase in size of the prostate could be palpated per rectum. The catheter was used twice a day and in four weeks his residual urine was decreased to four ounces.

The contraction of the bladder and the lifting up of the post-prostatic pouch which followed this treatment caused several calculi to be expelled. Some were as large as peas and at the end of the four weeks he had no symptoms of stone remaining and went home.

Dr. McIntosh continued the treatment for a few weeks after his return when his condition was apparently normal.

Frequency soon returned and he began catheter-life with palliating effect until Jan., 1905, when it produced cystitis of virulent type, and he again passed a number of small calculi.

On June 18th, he came to the Western Hospital for radical operation. He had to urinate every 15 or 20 minutes. The urine was very foul; intensely alkaline, contained mucus and pus in quantity, phosphatic crystals and abundance of streptococci. He could not sit comfortably on a chair owing to perineal irritation, would rest only one hip on the corner of the chair, leaving the perineum free from pressure. Was neurasthenic from loss of sleep and constant pain.

No enlargement of the prostate could be made out by palpation, but it was tender owing to sepsis no doubt.

For two weeks an attempt was made to get the bladder in better condition preparatory for operation, but no gain in this respect was noticeable.

Perineal prostatectomy was done on June 31st, Young's method. Nothing was found in the lateral lobes that could cause obstruction, although the left had a small induration about the size of a bean which was removed, but when the tractor was withdrawn and the finger was passed into the bladder through the urethra a median bar could be felt.

This was enucleated and in size and shape was like a date seed. A large drainage tube was inserted into the bladder and the lateral spaces packed with gauze.

The bladder was irrigated and drained through this tube and it was removed on the fifth day of July, allowing the urine to escape per perineal opening.

On July 10th the urine began to pass by the penile urethra in part gradually increasing. On July 20th the perineal opening closed completely.

He left the hospital on Aug. 11th still affected with foul urine, but able to retain it for 4 or 5 hours at a time.

The cystitis was almost well when he contracted a severe cold which aggravated it, so that he returned to the hospital for treatment on Nov. 5th. The trip to the city made his condition still worse and when he arrived he was suffering from a constant desire to urinate and had to be given opiates in addition to the usual treatment. On Nov. 19th he was improving and could retain three ounces of urine.

Since then he has been encouraged to dilate his contracted bladder by retaining the urine as long as possible once or twice a day.

He found he furthered this object best by compressing the urethra with the thumb and fingers.

His bladder increased in capacity for seven weeks at the rate of one ounce per week approximately, and he now retains ten ounces easily. To-day, Jan. 16th, 1906, the urine has still some alkalinity and other signs of cystitis, but he looks and feels well. We hope soon to report him cured.

An operation before the onset of cystitis would have cured him in 3 or 4 weeks. The agony he has endured during 1905 would have ended one of less vigorous constitution.

The following case shows the advantage of operation performed before the bladder becomes infected.

J. C., patient of Dr. Carveth, who furnished this history.

An outdoor workman, aged 76, no special trouble except colds and indigestion till a few years ago. Then frequency of micturition came on and gradually increased in severity till Sept., 1905, when he was forced to give up work on account of the frequent calls to urinate during the day, and his rest at night was much broken by constant rising in his attempts to empty the bladder. In Oct. complete retention occurred and the catheter was used. After this he could not urinate without the use of the catheter, when this had been continued two weeks. An operation was decided upon and on Oct. 24th he was sent to the Western Hospital under the care of the writer. At this time examination of the urine showed nothing abnormal, it being acid in reaction and free from albumen and casts.

Digital examination showed very large right lobe. This was removed by Young's method and owing to its large size the right ejaculatory duct was torn across during its enucleation. This accident no doubt was the cause of the infection of the right epididymis three weeks later which caused him to remain in the hospital for another month when he was about to leave for home.

Except for this complication he made a good recovery.

The perineal opening was practically closed in twenty days and all the urine escaped by the penile urethra except a drop or two which came through a small fistulous opening. In 35 days the perineum was completely closed and continence was good, the patient requiring to urinate every 3 hours.

He was dismissed from the hospital on Dec. 20th. To-day, Jan. 20th, his general condition is normal and continence has progressed so that he has only one call during the night.

Epididymitis occurred in 12 out of 30 cases in Albarran's clinic. The French surgeons to prevent this annoyance adopted the practice of ligating the vasa deferentia after completing the prostatectomy.

In most cases done by Young's technique the urethra and ejaculatory ducts are so conserved that it seldom occurs. He had 4 cases in 50 prostatectomies and in every case where it occurred the bladder was infected before operation. Except for loss of time and suffering its occurrence is not serious.

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#### THE TREATMENT OF NASAL CATARRH.

For years I used various remedies and met with varying success, until, tiring of one remedy after another, I relied solely on Potassium Permanganate in weak solutions as a nasal douche, but a review of some points in this paper will show why I always sought for something else. Glyco-Thymoline has usurped the place of the permanganate solution in my armamentarium, and after sufficient trial establishing faith, implicit faith, in its specific therapeutics for this connection. A knowledge of its essential constituents and their therapeutic action only tends to strengthen a belief in its specificity. Caution is necessary in the selection and use of remedies, but a fair trial has proven no untoward inconvenience emanating from the use of this remedy. Meanwhile the therapeutic results are gratifying and the good effect of Glyco-Thymoline can be easily verified by a trial, when conclusion will be the result of practical truths only.—*John A. Hale, M.D., Alto Pass, Ill.*

## QUEBEC MEDICAL NEWS

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills, Que.

The Montreal League for the prevention of tuberculosis is to hold a special meeting early in February. This assembly is to be held at the suggestion of Lord Grey as he is very keenly interested in the movement, and desired to be able to attend the whole meeting, which he would not have been able to do had it been arranged for an earlier date. The special phases of the question to be discussed are those of municipal, provincial and federal aid, and the erection of "shacks" for the isolated treatment of patients in an incipient stage of the disease.

At the present time the city makes a grant each year of \$1,000 to the work of the League, but neither the provincial nor the federal government gives anything, nor do the surrounding municipalities.

With the object of obtaining provincial and federal assistance of a practical nature, the ministers and some of the members of the Dominion and Provincial Houses will be invited to attend the meeting.

In regard to the erection of special shacks for the treatment of patients, the League has no land on which to build, but a deputation will wait on the city council and ask them to grant the use of two acres of land on Shakespeare Road for this purpose.

The following is the list of officers elected for the ensuing year: President, Sir George Drummond; Vice-Presidents, Sir William Hingston, Dr. E. P. Lashapelle, J. Reid Wilson, Senator Beique, E. S. Clouston, Dr. T. G. Roddick; Honorary Treasurer, Robt. Archer; Secretary, Dr. E. S. Harding; Asst. Secy., Miss Bengough; Visiting Inspector, Mr. Max. Mireault. The treasurer's report showed that the year's receipts had amounted to \$2,328, and that the League had a balance on hand of \$332.

A movement in favour of medical inspection of schools has been started by the Woman's Club, and is supported by the Hygiene Committee of the city council. Dr. Roddick estimated before the civic committee of hygiene the other day that the schools could be looked after by a corps of young medical men for a vote of some \$5,000. Besides looking into the matter of contagious diseases they will at the same time examine into the condition of the eyes and teeth of the pupils, then a note of advice will be sent to the parents and they can act upon it or not as they see fit.

The committee of the Children's Memorial Hospital has issued, from their temporary quarters on Guy Street, a neat booklet containing the report of the Committee of Organization, the Act of Incorporation, the

Announcement of the Committee of Administration, and a list of the officers and staff.

Arrangements have almost been completed for the purchase of a block of land comprising 60,000 feet, situated on the north side of Cedar Avenue, which is on the south-western slope of Mount Royal. Here the patients can be supplied with an abundance of sunlight and fresh air, while the proximity of the site to the city will be a great convenience both to the staff and the inmates.

The Montreal General Hospital had an increase last year over the preceding year of nearly 5,000 patients. For the year ending Dec. 31st, 1905, the admissions to the wards were 3,210 and the outdoor consultations numbered 44,377, there being 257 admissions during the last month of the year.

At the District of St. Francis Medical Association the question of revision of tariff was discussed, and the committee and secretary were requested to obtain all data possible to submit at the next meeting.

Communications were read from Wolf Co. Medical Society, asking the society to join in several improvements upon the present condition of things in regard to fees paid to medical men in the country.

First, in regard to fees paid expert witnesses at a trial. At present the country physician is paid at much lower rates than the city doctor, a discrimination which seems to be anything but fair when it is realized that the country man has higher expenses and must leave his practice entirely during his attendance upon the court. The second was in respect to fees for insurance examinations, five dollars being the limit set for an ordinary examination, and for fraternal societies two dollars should be the minimum. A few comments were made in favour of those resolutions, but no definite action was taken at the meeting.

The paper of the day was read by Dr. J. F. Rioux on Hygiene of Tuberculosis and X-Ray Therapy. The paper pointed out a few of the ways in which infection was spread and a strong recommendation was made for greater care in the delivery of bread in the towns and cities.

Dr. M. Mackay demonstrated a case of porencephalus in a child aet. 14. The condition had been carefully worked out, there being sections of the cord from the sacral regions up to the pons and crista, and this series was completed by a number of photographs of sections through the brain.

In the morning there were clinics at the Sacred Heart and Protestant Hospitals. At the former Dr. Camirand operated upon a necrosed ilium and at the latter Dr. Williams, after doing a ventro-suspension, anchored a moveable kidney. The meeting was unusually large and the programme of the morning and afternoon particularly interesting. The next meeting will be held at the Monument National, Sherbrooke.



## CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, January, 1906.

### THE SIGNIFICANCE OF THE SPIROCHÆTA PALLIDA IN SYPHILIS.

This subject is attracting much attention at present. Dr. J. G. Fitzgerald, of the Sheppard and Enoch Pratt Hospital, Baltimore, gives a brief review of the history of the search for the germ of syphilis. In the case of the spirochæte pallida it is to be hoped that an organism has been found that will meet the requirements of the Koch tests. The spirochete is long and thin, cork-screw in appearance, very mobile, and difficult to stain. The following stain is given: Twelve parts Giemsa's eosin solution (2.5 c.c. of 1 per cent. solution of eosin to 500 c.c. of water); three parts azur I, (solution 1 to 1,000 water); and three parts azur II, (solution 0.8 to 1,000 water). Very thin smears from fresh syphilitic lesions are made on cover glasses fixed in absolute alcohol for ten minutes, thoroughly dried with blotting paper, and left for sixteen to twenty-four hours in the stain.

### OBJECTIVE NOISES IN THE EARS.

Dr. G. Sterling Ryerson, in a short paper, gives his views of the cause of tinnitus aurium, and reports a few interesting cases. He is inclined to the belief that tinnitus is caused by the fibrillary contraction of the muscular tissue in the Eustachian tube, rather than by spasmodic contraction of the tensor tympani. In the case of a child, two years old, a distinct purring sound could be heard in the left ear. It was thought that this was due to an arterio-venous aneurism. In the case of a young lady a clicking sound could be heard by means of the stethoscope. Treatment of the catarrh in the middle ear removed the condition. A man of 50 years had a tinnitus, and a fluttering sound could be heard by listening to the ear. In these cases no movement of the drum of the ear could be detected.

### TWO HUNDRED OBSTETRICAL CASES.

Dr. E. S. Hicks, of Port Dover Sanatorium, reports his experience in two hundred cases of labor. There were 110 male and 90 female children. The duration of time in the house was an average of  $4\frac{3}{4}$  hours. There were five cases of sepsis, none fatal. The presentations were: O. L. A. 180, O. L. P. 5, O. D. A. 10, breech 2, and shoulder 2. The

perineum was torn in fourteen cases; in these, eight were forceps cases. There were three dry births, twins in one case, anæsthetics were used in 180 cases, and 37 were instrumental labors. One mother died from eclampsia, and six children. Of these children the following was the cause of death: 1 from necessary manipulations, O. P. case; 1 from forceps case; 1 hydrocephalus, perforation; 1 from weak heart; 1 induced labor; 1 craniotomy. In one case there was a double uterus. Two children had gonorrhœal ophthalmia, both recovered. There was one case of congenital heart disease.

Albumen was present in a number of cases, but they all did well on restricted diet, with one exception, which not under treatment in sufficient time. Forceps were used to avoid undue delay. To this use of the forceps the writer attributes much of his good results. There were two cases of post-partum hæmorrhage, but neither had an anæsthetic. Perineal and vaginal lacerations repaired at once. It is stated that chloroform and the proper use of the forceps lessen the chance of lacerations. In one case the laceration did not unite.

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The Dominion Medical Monthly, December, 1905.

#### TRACHOMA AND IMMIGRATION.

This paper is by Dr. J. D. Pagé, Medical Superintendent, Quebec Immigrant Hospital. The writer states that trachoma is a rare disease in this country, and, therefore, even specialists do not see many cases. A careful inspection of immigrants goes to show that it is rather common among them, and that the disease may be introduced into this country by them.

A description is given of the appearances, and the statement of Sweigger quoted that it occurs mainly under bad sanitary conditions, as over-crowding, dirt, etc. It is an infectious disease and spreads readily by means of the discharges. Strong ground is taken that the disease should be classified among those to be excluded. In this respect, the writer refers to the opinions of Drs. Byers, Boulet, and Prowse, all Canadian authorities. In the United States immigrants with trachoma are not allowed to land, but made to return to the port of embarkation and at the expense of the ship company.

The act to amend the Immigration Act is quoted, and the Order-in-Council thereon, with the view of showing the Canadian position on contagious diseases coming into the country. Trachoma is not rigidly excluded from landing, and so some persons have been treated and allowed to pass, while others have been sent back to their original homes. This involves much responsibility on the head of the doctor who inspects the immigrants.

The evil effects of trachoma in some countries are gone into fully and the method of spreading the disease by immigration is mentioned. The opinions of a number of well-known specialists are cited to show that the utmost care should be taken in this matter.

A movement is now on foot to have trachoma included among the diseases that will prevent an immigrant gaining admission to the country.

#### THOMAS SYDENHAM.

Dr. W. J. Fischer contributes this article on the Hippocrates of English Medicine. He was born at Wynford Eagle in Somerset, England. He is said to have been baptized September 10th, 1624. He is spoken of as "the prince of practical physicians."

Little is known of his boyhood, other than that he was under the influence of honest parents, and was probably taught by the local clergyman in Latin.

At 18, he was sent to Magdalen Hall, Oxford, where he matriculated in 1642. The war between the King and the Parliament broke out, and Sydenham chose the side of the latter. Thus he threw his books aside for a sword in the great struggle for the people's liberties. His father and the four sons were known as the fighting Sydenhams, and two of the sons fell in battle. His mother was murdered by a Royalist, named Major Williams. Sometime later Thomas Sydenham met this same Williams on the battlefield. He said to his men "stick close to me, for I shall avenge my mother's innocent blood." He slew Williams who fell dead beneath his horse's feet.

In 1646, he resumed his studies at Oxford and came into contact with Dr. Thomas Coxe, who influenced Sydenham to study medicine, to which he diligently applied himself. After spending a few years at the University, he went to London to practise medicine. In 1648, he was made a Bachelor of Medicine. It appears that he received his degree before he completed his course, through the influence of the Chancellor, the Earl of Pembroke. For once patronage dispensed her favors with a happy hand. In 1648, he was given a Fellowship and the year after, a Bursarship.

At that time the Regius Professor of Medicine at Oxford was Sir Thomas Clayton, who gave some lectures on Hippocrates and Galen. Sydenham studied Cicero with much care and in this way learned his Latin. In 1665, he resigned his Fellowship and was married. He settled in London and his rooms were in the vicinity of Whitehall, close to where Milton lived.

He also studied at Montpellier, and it is said was a student under Barbeyrac, who had a great reputation as a consultant and teacher.

Locke, who also studied at Montpellier, says that Sydenham and this teacher were very much alike in disposition. It is probable he returned to London in 1661, and obtained his license from the Royal College of Physicians in 1663. After his return to London he devoted much study to the diseases of the city. In 1666, the great Plague swept over the city. He removed with his family to Dorset. Here he wrote his book on the "Treatment of Fevers." He also wrote on the Plague. His work on fevers was written in Latin and consisted of 156 pages. His book made a marked impression at the time, and many editions, with changes, appeared.

He wrote also on the treatment of some chronic diseases, on hysteria, smallpox, and gout. This latter book gives an account of his own sufferings from the disease. In 1686, he published his last book, on the Way of Approach of a New Fever. It is in this book that the classic description of Chorea is to be found.

Among his favorite authors were Cicero, Homer, Lucian, Virgil, Horace, Juvenal, Seneca, Hippocrates, and Bacon. Two of his most intimate friends were Robert Boyle and John Locke.

Sydenham was a great and a good man. In his writings he expresses his keen longing to write something that might bring relief to a sufferer, and regards this as more to be sought for than the wealth of Croesus. On one occasion young Dr. Sloane came to him after studying in Europe. He presented a letter showing that he was well versed in anatomy and botany. Sydenham said, "You must go to the bedside; it is there alone you can learn disease." He died in his 65th year, in 1689. In 1810 the Royal College of Physicians placed over his grave a tablet.

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The Montreal Medical Journal, December, 1905.

#### THE MEDICAL OFFICER OF HEALTH.

This paper was read by Prof. J. G. Adami, of McGill University, before the American Public Health Association. He traces the rise of sanitary laws and regulations in Britain from 1875, when the first sanitary or public health act was placed upon the statutes. By this act a Local Government Board was created. In 1894 a second act was passed establishing Rural or District Councils, which may make arrangements for local medical officers of health. In Britain the medical health officers fill a double position; they serve the local authorities appointing them, but they are also servants of the federal authority, and may be called upon to act for the weal of the entire people as well as for a section.

With regard to quarantine and the control of epidemics, this is the only way in which such countries as the United States and Canada can

properly act. The State or Provincial officer must also be federal and act for the whole people. The several districts must be in touch with a central authority and report to it on all matters concerning birth and marriage rates, mortality and morbidity.

First of all the medical health officer must be appointed by the state or province, and must report in duplicate to the state or province and to the central or federal government, in order that the fullest use may be made of his experience. These health officers should have a proper training for the duties prior to their appointment, and that they should not be permitted to act without a diploma in health matters.

It is recommended that there should be a paid officer for about every 50,000 people, and that in districts where there is no regular officer, the federal government should take charge of such areas. In this way efficient service can be secured. These health officers who have secured a diploma should not be made the victims of political changes. Their positions should be permanent.

#### RECENT WORK UPON TETANUS.

Dr. E. W. Archibald discusses some of the problems in the study of tetanus and its toxins. He states that the bacillus was discovered in 1884 by Nicolaier and grown in pure culture by Kitasato in 1890. It has been known since the time of Hippocrates that the toxin of tetanus affected the central nervous system. It was held by some that the toxin travelled by the nerves and by others by the lymphatics. It was finally proved by Meyer and Ransom in 1903 that the only route by which the toxin travelled to central nervous system was the nerves.

After subcutaneous injection of the toxin it can be found in the nerves. When large doses were given, the sciatic of the opposite leg of the guineapig was found affected. The passage of the toxin up the nerves depends upon the integrity of the axis cylinders. When the nerve is divided and degeneration sets in, the toxin does not ascend. If the nerve be divided before the injection is made, the toxin is found only in the distal portion of the divided nerve. It appears that the poison travels only centripetally.

It has also been shown that the spinal centres can be protected by blocking the afferent nerves with antitoxin. When tetanic toxin is injected into a vein and in a short time afterwards antitoxin is injected into the crural and sciatic nerves the hind limbs escape tetanus. This shows that the toxin reaches the cord from the blood by way of the motor nerves, and that if these can be protected by antitoxin the toxin does not travel to the cord.

It has also been shown by careful experiments that the toxin can be prevented ascending the cord by dividing it. When a cat receives a

fatal dose of the toxine in one sciatic nerve, the disease begins in that leg and gradually ascends to the trunk and forelegs and neck. These latter manifestations can be prevented by cutting the lumbar cord after the injection into the sciatic.

With regard to the treatment the following conclusions are arrived at:—

1. Antitoxine is an efficient antidote when in contact with the toxine.
2. It must be brought into direct contact with the toxine by operative means, making the disease a surgical one.
3. The infection being an ascending one, the nerves, the cord, and the lower central neurones must be blocked by the antitoxine by injecting it into these structures.
4. In the case of injections into the cord, it must be admitted to be a somewhat blind procedure, as it is not known to what extent the antitoxine will diffuse itself, but it is logical.
5. In cases that appear to be going on to a fatal ending, the intracerebral injections may be tried.
6. The injections should be given early.

#### SPIROCHÆTA PALLIDA.

Dr. C. B. Keenan showed two specimens of the spirochæta pallida at Montreal Medico-Chirurgical Society. He also showed a specimen of the spirochæta refringens to which it has a close resemblance. This organism was discovered by Schaudinn and Hoffmann. The specimen was obtained from a mucous patch and the other from a primary sore. The true form ends in a tapering flagella, which at times is double, and this is a distinguishing feature. This organism, sometimes called speronema, is found in primary and secondary sores and in the blood of children dying of the disease. It is also obtained from the sores in the artificially produced disease in the monkey.

#### MYXŒDEMA IN THE MALE.

F. G. Finley, M.D., reports the case of a man who had the disease. He was treated with thyroid gland extract from Nov. 5 to March of the next year, and made a good recovery. An excellent clinical description is given of the case.

#### PARANEPHRITIC CYST SIMULATING FLOATING KIDNEY.

Dr. J. M. Elder gives a good account of this case, arising from the remains of the Wolffian body. The patient, a woman, suffered from some attacks which resembled appendicitis. She lost a good deal of

flesh and, finally, took to bed. The cyst felt very much like a floating kidney.

The case was operated upon, when it was found, after the removal of the cyst, that the right kidney was in its normal position. The patient made a good recovery.

In these cases as the cyst enlarges a pedicle is formed, which becomes twisted giving rise to attacks of pain called Dietel's crisis.

#### MESENTERIC CYST WITH ACUTE INTESTINAL OBSTRUCTION.

Dr. Murray MacLaren records this case. The patient was a man, 65 years of age. He was taken with acute obstruction and purgatives and enemata failed to afford relief. The vomiting became frequent and faecal.

The abdomen was opened in the mid line, below the umbilicus. The cyst was rather less than the size of the hand. When it fell into the pelvis it caused obstruction. It contained a yellow fluid. The cyst wall was thin, white, lobulated and sacculated.

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The Maritime Medical News, December, 1905.

#### SCHOOLS USED IN PROMOTING PUBLIC HEALTH.

Dr. G. E. DeWitt, of Wolfville, N.S., treats of this subject in an address delivered before the Nova Scotia Educational Association. He points out that children should be taught what are the breeding places of diseases, and that the pathogenic germs have a great fondness for dampness, darkness and dirt. This is particularly true with regard to tuberculosis, and if steps could be taken to educate the children at school on the conditions causing this disease much would be accomplished towards its prevention.

Information should be placed in the hands of the teachers on the subject of communicable diseases. At the present much valuable time was being lost. Teachers should be trained how to use the information supplied to them on these subjects. In this way a sanitary campaign could be kept up, until the public became well educated on the laws of health and the prevention of infectious diseases.

Attention is directed to the proper regulation of athletic sports. Much attention should be given to this subject, in order that the children should have healthy bodies, as well as educated minds. Sufficient time ought to be given to outdoor exercises during school life to ensure the health of the scholars. The utmost care should be taken that the schools be sanitary in every respect.

## CURRENT MEDICAL LITERATURE

### MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

#### THE ROLE OF SALINE SOLUTION IN THE TREATMENT OF PNEUMONIA.

J. Madison Taylor presents a résumé of the facts relating to the position of the normal salines of the blood plasma, and its contained autoprotective potentialities, the recognition and use of which is capable of furnishing a beneficent agency in overcoming infectious processes. Modern physiological pathology has made good the assumption that the immunizing antibodies appear in the blood whenever an infectious disease terminates in recovery, and that he claims is our greatest weapon in overcoming pathogenic elements. A few observers have called attention to the value of saline solution designed to supply the enormous loss in those essential constituents of the plasma which occurs during febrile states. They have recommended the use of the measure only late in the disease, and in desperate cases. Dr. Taylor calls attention to the extreme importance of following the recommendations of Sajous to employ these measures from the outset, as soon as the disease is recognized, in order to insure the full efficiency of the blood's antibodies, *i.e.* the body's autoprotective powers. Saline solution, used early, preserves the blood's normal fluidity, renders normal osmosis possible, and gives free sway to the immunizing process. He urges that to delay in the use of the salines is just as dangerous as to delay administering antitoxin in a case of diphtheria; and, moreover, that the blood in infections suffers such rapid depletion of saline elements, the effects of which is to impair the efficiency of, and finally arrest the protective functions of, the organism, that this constitutes one of the most active causes of death. The practical recommendation is to begin from the outset in pneumonia and other infectious fevers the internal use of saline solutions, especially those containing sodium chloride and the other saline constituents of the blood. The use of these salines by hypodermoclysis or enteroclysis has been recently shown by a number of observers, acting upon Sajous' advice, to be of great efficiency when used early. The use of the saline drink has been shown by Todd and the writer to be of equal efficiency, and not at all inconvenient or disagreeable.—*Medical Record*, January 13, 1906.



ACUTE YELLOW ATROPHY OF THE LIVER FOLLOWING  
ECLAMPSIA.

L. J. Royster and Charles R. Grandy describe a case of eclampsia in a young woman who had her first convulsion during labor and died two days later. For some time before death she was markedly jaundiced and the autopsy corroborated the diagnosis of acute yellow atrophy of the liver. The authors review the modern theories regarding the relationship of these diseases and sum up their own belief as to their identity as follows: (1) A toxemia is always the primary condition, but it may be severe enough only to produce the early symptoms—headache, lassitude, disturbances of vision, and a diminished excretion of urine and urea, with possible edema and albuminuria. In a few cases this stage has been followed by coma and death, without convulsions, the pathological findings being the same as in eclampsia; (2) in eclampsia (the second stage) the toxemia has become severe enough to interfere greatly with the functions of the liver and kidneys, and to produce the nervous irritation, made evident by the convulsions and coma. The severer poisoning here produces grave lesions in various organs, and often causes death; (3) in acute atrophy of the liver the changes have progressed still further and have practically destroyed this organ. We have added to the convulsions (which, however, do not necessarily occur) a deepening coma, an increasing jaundice, vomiting, and often purging, with blood in the stools, followed practically always by death.—*Medical Record*, January 6, 1906.

## THE TREATMENT OF PNEUMONIA.

Dr. H. A. Hare urges that remedies be administered only when very definite and clear indications for their use were present. In many instances, spurred on by the anxiety of friends, the physician is inclined to give medicines continually throughout the entire course of an attack of croupous pneumonia, forgetting that remedies which are powerful enough to do good may, under certain circumstances, be powerful enough to do harm. Further, it must be recognized that our means of treatment cannot be curative, and should be directed simply to the support of the system, and the regulation of its functions, until the disease has run its course. In many instances rapidly-acting, but fleeting, circulatory stimulants, such as Hoffmann's anodyne and aromatic spirit of ammonia, are all that are needed to bridge over temporary periods of depression. These remedies are not advantageous when used for a long period of time, as they lose their effects and are also apt to disorder the stomach. If digitalis is employed, it should always be in the form of a

preparation which has been physiologically tested, since other specimens of digitalis often vary greatly in their pharmacological activity. Of the remedies which are best for the combating of collapse and circulatory failure strychnine and atropine undoubtedly rank highest; the atropine being particularly valuable in those cases in which there is a gaseous pulse with relaxed blood vessels. Digitalis often fails because the heart muscle has undergone degeneration as a result of the toxemia, or because the high temperature of the disease prevents it from exercising its physiological properties. Mild alkaline diuretics, for the purpose of flushing the kidneys, are useful, and hypodermoclysis may at times be a valuable resource. In conclusion, the author once more urged upon his hearers the necessity of avoiding medication except in the presence of very direct indications for the use of certain drugs. But, on the other hand, he advocated the free administration of remedies which were indicated to meet special conditions arising in the course of the disease. While, on the one hand, we must not be too active, it is an equally great mistake to be unduly passive in the presence of such a grave illness. Nitroglycerine, often used in pneumonia as a cardiac stimulant, is always abused under such circumstances, since it is a circulatory relaxant, and never active as a true stimulant. This is a point overlooked by many members of the profession. The only indication for the employment of nitroglycerine in pneumonia is when the arterial tension is unduly high, and the heart is consequently called upon to do an excessive amount of work.—*Boston Medical and Surgical Journal.*

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#### THE INFLUENCE OF POSTURE IN THE HEART.

In the *British Medical Journal*, Nov. 18th, 1905, W. Gordon, states that change of position affects the normal cardiac sounds and the normal cardiac dulness.

The change produced in the normal heart sounds is an alteration in the character of both the first and second sound. In the upright position the first sound is sharper, while the second sound is duller than in the recumbent position, so that the two sounds are much more alike in the upright than in the recumbent position. Changes in cardiac murmurs produced by altering the position can be explained partly by the action of gravity on the intracardiac currents, and partly by the flattening of the chest which occurs when the patient lies on his back. The changes in the normal heart sounds can be similarly explained, in part, by the different relations of the valves to the weight of blood in contact with them in the different positions. Posture also affects the deep cardiac dulness. In the erect posture the cardiac dulness drops nearly a

rib's breadth further from the clavicle than in the recumbent position, and about three quarters of an inch wider from side to side at the level of the fifth costal cartilage, the increase being greater to the right than to the left. These changes can be explained in the following way: On assuming the erect position the heart tends to fall lower in the chest, and owing to the forward slant of the anterior part of the diaphragm, to also fall forward against the front wall of the body. Thus the cardiac dulness should tend to sink somewhat lower, and to widen out when the upright position is assumed. In disease, where the heart is heavier, this drop may be very marked. In a small number of cases the upper limit of dulness actually rises instead of falling. This might be due to the heart being anatomically more firmly held up than is usual, and to its upper part coming forward into contact with the chest wall.

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#### THE INFLUENCE OF SILVER NITRATE UPON THE COMPOSITION OF THE GASTRIC JUICE AND THE MOTOR POWER OF THE STOMACH IN DISEASE.

In the *Roussky Vratch*, Aug. 20th, 1905, B. A. Baibakoff presents the results of his investigations on the action of silver nitrate in the stomach. He found that silver nitrate had the property of increasing the acidity of the gastric juice. This increase takes place even in those cases in which the general acidity had been in excess before the use of the drug. Therefore, silver nitrate is contraindicated in hyperacidity, in hypersecretion of gastric juice, and in round ulcer. The employment of silver in these affections should be condemned. Silver nitrate is used in ulcer of the stomach, because it is supposed to have a healing effect upon the ulcerated surface, but this effect is problematic, while the silver salts, increasing the amount of hydrochloric acid may be useful in the treatment of diminished secretion of hydrochloric acid, which usually accompanies chronic gastritis. In such cases there is usually a lessened power of digesting proteids. Silver nitrate, as the author's experiments have shown, may to a certain extent influence the very chemistry of a conversion of proteids, favoring their digestion. According to Hayem, the combined hydrochloric acid is the first stage in the digestion of proteids in which acid albumins are formed. The experiments of the author showed that silver nitrate usually increases the amount of combined hydrochloric acid. It also increases the digestive powers of the gastric juice. Therefore, silver nitrate is indicated in cases of diminished gastric juice and diminished acidity. In gastritis it may also act as an anticatarrhal remedy upon the mucosa. Silver nitrate, furthermore, prevents fermentation, the development of gases, belching, eructations,

etc. The motor power of the stomach is increased by silver nitrate, as experiments showed. The amount of stomach contents found in that organ an hour after a test breakfast was less after taking silver than before this drug had been given. It is rather doubtful as yet whether these effects of silver nitrate last any length of time after the drug is discontinued, but the impression gained thus far is that it does not. The dose of silver nitrate should be regulated, according to the indication. Large doses (0.03 gramme three times daily), increase the flow of gastric juice as well as small doses (0.002 gramme three times a day). But the latter are sufficient as a rule when we consider that larger doses present the danger of argyrosis. The mechanism of the action of silver nitrate upon the secretory power of the stomach is still doubtful. The remedy may act upon the glands of the mucous membrane, or it may be absorbed into the blood, and through the circulation act upon the nerve endings of the gastric nerves.

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#### THE ACTION AND USES OF DIGITALIS IN HEART FAILURE.

J. Mitchell Bruce, M.A., LL.D., M.D., F.R.C.P., at the Brompton Hospital for Diseases of the Chest, delivered a clinical lecture on the above topic. This lecture was based on the consideration of one case history, that of a man of 27, a bus conductor, who was in the Charing Cross Hospital from November, 1903, to February, 1904, suffering from failure of the heart with dropsy in connection with valvular disease of rheumatic origin. The valvular lesions were mitral incompetence, mitral stenosis, and aortic incompetence, with well-marked physical signs, including the characteristic murmurs, in addition to which a tricuspid systolic murmur was also audible. On admission, Nov. 23rd, the patient was cyanosed and suffered from orthopnoea, precordial distress and extensive œdema; the pulse was irregular in force and rhythm, the liver large and pulsating.

The case is described as passing through seven phases. He was put on routine treatment, a diet with little fluid, half a dram of compound jalap powder every morning, and he took 10 minims of tincture of digitalis with potassium acetate and tincture of nux vomica every four hours.

The first feature to be noted is the fact that the urine did not begin to increase in amount for some time and it is frequently noted that the diuresis may not be set up for several days, or even a week, during which time recourse must be had to other means of relief; in this case after a week had passed, there was no diuresis and the digitalis was increased to 15 minims a dose, this was followed by an increase in four days of the urine to 100 ounces. The writer emphasizes the necessity

of giving the drug in such doses as will produce its full physiological effect, and of making a proper interpretation of its effects, in this case it might have been suspected that the patient was being poisoned by the drug as the pulse was small, irregular and frequent, but it is to be noticed that it lacked the sledge-hammer quality of impulse and first sound which characterizes the heart poisoned by digitalis.

The next phase of the case was the appearance on the fourteenth day of a prolonged blowing murmur taking the place of the normal diastolic silence, reminding one that not only does digitalis slow the heart by lengthening diastole, but that in doing so it increases the time and also the amount of diastolic reflux; the dose was reduced to 5 minims every four hours and so continued up to the 22nd day. The heart still showed the influence of the drug, and trusting that the condition would permit of its cessation it was withdrawn entirely, but in a few days the pulse was again small, irregular and frequent, and the amount of urine fell to 26 fluid ounces. This proves that although the influence of digitalis persists for some time after administration it must be withdrawn slowly, and continued for some length of time if its influence is to be maintained. On the 33rd day of treatment the patient was again ordered 10 minims a dose. Again it influenced the pulse before effecting diuresis, and the dose had to be increased before the full effect was produced, the pulse rate was decreased to 65 and the urine increased to 96, falling later under the restricted fluid diet to 65 after the extra fluid had been removed from the body as marked by the disappearance of the œdema and dropsy.

Dr. Mitchell Bruce claims that a case such as this outlined proves conclusively the efficacy of this drug as a diuretic and heart tonic. He finds no considerable difference among the preparations of the drug. It is also evidence of the value of drug treatment *per se* when used intelligently. The importance of the comparative estimation of the urine in such cases is well exemplified and the importance and feasibility of establishing by the continuance of the treatment a reserve of heart capability.

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#### QUOT HOMINES, TOT SENTENTIÆ.

The above aphorism appears to apply especially to the various opinions as to the value of consumption sanatoria, and almost every conceivable view has been expressed as regards their value or otherwise.

Dr. Ronald Macfie, of Dundee, lately Medical Superintendent of the Sidlaw Sanatorium for the Treatment of Consumptives, declares that sanatoria for the poor, as at present conducted in England, "are simply a tragical farce."

It is the serious gravity of this statement that induces us to draw attention to it, and this gravity will be at once realized when we state the annual loss to the nation from tuberculosis is, at the present time, between thirty and forty million pounds. Merely to relieve pauperism due to tuberculosis £1,000,000 is annually spent.

Dr. Macfie in an article which recently appeared in the *Lancet* states that there are in Great Britain at present about 200,000 poor consumptives, and about 1,000 beds for these. Therefore about 3,000 patients—i.e., about 1 in 70—a year can be treated; and if all patients treated were cured, the death-rate from consumption would be lowered by something like 1.4 per cent. As a matter of fact, however, only a small percentage of the patients treated are cured. The much-vaunted sanatorium crusade, therefore, which was estimated to stamp out tuberculosis, in reality hardly affects the death-rate.

It may be objected that the sanatorium system in England is as yet only in its infancy, but Dr. Macfie, forestalling this objection, shows that in Germany, where the experiment has been carried out under almost ideal administrative conditions and in a business-like and scientific way, the sanatoria for the poor have not by any means been an unqualified success. There are now in Germany more than seventy sanatoria, capable of treating 30,000 persons in the course of a year. The German Imperial Health Office investigated the after history of 2,147 former patients of these sanatoria, with the following remarkable results:—

Of each 100 cases dismissed as being wholly or partially able to work, only 21 per cent. were able to work four years later; while each of the 100 cases dismissed as being wholly or partially unable to work, 18.27 were able to work four years later.

“Can treatment be of much value,” Dr. Macfie asks, “when so many of its supposed failures survive and outwork its supposed successes?” In the light of the German results, he says, “We are forced to the conclusion that 20 per cent. of cures is the highest that sanatoria on their present bases (unless in Alpine climates) can attain, and in England it is improbable that such a percentage can ever be reached.”

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#### ELECTRO-THERAPEUTICS.

In the December number of the *Monthly Cyclopædia of Practical Medicine* there is an article on this subject by Taylor, in which he states the case generally as follows:

Excluding the x-ray, the forms of electricity which are of practical importance in the treatment and diagnosis of diseases are: (1) the faradic, or induced current; (2) the galvanic, or direct current; (3) the static,

or frictional current; (4) the sinusoidal current, and (5) the high-frequency current. The difference in the effects of these currents is largely one of degree, with the exception of the galvanic current, which has certain specific qualities.

The galvanic current applied to the skin produces: (1) local congestion; (2) stimulates muscular contractions; (3) applied over a gland causes increased secretion; (4) has an electrotonic action; (5) produces a chemic and electrolytic effect; (6) influences osmosis, and, finally (7) is of value as a means of suggestion.

The faradic current does little more than act as an irritant, causing involuntary contraction of healthy muscles and excitation of sensory nerves. Its irritative action produces also some vasomotor dilatation.

When the static current is applied to a motor point muscular contractions ensue. It also is of value as a peripheral counter-irritant, and it produces a powerful psychic effect.

The sinusoidal current has the same physiologic qualities as the faradic current, but has the advantage of producing little or no pain.

The high-frequency current, according to Apostoli, affects powerfully the nutrition of the organism. Rheumatic states, according to the same authority, are benefited by its use. Apostoli is very enthusiastic about the value of this form of current, but an experience, though limited, in the use of these currents has made the present writer less so.

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#### TOXIC EFFECTS OF ASPIRIN.

In *The B.M.J.*, Dec. 30th, Dockray reports a case of poisoning by aspirin which presents some points of interest. The drug was given for an attack of lumbago to a patient who had taken it before, in doses of ten grains to the amount of 100 grains. The most marked effect of the drug was on the sensory cranial nerves, causing when the patient was fully under its influence, numbness and anæsthesia, followed as the patient was recovering, by pain. Except for slight ptosis, which lasted only a few hours, and occurred only at the height of the attack, there was no loss of muscular power. There was no œdema of the scalp or face as has been reported in other cases. The heart was not affected at all; in several of the cases reported there was palpitation or even an appearance of syncope. There was a marked diuretic action. There was a very severe pain in one ear and a bloody discharge therefrom which the writer thinks was due to the drug, this was followed by deafness persisting for some time.

## A PRELIMINARY INQUIRY INTO THE TONICITY OF THE MUSCLE FIBRES OF THE HEART.

In the *British Medical Journal*, Dec. 30th, James Mackenzie, of Burnley, discusses this phase of cardiac action along the lines followed by him in the articles reviewed here during the past year.

In considering the cause of dilatation of the chambers of the heart the writer was struck with the inadequacy of the explanations usually given for this condition, namely, a forcing of the walls outward by an increased pressure within the chamber, inasmuch as the increased pressure within the chamber is due to the contraction of the walls themselves, and one cannot assume that in the process of contraction dilatation occurs. Study of particular cases shows that neither the difficulty opposed to a chamber during its emptying nor the distending force during its diastole is the cause of dilatation as cases are observed in which a weakened heart muscle may work against an increased arterial resistance even to rupture without dilatation, and dilatation may occur even when the diastolic force filling the ventricle is greatly diminished as in cases of pure mitral stenosis.

We are thus forced to the conclusion that the determining factor is a vital and not a mechanical one. Permanent lengthening of skeletal muscles is due to a loss of tone and as dilatation is due to a lengthening of the heart muscle fibres it would seem to follow that the true explanation is to be found in a loss of tone, and Gaskell has shown that the heart muscle possesses this function equally with skeletal muscle and that it is possible by means of drugs to depress or excite this function. But the question is not so simple as this would make it appear, for dilatation depends on the failure of tonicity only in certain parts of the musculature of the heart. Functional murmurs and regurgitation of the blood into the veins of the neck also result from lack of tone in the heart muscle, and these signs may occur separately. Dr. Keith has shown that the musculature of the heart is made up of bundles with definite attachments and functions like the skeletal muscles, but it is also true that different muscle bundles have individual functions developed more than others, some having such functions as rhythmicity, or contractility specially developed, and some tonicity. The latter function is necessary for the maintenance of the action of the fibres around the orifices, while those bundles constituting the apex of the ventricle require a special development of contractility. Functional murmurs then may be explained as due to a depression of the tonicity of the fibres around the mitral or tricuspid orifices as the case may be, and this often exists where there is no enlargement of the heart, just as enlargement may exist where there are no murmurs.



A similar explanation seems to be available for regurgitation from the heart into the veins, for the old explanation of the closure of the caval orifices by the contraction of fibres in the walls of the veins is overthrown by Keith who has shown that there are no circular fibres in the walls of the inferior vena cava and very few in the superior, but that the closure is due to contract on of special bundles in the auricular wall. Lack of tonicity in these causes regurgitant murmurs and thus we may have no such murmur in a heart greatly dilated.

The cause of such depression of tonicity the writer is inclined to ascribe to the action of toxins, in as much as numerous cases appeared in those drinking beer contaminated with arsenic, and he suggests that in cases of anæmia there may be a toxin which causes this condition. Digitalis as Gaskell has shown primarily affects the function of tonicity, and hence its usefulness in such cases.

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## SURGERY.

Under the charge of H. A. BEATTY, M.B., M.B.C.S., Eng., Chief Surgeon Canadian Pacific Railway, Ontario Division; Surgeon Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

### THE OPERATIVE TREATMENT OF SIMPLE FRACTURES.

In the *British Medical Journal*, Nov. 18th, 1905, W. A. Lane states that the operative treatment of simple fractures is plain, and the risk practically nil. Even where the bone is friable or thin good results can be obtained. All swabs must be held in forceps. The skin must be thoroughly cleaned, which may take some days; it is best done by moist compresses and careful scraping. After exposing the fragments and removing all material and clot intervening between them, they are brought into accurate apposition, and retained there by screws, silver wire, or staples. Generally speaking, the screw is by far the most efficient and powerful means of retaining the fragments immovably on each other. Care must be taken not to split the bone. All instruments must be long enough to prevent the fingers touching the wound. If silver wire be employed, it must be pure, and before use it should be raised to a red heat to increase its flexibility. If there is much oozing a drainage tube may be employed. If staples are used, the portions penetrating the bone should be serrated to prevent their working out. In most cases a splint is required after the operation, but this may be impossible in cases of a femur ankylosed at the hip in flexion. Taylor reports a case of ununited fracture of the clavicle, which was successfully treated by operative methods. A semilunar flap, including some muscular fibres, was turned up, exposing the clavicle. No bone was removed, but after

refreshing the surfaces, a stout silver wire was passed from above downwards and a little forwards, about one-third of an inch from the ends of each fragment. The wire was tightened and twisted, thus securing firm apposition, and the ends were ripped off and bent well under the bone to prevent subsequent irritation.

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#### THE CONDITION OF THE BLOOD AFTER OPERATION AND FRACTURE.

In the *Edinburgh Medical Journal* November, 1905, F. J. Dawson presents the following conclusions: 1. A rise of temperature of  $1^{\circ}\text{F}$ . often occurs the day after an operation. This may continue two or three days and is independent of the appearance of the wound. 2. After every operation the leucocytes apparently increase independently of the numbers of the red corpuscles. The maximum is usually reached a few hours after the operation, after which the leucocytes gradually return to the normal. 3. The increase is due to the enormous increase in polymorphonuclears and mononucleateds, the latter being most marked when the polymorphonuclears are on the decrease. 4. The small mononucleateds are decreased and reach their minimum on the day of the operation. The eosinophiles are usually reduced in number, and the number of the mast cells varies. 5. In some cases a faint glycogen reaction may be obtained in the polymorphonuclears. These changes signify a reaction of the body to something introduced from without. It is almost impossible to exclude bacteria from wounds, and if present they would cause reaction of the tissues whereby the leucocytes could overcome them without pus formation. The leucocytosis, is therefore, protective, but if the leucocytes do not decrease by the second day the wound is probably septic. It is evident that to obtain the best results the blood should be examined before the operation and some hours after the operation.

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#### PERFORATION OF DUODENAL ULCER WITH DIAGNOSIS AND TREATMENT.

In the *Glasgow Medical Journal* September, 1905, C. G. Cumston remarks that perforation of duodenal ulcers is not infrequent. These ulcers are usually located near the pylorus, the perforation and the ulcer usually being in the anterior wall. They are mostly clean cut and single, though occasionally there may be more than one. Acute general peritonitis rapidly follows the accident, and in most cases is fatal. The symptoms to be noted are those which occur before perforation, the symptoms of perforation, and the symptoms of the resulting peritonitis: Of the first series there may be flatulency, pain in the epigastrium, vomiting, or hæmatemesis. Of the second series there is sudden and acute

abdominal pain which usually results in collapse. The sense of a tearing organ and of liquid flowing into the peritoneal cavity has been experienced in some instances. Or there may be a chill followed by a rise in the temperature. Physical examination will usually reveal the presence of both gas and fluid in the abdominal cavity. The symptoms of peritonitis are vomiting, constipation or diarrhoea, tympanitis, and dyspnoea. They progress very rapidly and are in most cases concluded in forty-eight hours. Should adhesions occur, as has been reported in rare instances, the infecting material may become encysted. It is often followed by other serious symptoms, perhaps by a second perforation, unless there should be surgical interference. The diagnosis is based upon the sudden sensation of tearing, followed by pain, collapse, the disappearance of hepatic dulness, and the appearance of tympanitis. Should the patient live sufficiently long to develop peritonitis the differential diagnosis should be with intestinal occlusion, but in the latter the symptoms make their appearance more slowly than in peritonitis. Abdominal section at the earliest possible moment after the subsidence of the initial shock is the only rational treatment, and if the perforation be not found it will at least be possible to drain the abdominal cavity with large tubes and gauze packing.

#### GLASS AS A SUBSTITUTE FOR LINT IN THE TREATMENT OF GRANULATING WOUNDS.

In *The Lancet*, Nov. 18th, 1905, J. L. A. Aymard advocates the use of a rigid aseptic substance, such as glass or celluloid, in the treatment of granulating wounds.

In wounds of the arm the glass is separated from the arm by the interposition of wool around its edges, a light splint placed on the opposite side of the arm, and the whole held in place by a bandage. The advantages are: 1. Perfect levelling of the wound, doing away with the necessity of cauterizing overgrowing granulations. 2. Painless dressing. 3. Absence of hæmorrhage. 4. Rapidity of healing process, reducing the same by at least one half. 5. An aseptic covering, as compared with lint. 6. An extremely cheap dressing. 7. The glass enables the wound to be examined without removal.

#### A METHOD OF STERILIZING SPONGES.

In *The Lancet*, Oct. 14th, 1905, P. W. Andrewes recommends the use of the following mixture for sterilizing sponges: Thirty-seven grammes of ammonium persulphate are dissolved in 950 c.c. of pure distilled water and 11 c.c. of strong hydrochloric acid are then added. When

first made up the mixture has no very extraordinary germicidal powers, but in the course of a few days these become very pronounced, and when six days' old it will kill anthrax spores in less than one minute. It retains its efficiency for many weeks. It is a perfectly clear colorless solution, with no staining powers and no injurious action on the skin.

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### THE QUICK CURATIVE TREATMENT OF GONORRHEA.

Frederick A. Lyons reports a series of 400 cases of acute gonorrhoea treated by the quick curative method during the last ten years, in 384 of which, that is, 95 per cent. of them, the disease was cured in six days, and in about 80 per cent., in twenty-four hours. This method was published by him ten years ago, and consists of injections into the urethra of one drachm and a half of solution of silver nitrate, at first in 4 per cent. strength, later in 2 per cent., and 1 per cent. strength. In most cases a single injection was sufficient. It produced little pain, and after it the gonococci had disappeared from the secretion. If they were still found the injection was repeated. When not cured by three injections the treatment was not continued. The method depends for its effect on the fact that early in the disease the gonococci lie entirely upon the outer layer of epithelial cells, multiplying on them, destroying their vitality and causing them to exfoliate. At this stage the microscope shows many gonococci on the epithelial cells. There follows congestion, afflux of serum, exfoliation of all the epithelium until the subepithelial tissue is laid bare. There will now be in the discharge few epithelial cells and many pus cells. At this time the gonococci penetrate the connective tissue. As long as there appear under the microscope epithelial cells studded with gonococci, so long are the germs within reach of the germicide, and the case is amenable to quick treatment. The exfoliation of the epithelium caused by the silver nitrate only quickens the exfoliation produced by the disease and destroys the gonococci and does no harm.—*Medical Record*, November 4, 1905.

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### GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital;  
Consulting Surgeon Toronto Orthopedic Hospital.

#### A NEW METHOD OF VENTRAL FIXATION OF THE UTERUS.

W. G. Richardson, M.B., F.R.C.S., Newcastle-on-Tyne, sets forth the details of a new operation for ventral fixation of the uterus, in a recent issue of *The Lancet* (British). He reports 12 cases. He contends that rupture of the perineum is not the only cause for procidentia, and

goes on to state that a general laxity of the pelvic and perineal connective tissue would appear to be the chief cause of prolapse of the uterus.

Ventral fixation, as usually performed, may relieve the patient, but it cannot be depended upon; and three operations may have to be combined, perineorrhaphy, colporrhaphy and ventral fixation. But such a procedure is very severe and it retains the defects belonging to ventral fixation. The usual operation for ventral fixation has for its object the formation of adhesions between the uterus and the abdominal wall, but this has the defect that all such adhesions tend to disappear or become elongated, forming long bands which are a source of great danger. The method is as follows:—

1. Open the abdomen in the middle line from the pubes to the umbilicus.

2. Retract the left side of the wound and take hold of the left round ligament of the uterus, then draw on it until it is tense between the point held and the inguinal canal. Catch it with two clip forceps as near to the inguinal attachment as can conveniently be done and divide it between the clips. Ligature the distal end and remove that clip, dropping the stump. Retain the clip on the proximal divided end.

3. Repeat this on the right side.

4. By means of the two clips upon the proximal divided ends of the round ligaments draw the uterus up towards the abdominal wound. Some tension will thus be made upon the peritoneal attachments of the round ligaments and, as a rule, the peritoneum will stretch sufficiently to allow the uterus to come up into the wound, even, in some cases, as high up as the umbilicus, but it may be necessary to make a few cuts with the scissors in the edges of the peritoneal attachments, in which case care must be taken not to cut right up into what may be called the "axillæ" of the round ligaments lest any vessels be injured. They are troublesome when cut. Lift the uterus by its round ligaments as high up in the abdomen as it will reach without undue tension and with the eye mark the position. In some of the cases of complete procidentia the uterus was purposely left outside the vulva before the abdomen was opened and it came up without any difficulty when drawn upon by the round ligaments.

5. At the place to which the fundus of the uterus reaches catch hold of the skin and superficial fascia on the left side of the wound and draw on them, at the same time separating them from the abdominal aponeurosis by thrusting in the handle of a scalpel as far as the outer edge of the rectus abdominis muscle. Withdraw the handle of the scalpel and pass a pair of clip forceps into the track thus made as far as a point one and a half inches from the middle-line incision and then thrust the

clip forceps through the aponeurosis, the rectus muscle, and the peritoneum into the peritoneal cavity; with the clip catch hold of the end of the left round ligament and draw it through the abdominal wall, keeping the clip attached.

6. Repeat this on the right side and then by dragging upon both round ligaments the anterior surface of the uterus will be seen to come up and to lie against the anterior abdominal wall.

7. Whilst an assistant keeps up traction upon both round ligaments and so retains the uterus in its new position sew up all the abdominal wound, except the superficial fascia and the skin, in layers with catgut. Let one or two of the sutures of the peritoneal layer be passed through the peritoneal coat of the uterus and thus occlude the passage between the abdominal wall and the uterus, through which it is conceivable that a loop of small intestine might find its way and so become obstructed if the passage were not closed. It is for that reason only and not for the purposes of suspension that the opposed surfaces of the uterus and the abdominal wall are sutured together.

8. Lay the left round ligament at right angles over the front of the aponeurosis and across the middle line as far as the point at which the right round ligament emerges. Ligature the left round ligament at that point and use the ends of the ligature to sew the ligament to the aponeurosis there. Cut off any redundant ligament.

9. Do the same with the right round ligament and the two ligaments will then lie side by side across the front of the aponeurosis. Additional security is made if a few sutures attach the edges of the round ligaments to one another and also to the aponeurosis, but care must be taken to see that too much of each ligament is not included in each suture lest the blood-supply beyond be diminished.

10. Suture the skin and the operation will be completed.

The height to which the uterus is raised varies in each case and depends upon the extent to which it had been prolapsed prior to the operation. In some cases, in which a vaginal examination was made before the patients had left the operation table, it was just possible to reach the cervix uteri with the index finger, while in others the uterus did not require to be raised so high.

In severe cases where there had been a large cystocele and rectocele there was considerable laxity though no prolapse of the vaginal walls when examined at the conclusion of the operation. In others there were varying degrees of rupture of the perineum, but only in two cases, in each of which the rupture extended through the sphincter ani, was the perineum operated upon.

The advantages of this method appear to me to be as follows: 1. It is a simple operation in which there is a minimum amount of bleeding

and shock. 2. It can be performed rapidly, a point of considerable importance in fat women. 3. There is no fear of hæmorrhage from needle punctures of the uterus. 4. Patients have very little pain during the first few days as compared with those upon whom the usual operation has been performed. They are able to be moved in bed more easily and can, without dragging pain, lie comfortably on either side. 5. There are no sutures to be removed. 6. There is no fear of the formation of long bands of adhesions. 7. The uterus is permanently held in excellent position.

Incidentally another advantage follows this method. In those cases in which there was a cystocele or a rectocele or both and in which, immediately after the operation, the walls of the vagina were redundant, it has been found that the cure of the prolapse of the uterus has been followed by reduction of the "slack" of the vagina, a fact of much interest as showing that their overgrowth had been due, at any rate in part, to congestion which was corrected as soon as the uterus was held high, the correction being followed by a return to the normal state.

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## OBSTETRICS AND DISEASES OF CHILDREN.

Under the Charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,  
McGill University, Montreal.

## THE SCIENTIFIC PRINCIPLES UNDERLYING MILK-FEEDING OF INFANTS.

Thomas S. Southworth says that an important problem in infant feeding has been the question of how milk whose composition and properties remain practically the same throughout lactation can be equally suitable for a digestion that is at birth feeble and at weaning able to care for adult foods. The explanation is that the milk itself is directly instrumental in developing the digestive tract through the changes in consistency of the curd caused by the alterations in the composition of the developing gastric juice. The infant's first semi-solid food is produced by the action of rennet alone, then hydrochloric acid and pepsin are secreted in larger and larger amounts, the effect of the acid being to cause the curds to become more and more solid, while the pepsin is provided to digest them. In this way the amount of work for the stomach keeps pace with gastric digestion. The most suitable foreign milk to use for infant feeding is that of the cow, but the measures adopted to secure the digestion by the infant of a sufficient amount of the casein of cow's milk to maintain the tissues and promote growth will have to be decided by the physician for each individual infant, and the art of infant feeding as distinguished from the science of infant feeding, is principally wrapped up in this one point. It is for the physician

to determine: whether he will make such addition to the milk that it will remain in a semifluid state; whether by the freer use of some alkaline antacid like bicarbonate of sodium he will completely neutralize the acid of the stomach and throw the digestion of the food into the intestine; whether he will use a gruel diluent to mechanically separate the milk curd; whether he will combine several of these measures; or whether perchance, in cases of particularly difficult casein digestion, he will stop milk entirely and temporarily feed some substance which will not form a solid in the stomach.—*Medical Record*, January 13, 1906.

#### CARE OF INFANTS IN PUBLIC INSTITUTIONS.

H. M. McClanahan, Omaha (*Journal A. M. A* November 18), remarks on the special difficulties encountered in the care of infants in institutions, and gives the experience at the Child's Saving Institution at Omaha for the past four years. A marked decrease of mortality was noted with the employment of trained nurses, and this he attributes entirely to skilled help. He claims, also, for the physician greater authority than is sometimes allowed, especially in children's hospitals, in the management of the diet, and the control of nurses. He describes the conditions in the institution, the unavoidable crowding and the means taken to secure good ventilation and disinfection. Special attention is given to disinfection of soiled napkins and those who handle them. He considers that there is more danger of gastrointestinal affections from this source than from the bottles or the milk. Other rules are that all the food for a given time is prepared by one nurse so as to fix responsibility. All infants are fed on modified milk, which, during the summer, is pasteurized, and when infants use pasteurized milk it is a standing rule that they receive orange juice once a day. Another rule of great value is that of isolating children as soon as they are observed to be at all ailing, whether it be a cough, a rise in temperature or an offensive bowel movement. By following this rule it has been possible to prevent the spread of any contagious disease.

#### OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otolaryngology, Medical Faculty of the University of Toronto.

#### THE TREATMENT OF ACUTE NON-SUPPURATIVE OTITIS MEDIA.

Edwin Pynchon, M.D., of Chicago in the *Columbus Medical Journal*, for March, 1905, writes that owing to the frequency with which acute or catarrhal otitis media occurs, particularly during child life, its prompt and correct treatment is of the greatest importance.



Chronic inflammation of the Schneiderian membrane, extending through continuity of tissue to the Eustachian tube, is an important etiological factor to be considered and, in a general way, defective nasal respiration associated therewith, whereby the nasal secretion, instead of being evaporated, is retained, so through deterioration it causes or intensifies the chronic inflammation alluded to. In the very young, enlarged tonsils and adenoids can be justly credited with being the almost invariable causes of the obstruction, which accounts for the defective nasal respiration, while in older patients intranasal hypertrophies, or intumescence from local or systemic causes, are often additionally present.

The natural collection of infective material about the tubal orifice is largely due to the structural formation of the post-nasal space, as well as to the proximity of this orifice to Luschka's tonsil which, when either hypertrophied, or in that not infrequently observed condition of degenerative atrophy, becomes an ideal culture field for pathogenic organisms.

In the development of an acute otitis media, there is first a brief stage of intra-tympanic rarefaction, owing to tubal stoppage, with the m. t. retracted, whereby, owing to negative pressure, serous or hemorrhagic exudate in the middle ear is induced, which in turn, through imprisonment, soon causes pressure with a bulging drum head, and may be considered a second stage. As the secretion is retained, it becomes more viscid.

Among the symptoms of acute middle ear trouble, pain may be regarded as the most important, though it is not always present, and is more liable to be of brief duration in young children, owing to the shorter and wider Eustachian tube an exit of the middle ear secretion is more readily secured than with adults. Subjective sounds and reduced hearing acuity with fullness of ear are promptly noted by adults, though rarely complained of by children. In adults autophonia is commonly reported, and vertigo occasionally, while delirium and convulsions are chiefly manifested in children. In all cases there is some febrile reaction, which in children may be quite pronounced, constituting the most important symptom. In fact fever when of sudden development, particularly in children, may at any time suggest ear trouble.

Among the exciting causes the exanthemata and grippe are of the most importance from a numerical standpoint, though typhoid, acute nephritis and pneumonia must be mentioned. When grippe is the cause there seems to be an increased danger of serious otitic infection. Another common exciting cause is the getting of water in the post-nasal space while bathing, or from the improper use of a nasal douche,

in which case the water entering the e. t., carries in micro-organisms from its entrance. In fact, any exposure which results in coryza may cause an acute ear trouble, particularly when vigorous sneezing occurs, or when the nose is too vigorously and incorrectly blown.

The ideal treatment in this condition, when possible to be employed, is the prompt and early use of the intra-tympanic air douche. Inflation for this purpose has been both praised and condemned by different writers, though all appreciate the fact that a cure can be facilitated by the re-establishment of tympanic drainage and the restoration of atmospheric equilibrium. The question is, how may this be safely and readily accomplished. The tube being stopped, an increased pressure is required, particularly by the method of Politzer, in order to pass the obstruction, and in fact with the necessary pressure required in order to effect Politzeration, the fluid in the tympanum may be driven into the mastoid cells, or the drum head ruptured. Furthermore, infective material from the tubal entrance may thus be driven through to the tympanum so the patient is subjected to both intense pain and the danger of further infection. With this view, it is not strange that many writers should decry the use of the air douche and should instead advise paracentesis whereby is imitated nature's alternate plan of termination when resolution fails.

The method, in brief, consists of the use of a constant in place of the intermitting air current, having at hand means for absolutely controlling and regulating the air pressure, and always employing a catheter, and using a vapor or nebula in place of thin air, for it must be a poor nebula indeed that is not better and more aseptic than unmedicated air.

Generally speaking, in the treatment of acute ear inflammations, hot aqueous douches are, for many reasons, to be preferred. For several years, in such cases, I have depended largely upon the frequent employment of a hot one per cent. carbolized douche, to be used at least every two hours, while during the interval dry heat is continuously applied with the aid of a Japanese hot box. In order that the douche will be properly used, I give the patient a printed sheet of directions, of which the following is a copy:—

“Dissolve one teaspoonful of carbolic acid in a teacupful of hot water, and stir with a teaspoon until thoroughly mixed or dissolved. Then add enough warm water to make one (1) pint. It should, when used be as warm as can be comfortably borne by the ear. The best kind of a syringe to use is a fountain syringe, of not less than the No. 2 size, which holds one quart. Put in the bag the warm solution which has been prepared and hang the bag as high as the top of a door, so that when the patient is seated there will be a fall of about four (4) feet

from the bag to the patient's ear, though the height of fall should be so adjusted as to never cause discomfort. If at all painful lower the bag.

"Use the smallest size of hard-rubber tip, which should be slightly introduced just within the opening of the ear, but *must never be pressed in against the ear so hard as to cause pain or prevent the free escape of the injection* into a bowl which should be held below the patient's ear.

"Use the entire pint in this way in one ear and, when required, use a similar quantity in the same way in the opposite ear. Repeat the injection 8 to 12 times daily as directed."

Lastly, if there is not a prompt subsidence of pain and the other manifestations, paracentesis must be done, and the call for this step hinges largely upon the stage of the disease and upon the character and location of the intra-tympanic contents. In the more mild forms of infection, the retained secretion is a serous transudation in the atrium, while in the more virulent infections, which are considered suppurative, the tympanic vault becomes involved, and, in fact, as soon as this location is known to be the field occupied a free paracentesis should be done without delay.

I must add that after the drumhead opening, whether by spontaneous rupture or by incision, I have failed to appreciate any disadvantage from the use of the hot carbolized douche, when used with the precautions specified on the printed sheet of directions, and when douches can be employed with sufficient frequency, I greatly prefer this method instead of the use of the so-called "dry treatment," until the discharge has practically ceased, when the latter method is admirable until the drumhead has healed.

## LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., C.M., Belleville, Fellow of the British Society of Laryngology, Otology and Rhinology.

### THE SUBMUCOUS OPERATION FOR DEFLECTION OF THE NASAL SEPTUM.

Dr. A. Coolidge, Jr., in the *Boston Med. Jour.*, writes: During the past year this operation has been the subject of several papers which, without introducing anything essentially different from the methods of the few preceding years, contain many interesting details of technique and instruments. Killian describes his operation in detail in a paper which should be carefully studied. He considers that the essential feature of his technique is the use of his long specula. After the mucous membrane has been separated from both sides of the septum the specu-

lum is passed through the incision in the mucous membrane, and one blade through the incision in the cartilage also. The blades then have the denuded septum between them, in a median space between the two septal mucous membranes. By opening the speculum this space becomes large enough to give ample room for the removal of as much cartilage and bone as is necessary.

A description of the operation by Freer appeared in this Journal a year ago. Another comprehensive paper by the same author describes not only his own methods, but also reviews the details of the operations of others. He advises the older form of incision through the mucous membrane, two cuts at right angles to each other over the angles of deflection, in preference to the single anterior incision of Killian, Hajec and others. Among his interesting conclusions may be mentioned the following: The operation is adapted to children, but the chance of a possible recurrence from the effect of growth demands a very complete removal of the deflection. The firmness, and, therefore, probably the cartilage and bone of the septum, is completely or nearly completely reproduced in the window after the resection. The lower portion of the quadrangular cartilage, as high as the level of the *alæ nasi*, may be resected without fear, from its anterior inferior free border horizontally back to the bone. The recumbent position of the patient is best for the operation, except in operating along the nasal floor. The presence of a nasal angle in an instrument complicates its movements, and makes it necessary to hold it with a stiff wrist and fingers, thus sacrificing the lightness and accuracy of motion of straight instruments. With the exception of fragments cut with the chisel from the *crista incisiva* or anterior end of the vomer, neither cartilage nor bone should ever be broken, twisted or torn from its attachment, but should be cleanly cut away. Sewing is needless; strips of lint impregnated with subnitrate of bismuth makes the best tampon. The author introduces the strips in layers by which the flaps are perfectly held in place.

Ballenger has introduced an ingenious knife in which a stirrup blade swings as a swivel between the tips of two prongs. The prongs are placed astride of the denuded cartilage which is cut by the blade as the prong tips describe the outline of the cartilage to be removed. As much cartilage as is desired is thus quickly removed in one piece.

A modification of the incision through the mucous membrane is described by Yankauer. A single vertical incision is made so that its lower end corresponds with the anterior edge of the nasal floor. It is then continued outward on the floor of the nose half way to the *ala*, and the mucous membrane, perichondrium and periosteum are separated and reflected outward upon the outer wall. This gives a large amount of room for subsequent work.

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## EDITORIAL.

### SHOULD A PAINFUL LIFE BE ENDED?

Bystander (Mr. Goldwin Smith) in *The Weekly Sun*: "There does not exist a more humane or conscientious man than Professor Eliot Norton of Harvard University, who supports the movement for putting an end to life when, prolonged, it can be nothing but pain. The professor thinks that the duty of prolonging human life has been pressed too far. He can hardly say that we are too sparing of human life in the age of the Russo-Japanese battlefields, of Russia turned into a slaughterhouse, of two years and a half of carnage in South Africa for the satisfaction of Mr. Chamberlain's ambition and Johannesburg's greed. However, there are cases in which, apart from some highly spiritualist theory of the soul and its connection with the body, the prolongation of life is a curse. Nobody can see without shuddering the contents of an infant hospital for incurables, or doubt that death in all those cases would be a happy release. So with cases of incurable and agonizing disease or of hopeless insanity. In putting an end to merely bodily suffering, you can hardly be said to violate the sanctity of human life. Life there is, but it is not human. It is unjust and absurd to treat as a lunatic Prof. Norton, or anyone who gives utterance to a thought which must have occurred to every witness of hopeless, useless, and lingering agony. But the time is not yet; and when it comes the most jealous precautions will obviously be required."

Readers of Grecian history will recall the Spartan law that sickly and deformed children were exposed to death in a glen on Mount Taygetus. But this custom never became general with the nations, and though modern civilization owes much to Greece and Rome, it has never copied from the former the Taygetian Mountain, nor from the latter the Tarpeian Rock.

There are cases of lingering and painful bodily illnesses, or equally lingering and hopeless cases of mental derangement, which the closest and fondest of friends would gladly see end by death. In the language of the Roman, these are cases to which the words *ita sine vita vivere ita sine morte mori*, thus without life to be living, thus without death to be dying, are particularly applicable. But while it may be the longing desire of the friends to see such a one at rest, they would shrink from the thought of having even such a wretched life cut short by wilful hands.

Any arguments that might be advanced in support of relieving the incurable sufferer of his burden of earthly woes, could be advanced with much greater force in the case of children who are born in an incurably deformed condition. The belief in the sacredness of life cannot be held with too great tenacity. It is better that many should be allowed to endure their sufferings till the time of their natural demise arrives, than that even one should be wrongfully deprived of life.

It is now almost universally admitted by the medical profession that it is a justifiable act to sacrifice the foetus for the mother. But this advance had to be fought for long and hard. It may be that in time, opinion may come to the conclusion that the Spartan custom, at least in so far as hopelessly deformed children are concerned, would be a good one to follow. The propriety of inducing premature labor in certain conditions was put to John Hunter by W. Cooper, in 1768. This question was answered in the affirmative. It may be that the one who induces the profession to become equally unanimous on the advisability of cutting short the lives of infants born with certain grades of deformities, will be to such a procedure as Hunter and Fodéré are to necessary premature delivery.

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#### THE MUNICIPALITY IN THE PREVENTION OF TUBERCULOSIS.

In a recent issue of the *Edinburgh Medical Journal* there appeared an article from the pen of Dr. John Robertson, in which he discusses very fully the question of the prevention of tuberculosis. In England he points out that in five years tuberculosis causes 280,000 deaths; bronchitis, 240,000; pneumonia, 200,000; old age, 160,000; cancer, 140,000; and diarrhoea, 120,000. He points out, too, that the majority of the victims are young adults, and that as the disease is a very lingering one it is necessarily a very expensive one.

Another feature of the paper of considerable interest is that in some districts the disease is much more prevalent than in others. For example, in one place the death rate was 2,955 in four years per million, while in another locality it was only 832 for the same period and number of persons. Such variations can be found in many places in England, especially in the large cities. This goes to prove infection on the one hand, and poor sanitary conditions on the other.

From his studies he draws the following conclusions: The infants are not born with the infection; that the bacillus gains entry into the body through the air or the food; the amount of resistance to invasion varies very greatly; the growth of the bacillus in the body is usually

very slow; and that the main danger of infection is in the sputum which may be expelled from the mouth some distance in coughing, or dried and carried about in the air.

The two lines along which the disease can be prevented are bettering the houses and improving the health of the people. To attain these two ends much may be done by municipal regulations with regard to buildings, and the proper care of the sick. He takes strong ground that the disease should be reported, in order that the health officers may take steps to place safe-guards upon the sick.

With regard to sanitarium, he thinks that they cannot be of much use to the advanced cases. With regard to those in the early stage of the disease, sanitarium are of much use, but the stay in them should be somewhat prolonged. Much care should be taken with regard to places of employment of those, who are known to have the disease, that they may not expose others to infection, the writer of the paper being a strong adherent of the infection theory. He does not think the fear or annoyance arising from notification is a sufficient reason for not reporting the disease.

Dr. Robertson is an advocate of public, municipal sanitarium for the disease. He thinks that voluntary efforts are too uncertain; and, while they have done much good, fall far short of being the ideal method.

When consumptive cases are reported, they should be regularly visited to see that the sputum is being properly destroyed, and in the next place that the houses are periodically disinfected. He goes on to show that the death rate from consumption has fallen in England to one-half on a given number of people during the past 50 years. This is very encouraging, and shows that the real remedy lies in prevention.

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#### THE PROPOSED PROVINCIAL HOSPITAL.

At a meeting of those interested in the proposed new Provincial Hospital, which was held in the Parliament Buildings on the evening of 10th January, past, after a good deal of discussion it was agreed that the board should consist of 25 persons, made up as follows: 8 appointed by the Government, 7 elected by the subscribers, 5 by the City Council, and 5 by the University of Toronto.

A motion was passed to ask power to expropriate a site on College street, near Queen's Park. This site contains about 8 acres, and lies on the south-east corner of College street and University Avenue.

It was agreed that portions of the new hospital would be continued as the Andrew Mercer Eye and Ear Department, and the Burnside Lying-in Department. This would tend to perpetuate somewhat the historical associations of the Toronto General Hospital.

During the discussion, the old question was opened up of the right of doctors to attend their patients. It was clearly settled during the past year that the city would only pay over the \$200,000 on the condition that all patients paying their way would have the right to select their own medical or surgical attendant. It is held by some that, "Paying their way" means paying what the Hospital Board may fix as the fees for patients, be that much or little, enough to cover the cost of maintenance or not. The patients, it is held, have nothing to do with the management of the hospital, and consequently they pay their way when they pay what is demanded of them for the beds and wards they select.

Then the question of the medical students came up. It was asserted by some that only students of the Medical Department of the University of Toronto should have the right to attend the hospital.

One gentleman said that the most important work of a hospital was not to cure the sick, but teaching. We have very decided views the very reverse of the above. But both can go together, the cure of the patient always being first, and in this way the best teaching can also be done.

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#### PROPRIETARY MEDICINES.

It is with much pleasure that we notice the action of certain lay journals in exposing the frauds of the much vaunted cures placed before the people. Just think of the sin of advertising a cure for consumption, or cancer, or locomotor ataxia!

Some respectable journals have been refusing the advertisements of many patent medicines. Would that more could see their way to this course! It is when the lay journals become aroused to the injustice of gulling the people by advertisements setting forth virtues which no drug, nor combination of drugs, can possess, that we may hope for some progress in the curtailment of the privileges now enjoyed of advertising such wonderfully curative mixtures.

For some time past the formulæ of many proprietary medicines have been published. As could readily have been supposed, the composition of these nostrums does not impress the medical practitioner very favorably. In some cases the principal ingredient is alcohol, in others some narcotic, in others some common vegetable bitter. Some of the preparations are objectionable because of the alcohol and narcotics they contain.

But these decoctions are foisted upon the public on the strength of testimonials obtained from prominent persons. In this respect, one from a minister, especially if he is a D.D., is of special value. But there is no objection to have recommendations from senators, generals, and,



if perchance, one can be secured from a person who can or does sign M.D. to his name, then there is proverbial joy.

Now for the remedy to all this wholesale deception of the people.

1. First and foremost, the composition should be printed in plain language on the wrappers, circulars, and advertisements.

2. All mixtures containing narcotics, or poisonous drugs should be labelled "poison."

3. All mixtures containing alcohol should be sold under the regulations governing the sale of spirituous liquors.

4. All statements setting forth wonderful cures should be made the subject of investigation at the hands of the government if any one similarly afflicted demanded the information.

5. The giving of testimonials for these preparations should carry with it certain responsibilities, such as the reality of the person and case, that the facts are as set forth in these testimonials, and if not that the proper official might have power to close the business.

These regulations would not prevent a druggist from putting up a mixture for coughs, nor an ointment for ordinary sores; but they would make it necessary to publish their composition and to refrain from misleading statements. It is high time the medical profession took active steps in this matter, and tried to secure legislation that would regulate the making and selling of proprietary medicines.

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#### THE VALUE OF DRUGS.

The physician who regards the prescribing of drugs as the principal duty he has to perform towards his patients, has a very impoverished view of the healing art. But *in res medias via tutissima* has its truth here as well as in many other spheres of life.

When words of an important nature come from one of weight, it behooves those whom they affect to stop and consider their likely influence. In his farewell address to the medical profession of America, Dr. Osler makes use of these words: "We have long got past the stage when any 'system' can satisfy a rational practitioner, long past the time when a difference of belief in the action of drugs—the most uncertain element in our art—should be allowed to separate men with the same noble traditions, the hopes, the same aims and ambitions."

In these words he is making an earnest appeal to the profession to set aside such terms as "allopath" and "homœopath," and unite on the common foundation—large enough for all—of rational medicine. Let us hope that this appeal did not fall upon deaf ears!

It is, however, with reference to what he says in connection with drugs that we have taken the liberty of quoting the preceding passage. It would be much to be regretted if the words of so eminent a teacher should lead the rising generation of the medical profession to lose faith in drugs to too great an extent. There are teachers who would be bold enough to state that therapeutics is not less certain in its results than is pathology in its findings, or physiology on the functions of the many organs of the body.

To most practitioners it is accepted as final that by means of morphine pain can be relieved, that quinine will cure ague, that mercury is a specific for syphilis, that cocaine is indispensable to the ocular surgeon, that atropine dilates the pupil while eserine contracts it, that strychnia is a valuable heart tonic, that croton oil will purge, that antitoxine cures diphtheria, that pilocarpine causes diaphoresis, that chloroform and ether will produce anæsthesia, that apomorphia will cause emesis, and so on. It would be very regrettable if a wave of pessimism should set in against the great value of drugs and their many splendid therapeutic uses, such as the proper employment of alkalies in the acidity often met with in cases of gastric ulceration.

No one now pours drugs into a patient to cure consumption, and yet they have their value even here. In the same way drugs may be employed usefully in typhoid fever. While we do not give them to kill the bacilli, we can still give them for the symptoms; and it is along this line that the experienced physician can often accomplish so much for his patient. There are many, very many, uncertainties in connection with our knowledge of drugs, but there are many, very many, certainties for which we ought to be thankful.

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#### THE CARE OF DEFECTIVE CHILDREN.

It is to be hoped that we are fast getting past the age when the care of defective children should be left to voluntary charity. We are not decrying the excellent work that has been accomplished by the benevolent and charitable.

The care of the degenerate classes of children, however, is too large and important a matter to be left to this method of dealing with it.

The physical, moral and intellectual training of such children can only be carried out by the State in some form or other. There are many cases of children who would become hopelessly perverted if allowed to grow up under home influences, or even under such conditions as may be afforded them in voluntary charitable institutions. If separated from their surroundings early in life and placed under proper care, many of

these children are capable of such a degree of education and moral betterment as would fit them to earn a proper livelihood. Those, of course, who cannot be so improved might be placed in an institution for life and placed at some sort of occupation that would enable them to earn the cost of their maintenance. In the end such a course would prove to be true economy.

There should be a variety of institutions to permit of a proper classification, such as the epileptic in one, the imbecile in another, and the juvenile criminal in a third. These institutions, or places of detention and training need not be large. In many instances the work could be carried out on the cottage system, under proper inspection and guidance. The true solution for these classes we think is along the outdoor and farm life. Arrangements should be made by the provincial governments for suitable lands and simple buildings, not large, where these defectives could be placed at health-giving employment. This would prove a very cheap way of dealing with them, as they would raise their own provisions and become self-sustaining. But the occupation is the best known for these cases. There could be a judicious combination of bodily training and education, along with moral culture, in the open air and at a natural and healthful occupation.

This is the plan now coming into favor in some countries, not only for defective children, but for a very considerable number of the adult insane.

As we have urged before, we urge again, that there should be a competent inspector of schools to pick out defective children and this with criminal tendencies, in order that they might be placed under proper treatment, or observation, and that their home life might be looked into.

But a step further must be taken. Tares do not yield wheat, nor thistles figs. Those who are degenerate or are juvenile criminals, or have been insane, should be debarred the right of marriage, except under the most exceptional circumstances. The rule is in force in some places that epileptics or those with insane perversions may only marry a woman past the menopause. In the end the state must shoulder the lion's share of the cost, why not then take decided steps to prevent?

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#### PHTHISIS, MARRIAGE AND IMMUNITY.

A short time ago, a French writer, Dr. Valentino, gave expression to the opinion that the children of consumptive parents possessed an immunity to the disease, and that it was desirable to encourage the marriages of tuberculous people.

The whole trend of experience is opposed to this view. How common it is to witness the children of consumptive parents die of the disease, or suffer from enlarged glands, curvature of the spine, meningitis, intestinal wasting disease, or tuberculosis of the bones. These experiences would not be common, if the children of tuberculous parents enjoyed a charmed life against the disease. It may be at once laid down as a working rule that no such immunity is transmitted from the parents to the children.

This being the case, is it not wise that the medical profession should advise those of distinctly tubercular families to avoid marriage until mid life, or, if married at an earlier period, to guard against large families. Dr. S. A. Knopf, writing in *American Medicine* on this subject, says: "I consider it the sacred duty of every physician to teach prevention, particularly when the wife is tuberculous." The prevention here referred to is that of avoiding pregnancy. Further he remarks: "I am willing to take the responsibility before the law and my God for each time I have taught a tuberculous husband and wife not to procreate a race predisposed to tuberculosis."

On the matter of large families, experience bears out the statement that with the increase in the number of children there is an increase in the risk to tuberculosis, and this is specially so of the later-born children. It is also often said that consumptives are prone to have large families. Dr. Knopf explains this by saying that their disease frequently interferes with an active life and keeps them more at home, putting in their time in an indolent manner. It is here that firm advice should be given such to avoid pregnancies occurring. Further, every one will agree that it is a lighter tax on the parents to care for a small family, and that the children and parents will have better opportunities of securing the comforts of life and home, which make for health and vigor. In the minds of many high authorities a poor, delicate or tuberculous child is no acquisition to the state, and that it would be better had it never been born.

#### DIPHTHERIA AND ANTITOXINE.

There are some members of the medical profession who do not yet appear to be satisfied in their minds that the antitoxine for this disease has justified its claims to be curative. For such doubters we recommend the reports from the Metropolitan Asylums Board, of London.

From 1888-93, before the use of antitoxine, the death rate was 37.3 per cent.; but that from 1894-1904, after the introduction of the antitoxine, the rate fell to 15.8 per cent. Very strong evidence is furnished of the rising mortality according to the lateness of administration.

When given on the first day the death rate drops to zero, when on the second day to 5 per cent., if on the third day it is 10 per cent. If the treatment is not begun till after the third day the death rate is 20 per cent. The value of early employment of this remedy is thus made very clear.

From other large cities comes equally satisfactory information. In Chicago the experience with antitoxine has been of a most gratifying character, likewise from New York.

But, perhaps, the best proof of its value is that of the general practitioner whose experience covers the periods before and since the introduction of the antitoxine. His dread of the disease has entirely disappeared. He gives the antitoxine and waits with confidence the progress of the case.

#### TROPICAL DISEASES.

Of late much progress has been made in the study of these diseases. With regard to the plague, it would appear that it is endemic in certain districts, and that in these places man and the lower animals live in the same dwellings. Hankin has advanced our knowledge of the means of spread by finding the plague bacilli in the digestive organs of fleas obtained from the bodies of rats. This may prove to be one of the chief agents at work in the spread of the disease.

In the case of cholera some progress has been made in the study of protective inoculation. It has been shown that the use of dead cultures produces almost as good results as that of the living ones. By different methods of culture, varying degrees of virulency can be secured which is of use in the experimental study of inoculation.

It would appear that malaria can be brought under control by destroying the breeding places of the mosquito. This has been carried out in an actual test in two places in the Malay States, which formerly were severely scourged with malaria. By draining the marshes and removing jungles, Dr. Watson has practically freed these districts from the disease.

Recent work on beri-beri seems to confirm the theory of Dr. Wright that the gastro-duodenitis of the disease is caused by an organism, and not by arsenical poisoning, or the use of rice as a food. This organism produces a toxin which enters the circulation and affects the peripheral ends of the neurones, causing the paralytic symptoms of the disease, much in the same way as in diphtheria. The infection is contained in the faeces, and by destroying these the spread of the disease can be arrested. Dr. Wright succeeded by this means in freeing certain localities from its presence.

Malta fever seems to have been traced to its source of infection. The goat is liable to the disease and the goat's milk conveys the infection. It may reach the milk in two ways, either from the blood of the goat, or from their udders, soiled by infection from the droppings of these animals. This knowledge enables proper steps to be taken to control the spread of the disease.

Sleeping sickness has attracted much attention. The trypanosomata are carried from the sickly to the healthy by the tsetse fly, *glossina palpalis*. Sodium arseniate has been given with considerable benefit. Atoxyl and trypanroth have also been recommended.

During the past year yellow fever invaded many districts around the Gulf of Mexico. It is spread by the proboscis of a variety of mosquito. The prevention of the disease lies in screening the sick in such a way that the mosquito cannot reach them. The strict carrying out of this method of dealing with the sick speedily cuts short the spread of the disease.

#### THE TREATMENT OF PROSTATIC HYPERTROPHY.

Dr. Von Rydygier advocates the early removal of the enlarged prostate. He also urges the perineal method and contends that the urethra should not be opened. He removes the portion of the gland nearest the urethra by a finger dissection. The suprapubic operation involves too much risk. He only resorts to this plan when the middle lobe is large and projects into the bladder.

Mr. Reginald Harrison advises that most cases should be treated by the proper use of the catheter, and only advises operation when the use of the catheter becomes either difficult or painful. When operative interference becomes necessary, he prefers the suprapubic route, and operates after the method of Freyer.

Bottini's method is advocated by many surgeons. Among these may be named Freudentberg, Jaffé, and Gordiano. This operation is specially suited for prostatitis and contraction of the neck of the bladder.

Drs. Albarran and Leguen both urge a careful but thorough operation through the perineum. When necessary the prostatic portion of the urethra may be opened.

Dr. Hartmann prefers the transvesical operation after the method of Freyer. He drains the bladder.

When there is complete retention the operation is necessary and gives definite results. In cases of incomplete retention there is not the same consensus of opinion, as many eminent surgeons hold that in partial retention and smallish prostates there is no need to operate. If there be calculi, hæmorrhage, cystitis, difficulties in catheterizing the

patient, the operation should be performed. Also if there be any reason to fear new growth of the prostate.

It appears that the death rate from the operation is about 10 per cent., and the sexual power is lost as a result of it.

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### THE ORGANISM OF SYPHILIS.

The following extract from an editorial in the *Medical Record* is interesting :—“Since the publication of the researches of Schaudinn and Hoffmann, a number of observers have offered confirmatory evidence. Metchnikoff and Roux found the spirochete in a chancre in a monkey inoculated with syphilis. The organism has been found in congenital syphilis, and in the blood of secondary syphilis. It seems to be constantly present in primary and secondary lesions, although sometimes in such small numbers as to evade any but the most careful search. It seems, however, to be absent in tertiary lesions.

“In this country, the first investigation published on this subject was, we believe, that of Dr. Fanoni. This author confirmed the results of Schaudinn and Hoffmann, and published a study of fifteen cases of syphilis. In two of these he failed to find the spirochete, but both had been under treatment for some time. In two control cases, non-syphilitic in character, this organism was absent. It was present, however, in all the primary lesions examined, and also was found in the inguinal glands, in condylomata, in mucous patches, and in the tonsils. The finding of the organism in the tonsils was especially interesting, as it was the first attempt to demonstrate the new organism in tonsillar tissue. Preliminary reports on the same subject have appeared within the past few weeks in various American medical journals, indicating that a number of other observers are now working in the same direction. In the Wesley M. Carpenter lecture recently delivered at the Academy of Medicine, in which a résumé of the entire subject was given, Dr. Simon Flexner stated that the Rockefeller Institute is now conducting an extensive investigation on the same theme. Dr. Flexner concludes, from a study of a number of cases in which the spirochete was found, that while we are as yet not justified in declaring that the organism is pathogenic for syphilis, the investigations thus far published certainly encourage the hope that we are at last upon the right track.”

Schaudinn and Hoffmann found the spirochete in each of their 26 cases. Metchnikoff and Roux found this organism in 6 monkeys inoculated with the disease. The same organism has been found in glands, the liver and the blood of syphilitics. Levaditi has found the spirochæta pallida in the bullæ of children with congenital syphilis. But many

others might be quoted. Fanoni found characteristic spirilla in 5, Tchlenoff in 14, Rille in 6.

Dr. R. C. Rosenberger, *Am Jour Med. Sciences*, Jan., 1906, states that he has studied 34 cases; 10 chancres, 11 mucous patches, 4 enlarged glands, 3 condylomas, and 6 eruptives. "In every specimen of material examined, with the exception of the cerebro-spinal fluid, the spirochæa pallida was demonstrable." This writer is of the opinion that organism is an animal parasite and is properly a protozoän.

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#### ONTARIO MEDICAL ASSOCIATION MEETING, 1906.

The attention of the Profession throughout the Province is called to the Annual Meeting of the Ontario Medical Association for 1906, under the Presidency of Dr. George A. Bingham, of Toronto, with Drs. D. J. Gibb Wishart and H. J. Hamilton as chairman respectively of the Committees on Papers and Business and of Arrangements.

By vote of the members at the last meeting that of this year will take the form of a business session, preceding the meeting of the British Medical Association, which will begin August 21st. Consequently, the provincial meeting will be convened Monday evening, August, the 20th, at 8 o'clock. It will thus avoid conflicting with the necessary sessions of the Canadian Medical Association, and the members will arrive in none too early time to participate in the Imperial meeting of the next day.

Members are particularly requested to remember this announcement. Notification of the various committees will be made at the accustomed date. All enquiries and communications should be made to Dr. Chas. P. Lusk, General Secretary, Toronto.

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#### INSTRUMENTS FOR ALL OPERATIONS.

A committee of the surgical staff of the Toronto General Hospital, with Dr. N. A. Powell as its chairman, has prepared certain instrument lists, which we present in the belief that they may also be found of service in other hospitals.

Surgeons preparing for operative work in private houses may find them suggestive. Only essentials are mentioned, the individual preference of the operator being respected in whatever may be added.

*List No 1.*—It shall be the duty of the house surgeon to select and have ready in ample time for every cutting operation under anæsthesia the following instruments and to see that each one is in good working



order. The operator should always be consulted regarding special requirements: Two sharp scalpels, 1 pair scissors, straight, sharp-pointed; 1 pair scissors, curved on the flat, blunt-pointed; 1 pair scissors, angular; 2 pairs dissecting forceps, 1 pair mouse-toothed forceps, fine; two or more hæmostatic forceps (6 in each set); 4 retractors, superficial and deep; directors, long probe, aneurism needle, needle holder, needles, suitable for the operation to be performed; ligating and suturing materials, spirit lamps (to dry and char ends of suturing materials and facilitate threading), and drainage tubes.

*List No. 2.—For amputations.* List one and elastic tourniquets, large, round and flat; amputating knives, saws, periosteum elevator, bone-cutting forceps, lion jaw forceps.

*List No. 3.—For excision of joints.* List one and tourniquets, periosteal elevator, saws—bow, Hays, Gigli, etc.; lion jaw forceps, bone-cutting forceps, bone scoops, curved probe pointed bistoury, splints or other fixation apparatus, and plaster of Paris bandages.

*List No. 4.—For necrosis or other bone operations.* List one and tourniquets, periosteal elevator, gouges and chisels, osteotomes, mallet, sequestrum forceps, bone drills, lion jaw forceps, bone-cutting forceps, bone scoops, rongeur forceps, and splints or other fixation material.

*List No. 5.—For trephining.* List one and trephines, saws—Hay's and Gigli's, rongeur forceps, periosteum elevator, bone elevator, chisels, mallet, and three long exploring needles.

*List No. 6.—Operations upon the mouth and jaws.* List one and mouth gag, periosteum elevator, saws—Hay's and Gigli's, bone forceps, chisels and gouges, mallet, tracheotomy tube, and sponge-holding forceps—long.

*List No. 7.—For stomach and bowel operations.* List one and Murphy buttons or substitutes therefor, McGraw elastic ligatures and their needles, stomach and intestinal clamps, intestinal needles, straight and full curved.

*List No. 8.—For operations upon the bile passages.* List one and Mayo Robson's scoop, long forceps for stone extraction, aspirator (tested before operation is begun), and trocar and canula.

*List No. 9.—For operations in the appendix region.* List one and Lister's sinus forceps, straight intestinal needles ("straw" No. 6), and full curved spring-eyed intestinal needles.

*List No. 10.—For abdominal section for uterine, tubal or ovarian disease.* List one and 4 broad ligament clamps, 2 pedicle needles, ovarian trocar and tube, large retractors, long sponge-holding forceps, and tenaculum forceps, large.

*List No. 11.—For supra-pubic cystotomy.* List one and metallic and soft rubber catheters, sounds, lithotomy forceps and scoops, long-handled

scissors, curved on the flat; long hæmostatic forceps, curette and Ferguson's speculum and forehead light or reflector.

*List No. 12.—For operation upon rectum or anus.* List one and pile forceps, anal and rectal specula, pile clamp, thermo-cautery (tested before operation), and director—long probe ended.

*List No. 13.—For urethral or perineal operations.* List one and sounds, metallic and soft rubber catheters, bulbous bougies, urethrotome, Wheelhouse staff and gorget, and bistoury, straight probe pointed.

## PERSONAL AND NEWS ITEMS.

Dr. C. R. Newman removed from Dunnville, to St. Catharines.

Dr. R. H. Richards, of Winnipeg, has gone to Honolulu and Australia for a three months' trip.

Dr. Albert H. Laidlaw, of Kenora, Ont., was married in Tillsonburg to Miss Ross 27th December, 1905.

On the evening of January 4th, Dr. G. W. Rogers, of Welwood, Man., and his bride were tendered a reception.

Dr. and Mrs. Scadding, of Toronto, will spend a part of the winter abroad.

Dr. and Mrs. T. H. Whitelaw, of Edmonton, Alta., paid a visit a short time ago to their relatives in Toronto.

Dr. and Mrs. Williams, of Bracebridge, were spending a couple of weeks with Toronto friends.

Dr. D. D. McLaren, of Calgary, was married December 27th, at Russell, Ont., to Miss Mima Turnbull.

Dr. H. C. Norquay, of Brandon, Man., has been appointed assistant superintendent of the Brandon Asylum.

Dr. W. M. Pruyn, Napanee, left in the early part of January for the city of Mexico, where he intends to practise.

Dr. Harold P. Martin, son of the late Dr. C. E. Martin, has commenced practice at 36 Carlton St., Toronto.

Dr. N. D. Buchanan, formerly of Zurich, after spending a few years in Europe, has decided to locate in Berlin, Ont.

Dr. Harvey, of Woodstock, was in Toronto for a few weeks on account of ill health.

Dr. G. R. McDonagh, of Toronto, is spending a couple of months in California.

Dr. Ruttan, who has been in practice in eastern Ontario, has decided to locate in Woodstock, and has bought Dr. Rice's property.

The Post-Graduate School of New York has issued a beautifully illustrated announcement.

In Toronto on December 27th, 1905, the marriage of Dr. James M. McCormick, of Toronto, and Miss Taylor, of Hamilton, was celebrated.

Dr. G. W. Graham, of Toronto, Dr. F. W. E. Wilson, of Niagara Falls, and Dr. Enoch L. Roberts, of Simcoe, Norfolk County, have recently been appointed Coroners.

Dr. George L. Husband, of Hamilton, met with a serious accident by being thrown from a street car, but is again improving. He was reported to have been unconscious for some time.

Dr. S. W. Radcliffe, of Moose Jaw, has sufficiently recovered to leave Toronto General Hospital; but it is stated he will remain in Toronto till next spring.

Dr. Paulin, eldest son of Dr. George Paulin, of Chesley, has sold his practice at Kearney, Parry Sound District, and will take a post-graduate course in London, England.

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## OBITUARY.

### O. S. STRANGE, M.D.

The late Dr. O. S. Strange, who died in Kingston, 2nd January, 1906, was born in 1826, the son of John Strange, who came from Killbridge, Lanarkshire, Scotland, in 1814. Dr. Strange had one of his brothers, Maxwell W. Strange, Police Magistrate. He studied one year at Queen's College, then graduated in medicine in New York, under the celebrated Dr. Mott. He married Emily McLean, granddaughter of Colonel McLean, whose name is woven in many strands of Kingston's early history. He served as Alderman for a number of years, and in 1859 was elected Mayor over Colonel Jackson. In 1860 the Mayor was elected by the people for the first time, and he was again the choice. The year was historic, as it included the visit of then Prince of Wales, now King, and a great conflict of feeling over the projected procession. In three most strenuous days Dr. Strange had to bear the brunt of criticism and restrain the impulses of approving friends. In his intercourse with the Prince, however, he represented the city with unexceptional credit. Later he was surgeon to the Garrison Battery, then surgeon at the penitentiary for eleven years. For a quarter of a century he was a staunch worker for the General Hospital as Governor.

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### JOSEPH CARBERT, M.D.

The death occurred two weeks ago at his residence, 30 Clinton street, Toronto, of Dr. Joseph Carbert in his 80th year. Dr. Carbert formerly

had a large practice in the town of Orangeville for many years. He was well known and highly respected through Mono and adjoining townships. He took an active part in public affairs and was an adherent of the Methodist Church. He leaves a widow and three sons and also two daughters. Dr. Carbert was a brother of Mrs. Thos. Thompson of Rosedale.

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#### WILLIAM ARMSTRONG, M.D.

Dr. Wm. Armstrong died January 11, 1906, at his home, 13 Fenning Street, Toronto, after a short illness. He had been a resident of Toronto for 26 years. He was born in Roscommon, Ireland, in 1827, and came to Canada with his parents when a child. He lived some time in Burford Township, and moved to Wellington County in 1845. In 1849 he married Frances, daughter of Orange Lawrence, founder of Orangeville. He lived in Orangeville for 20 years, and was a member of the Wellington County Council, and was for some years treasurer of the Town of Orangeville. He was for over 20 years a trustee of the Methodist Church, and was a member of the Quarterly Board of Wesley Church. He is survived by a widow, five daughters, and three sons; Miss Lottie, at home; Mrs. Geo. Beswick, Orangeville; Mrs. A. Durie, Clarkson; Mrs. (Dr.) Kendall, Buffalo; Mrs. Mason, Toronto; Orange L., Toronto; William, Buffalo, and Dr. G. W. Armstrong, Toronto.

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#### J. A. SABOURIN, M.D.

Dr. J. A. Sabourin died 28th December, 1905, at the Hotel Dieu, Montreal, of typhoid fever. He had been ill for three weeks. Dr. Sabourin was born at Rigaud thirty years ago, and is a brother of Abbe Sabourin, the superior of the College of Valleyfield. He was admitted to the practice of medicine only three years ago, and since then has been established at Point St. Charles, where he had already built up a good practice. He was unmarried.

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#### FREDERICK LAPSLEY, M.D.

Dr. Frederick Lapsley, formerly of Toronto, died in Chicago on Saturday, 6th January, 1906. Dr. Lapsley, who was 37 years of age, was born in Scarboro' township and was a graduate of Toronto Medical College. The body was brought home for interment.

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## BOOK REVIEWS.

## MAN AND HIS POISONS.

A Practical Exposition of the Causes, Symptoms and Treatment of Self-Poisoning. By Albert Abrams, A.M., M.D., F.R.M.S., Consulting Physician, Denver National Hospital for Consumptives; the Mount Zion and the French Hospitals, San Francisco; President of the Emanuel Sisterhood Polyclinic; formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College, San Francisco. Illustrated. New York: E. B. Teat and Company, 241-243 West 23rd Street. Price, \$1.50.

We begin by saying that this is an attractive looking book, being got up in the very best style possible. This is saying a great deal for the publishers, as medical books are now published in very fine forms. The chapters of the book are: Life, man and his Poisons, Fatigue, The Toxicology of the Emotions of Sleep, Chemistry and Physics of Thought, The Symptoms of Self-Poisoning, The Prevention and Cure of Self-Poisoning, Sinusoidal Current in Intestinal Self-Poisoning, The Mental Dyspeptic and the Influence of the Mind upon the Body, Relief for the Ideopath. To these are added several appendices. On every one of these subjects the author advances some important views. The treatment of autointoxication is one that no advanced physician can afford to neglect. This little book will afford the required information.

## MEDICAL CHEMISTRY.

A Compound of Medical Chemistry, Inorganic and Organic, including Urinary Analysis, by Henry Leffmann, A.M., M.D., Professor of Chemistry in the Woman's Medical College of Pennsylvania, and in the Wagner Free Institute of Science. Fifth Edition, Revised. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. 1905. Price, \$1.00.

This little book is one of the well known quiz compend series. It is now in its fifth edition. The author is a high authority on chemistry and has the power of expressing himself in a very brief, but clear, manner. This is an excellent text-book for students.

## DIAGNOSIS AND TREATMENT.

Differential Diagnosis and Treatment of Disease; a Text-book for Practitioners and advanced students. By Augustus Caillé, M.D., Fellow of the New York Academy of Medicine; Member and ex-President of the American Paediatric Society; Professor of Diseases of Children, New York; Post-graduate and German Hospitals; Consulting Physician to Isabella Home and Hospital, etc., with 228 illustrations in the text. New York and London: D. Appleton and Company, 1906.

This book makes its appearance for the first time, but it will soon be well and favorably known. Most medical practitioners are aware of the handsome form in which the Appletons get out their books, and

this is no discount on the rule. Dr. Caillé has given the profession an excellent work on the subject of treatment which is accompanied by a clear exposition of the diagnosis of the disease to be treated. The book is full of the most helpful suggestions in the form of prescriptions and useful "pointers" as to what to do in almost every case. This book is truly a doctor's table book and should lie at his hand continually. Turn up what you think is the disease and it will soon become clear whether you are right or not in the diagnosis. Then will follow in a brief but satisfactory manner the detailed method of treatment. What we like about this book is that it is "practical," but practical in the proper sense of the term, being founded on a true scientific conception of the pathology of disease in the first place. Dr. Caillé has definite opinions and states them in a definite manner, and this makes the book agreeable reading, as so many books are written in such a non-committal style that any view may be taken from them. Not so here. It is a book of positive statements.

#### AN OSLER ANTHOLOGY.

Counsels and Ideals from the Writings of William Osler. Boston and New York: Houghton, Mifflin and Company. 1905.

This unique little book, nearly 300 pages, is made up of choice pieces from 47 of Dr. Osler's addresses, lectures and articles. Most of the original sources of material for this book we have read, and yet this fact only enhances the pleasure of reading this little book. The extracts have been culled and arranged by Dr. C. N. B. Camac, and grouped under some twenty different headings. The nature of the book precludes anything like a formal review; for how could one review the choice and miscellaneous sayings of such an author? Every piece stands on its own merits and makes a perfect gem by itself. It is perfectly charming to notice what Dr. Osler has to say on such men as Virchow, Locke, Hutchinson, Sydenham, Linacre, Beaumont, Pepper, Mitchell, Charcot, etc., etc. The thoughts on work, the humanities in medicine, silence and self control, honesty, truth, accuracy, thoroughness, charity in medicine, etc., etc., are among the finest things in the English language. Osler has a mind for seeing things much after the style of one of his favorites, Montaigne, and Montaigne should be read by all, for his is rare gold. It is quite impossible to convey an accurate notion of this book, but we advise every doctor to get a copy, keep it by him, take it up often, open it anywhere and read some piece, any piece, they are all good. Osler's life has been lived much according to the following lines of one whom he admires much, Keats, the doctor poet: "Beauty is truth, truth beauty,—that is all ye know on earth, and all ye need to know."

## DOSE-BOOK AND PRESCRIPTION-WRITING.

With a List of the Official Drugs and Preparations, and the more important Newer Remedies. By E. Q. Thornton, M.D., Assistant Professor of Materia Medica, Jefferson Medical College, Philadelphia. Third Edition. Revised and Enlarged. 12mo. 392 pages, illustrated. Philadelphia and London: W. B. Saunders & Company. 1905. Bound in flexible leather. \$2.00, net. Messrs. Carveth and Co., Toronto, Agents.

A glance at the contents of Dr. Thornton's book fully explains its attainment of a third edition. In addition to the consideration of the official and the more important nonofficial preparations intended for internal administration, weights and measures, solubilities, and incompatibilities, attention is given to the grammatic construction of prescriptions, illustrated by examples. In revising the text for this edition Dr. Thornton has made it conform with the new (1905) Pharmacopeia, the radical change in strength or name of many chemicals, drugs, and preparations already official, and the admission of many newer remedies necessitating the rewriting of a number of sections. We notice in the Appendix an addition of much value—a table showing the change in strength of important preparations, and also a list of average doses for adults in accordance with the new Pharmacopeia. Dr. Thornton's Dose-book is, as it always has been, accurate and up to date.

## MODERN THERAPEUTICS.

By A. A. Stevens, A.M., M.D., Lecturer on Physical Diagnosis, University of Pennsylvania; Professor of Pathology, Woman's Medical College of Philadelphia. Fourth Edition, Revised. Octavo of 670 pages. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, \$3.50, net. Messrs. Carveth and Co., Toronto, Agents.

The new fourth edition of Dr. Stevens' excellent work on practical therapeutics appears at a most opportune time, close upon the issuance of the Eighth Decennial Revision of the Pharmacopeia to which it has been adapted. Dr. Stevens, by his extensive teaching experience, has acquired a clear, concise diction that adds greatly to his work's pre-eminence. New articles have been added on Scopolamin, Ethyl Chlorid, Theocin, Veronal, and Radium, besides much new matter to the section on Radiotherapy. The numerous changes in name or strength of various drugs and preparations, as called for by the new Pharmacopeia, have also been made. In fact, it is somewhat difficult to speak of Dr. Stevens' Therapeutics without resorting to the frequent use of superlatives, for of all the good works on this most important of subjects, this book before us is undoubtedly the very best.

## ESSENTIALS OF MATERIA MEDICA AND THERAPEUTICS.

By Henry Morris, M.D., College of Physicians, Philadelphia. Seventh Edition, thoroughly revised. By W. A. Bastedo, Ph.G., M.D., Instructor in Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons), New York City. 12mo, 300 pages. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, \$1.00, net. Messrs. Carveth and Company, Toronto, Agents.

The student cannot find a better or more practical work on Materia Medica, Therapeutics, and Prescription Writing than this little essential from the press of W. S. Saunders and Company. But then, this work is no exception in this respect to all the other numbers of this excellent series of compends. Dr. Bastedo, in revising the book for this seventh edition, has brought it in accord with the new (1905) Pharmacopeia, introducing all the new remedies and carefully indicating their therapeutic doses and uses. For a work of three hundred pages it contains a mine of information so presented as to be easily grasped. We give it our unqualified endorsement.

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WILLIAMS ON FOOD.

Food and Diet in Health and Disease. A Manual for Practitioners of Medicine, Students, Nurses and the Lay Reader. By Robert F. Williams, Professor of Principles and Practice of Medicine in the Medical College of Virginia, Richmond. In one handsome 12mo volume of 392 pages. Cloth, \$2.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1906.

That there exists to-day a need for a convenient, practical book on foods and how they should be used, one that will give the facts concisely and clearly and without technicalities, is patent to every physician and every nurse, as well as to every family in which sickness has been an unwelcome visitor.

For practical use such a work may well omit all reference to the tedious scientific investigations by which chemists and physiologists have evolved the present day knowledge of diet. Results, facts and clear directions are what is wanted, and this is exactly what Dr. Williams' excellent work gives, in language so simple that a schoolboy could read it intelligently.

Doctors will welcome this book as one which they can recommend to their patients as a guide to the preparation and use of food in sickness and convalescence. For mothers the book will be especially valuable. Ignorance is always costly. This is particularly true in the feeding of growing children, in whom habitual errors of feeding frequently produce effects lasting through life as well as temporary illness.

Nurses and hospital superintendents will find an attractive feature of the work in the last section, where is given a great number of recipes



for foods for sick patients and convalescents, with full directions for preparing and administering.

For convenience, the book is divided into two parts. In Part I, (Food in Health) the needs of the body for different kinds of food, and the manner in which they are utilized, are explained. The principles of cooking and detailed descriptions of the different articles of food in common use are given, with chapters on the proper nourishment of infants, children, adults and the aged.

Part II, (Food in Disease) deals with the variations from the normal diet which are necessitated by the more common diseases, and includes a section on the general methods to be observed in feeding the sick, as well as special directions for nourishment in the different diseases.

Dr. Williams has furnished a book which has been wanted and which is perfectly adapted to the needs of physicians, students, nurses and the laity. It is decidedly an excellent book of its kind.

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#### NERVOUS AND MENTAL DISEASES.

By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., President of the State Commission in Lunacy, New York; Clinical Professor of Neurology and Psychiatry, Columbia University. Fifth Edition, Revised and Enlarged. Octavo volume of 937 pages, with 341 illustrations. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, \$5.00, net; Half Morocco, \$6.00, net. Messrs. Carveth and Co., Toronto, Agents.

It is not at all surprising to us that a fifth edition of Church and Peterson's work should be necessary. Indeed, such a success was to be expected from what is undoubtedly the most complete and authoritative volume on nervous and mental diseases to-day. In preparing this edition Dr. Church has carefully revised his entire section, placing it in accord with the most recent psychiatric advances. In Dr. Peterson's section—Mental Diseases—the Kræpelin classification of insanity has been added to the chapter on classification for purposes of reference, and new chapters on Manic-Depressive Insanity and on Dementia Præcox included. While the changes throughout have been many, they have been so made as but slightly to increase the size of the work. A number of the illustrations have been replaced by newer and better ones. We can confidently say that this work will maintain the reputation already won.

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#### GALL-STONES AND THEIR SURGICAL TREATMENT.

By B. G. A. Moynihan, M.S. (London), F.R.C.S., Senior Assistant Surgeon to Leeds General Infirmary, Leeds, England. Second Edition, Revised and Enlarged. Octavo of 458 pages, beautifully illustrated. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, \$5.00, net; Half Morocco, \$6.00, net. Messrs. Carveth and Company, Toronto, Agents.

The first edition of Mr. Moynihan's work on gall-stones was completely exhausted in eight months. Mr. Moynihan, by his masterly presentation of operative technic and clear, logical discussion of indications and contraindications, has won an enviable place in contemporary abdominal surgery. In this edition, increased in size by some seventy pages, many additional case records have been incorporated and a number of new illustrations added. We note also the addition of a very valuable chapter—Congenital Abnormalities of the Gall-Bladder and Bile-Ducts. It is evident that the whole text has undergone a careful revision and all recent work along the line of gall-stone surgery included. Mr. Moynihan's book still holds first place in its field. The illustrations are very beautiful, especially the nine colored plates.

## MISCELLANEOUS.

### HAMILTON MEDICAL SOCIETY.

The regular monthly meeting of the Hamilton Medical Society was held, January 3rd, in the Hotel Royal, the President, Dr. Ingersoll Olmsted, occupying the chair. The programme was as follows: 1. Round Ulcer of Duodenum by Dr. J. Albert Dickson, who read notes of three cases. In the discussion which followed, attention was called to these points: One was syphilitic, another tubercular, and the third an alcoholic, with cirrhotic liver and kidneys; and that accurate diagnosis of the condition is difficult, or impossible, before hæmorrhage or perforation occurs. 2. Compound Fracture of Skull by Dr. L. W. Cockburn, who presented a case, with a history, that patient, as a result of an accident, had a complete osteoplastic flap removed from the head, very much as would be done prior to an operation on the brain or dura mater. Both bone and scalp were replaced and the wound drained. The patient made a complete recovery. Dr. Cockburn also showed a patient who illustrated strikingly the value of conservative surgery. The man had suffered from a complete crushing of his right hand, so that the member was practically disorganized. Instead of amputation at the wrist—the usual procedure in such cases—the hand was cleansed as thoroughly as possible and dressed. As a final result the patient showed, instead of a stump, a comparatively useful, though deformed, hand. 3. Microscopic Specimens, by Dr. J. Albert Bauer, were shown of a number of interesting pathological specimens carefully stained. 4. Gross pathological specimens were shown by Drs. Olmsted and Mullin, with reports of cases.

RESPIRATORY AFFECTIONS :  
SYMPTOMS AND THEIR TREATMENT.

By JUSTIN HEROLD, A.M., M.D.,

Former House Physician and Surgeon, St. Vincent Hospital, New York City; Former Coroner's Physician, City and County of New York; Member of the New York County Medical Association, County Medical Society, Medical Society of the Greater City of New York, Medico-Legal Society, Society of Medical Jurisprudence, and New York Academy of Medicine.

Mathematical precision, it must be admitted, has its place on less in medicine than in its legitimate field in the study of the higher classics. This precision, in the therapeutic sense, applies to the exact dosage of preparations used by the busy practitioner in his everyday experience. How often do we attain proper results from the use of drugs; how often results that are not only improper, but even dangerous? Precision in dosage can only be obtained by constant study on the part of our co-laborer, the pharmaceutical chemist—study embodying experimentation, the comparing of results, re-experimentation, and, finally, the circulation of the decisive product in the hands of the practitioner.

The past few months have afforded me, and no doubt others, opportunities to test the efficacy of the therapeutic qualities of the various remedies vaunted as certain to relieve the harassing symptoms attendant on the diseases produced by the bacillus of that nineteenth-century infant, "La Grippe."

I refer to this epidemic particularly, because it had not manifested itself in such virulent form since the memorable grippe epidemic of 1889. The author of this paper, in the past few months, has had occasion to employ the several preparations recommended for the relief of the distressing respiratory symptoms attendant upon "la grippe." These manifestations, from my view-point, have been characterized principally by cough and dyspnea, in other words, "dyspneic cough." Expectorant mixtures, anodyne solutions, together with hypodermic medication, produced in me a disgust; and why? Simply and undeniably for the reason that the ordinary cough mixtures contain the opium preparations in such combinations as to leave a depressing effect, which, especially in cases of the grippe of the "depressing or melancholic" type, enhances the already depressed feeling. Combinations of expectorants with stimulating ingredients had no less the same effect.

The feelings of the physician are not heightened when his "stand-bys" serve him so poorly; neither are the feelings of the patient calculated to give him increased confidence in his physician. Where lies the fault—in the opium, in the morphine, in the codeine, in the heroin?

No, the fault lies in the unstable (or whatever you may call it) combination, or ill-combined ingredients. In seeking for a remedy to relieve the harassing night cough of an attack of "bronchitis due to grippe," in a member of my own family, I chanced to come across a preparation of heroin, which, of all remedies tried, gave relief. I refer to Glyco-heroin (Smith).

Glyco-heroin, in all the cases in which I have used it, has never caused vomiting, an important point for the physician. Is not the stomach the physician's best friend in the treatment of diseases other than obstructive or malignant affections? Another important point noted was that this preparation of heroin—Glyco-heroin (Smith)—never played pranks with the structures composing the vaso-motor system. Now, what do we, in treating disease, want in addition to a good stomach and a stable nervous attachment? We want rapid action. That I effected through the use of Glyco-heroin.

You cannot produce toxic effects with this preparation, as its effects are lasting, and in most cases do not necessitate the use of the drug at very frequent intervals. Glyco-heroin allays cough, without doubt, better than any remedy I have used this winter. And that without the sometimes disastrous results of other preparations of the papaver group. Respiration is stimulated, not in number, but in the depth of the inspiratory act; thus full and complete oxygenation takes place, an important adjunct to the helpful effects of drugs in general, and saving the patient that expensive tank of oxygen. Given full and complete oxygenation, all other symptoms must accordingly diminish; thus temperature and pulse-rate are reduced to a normal condition. Elimination of noxious products not being interfered with, the excretion of urine is brought to the normal under the use of Glyco-heroin. It is well known that diminished quantity of urine follows as a result of inflammatory diseases of the respiratory tract; thus the standard quantity of urine is enhanced by the judicious use of Glyco-heroin. In the case of tuberculosis it acts not only as a respiratory sedative, but also as a stimulating expectorant, as the following case will attest:

CASE I.—*Pulmonary tuberculosis, stage of cavities.*—W. B. C., aged 28 years, suffering from cough, expectoration, emaciation, loss of appetite, loss of sleep, inability to lie in certain positions, of eight years' duration, weight 122 pounds. Physical examination revealed a number of cavities in both lungs, although the laboratory tests did not show any tubercle bacilli. Guaiacol, arsenic, encalyptus, ichthyol, and creosote benefited him but imaginatively. Glyco-heroin in doses of one teaspoonful every two hours, to start with, to be taken from 8 a.m. to 6 p.m., benefited him to such a degree that, to quote from his letter to me, he "gained four pounds in four weeks." Lungs appear

to take on a better action as regards respiration, thus giving him, indirectly, proper sleep, followed by the ability to eat with a relish. Coughs little at night; advised him to expectorate forcibly during day. Patient now finds relief by taking his doses every eight hours.

Now, why this beneficial action in tubercular disease, for this case was taken at random from my case-book, as are all the other cases? Simply because Glyco-heroin loosens cough, promotes the throwing off of the noxious material from the lung cavities, and thus gives relief, breathing becomes easy, oxygenation takes place with renewed vigor, and, by careful attention as regards regulation of dosage, patients of this class may live many years in comparative comfort as regards distressful symptoms.

CASE II.—*Acute laryngitis*.—George F. N., aged 14 years. Coasting, perspiration, and no overcoat, a good combination to bring on an acutely inflamed laryngeal mucous membrane. Pain on swallowing, talks in whispers, temperature 101.5° F., pulse 135, respiration 23, cough; barking like dog, uncomplicated case of laryngeal inflammation. Stokes' expectorant did not relieve, seemed to increase cough. Glyco-heroin, full doses of one teaspoonful every three hours, while producing much sleepiness, reduced inflammation, cough, and pain in three days. I then combined it with squills and syrup balsam tolu, to be given every four hours until completely relieved.

Glyco-heroin, in cases of laryngitis, seems to me to take the place of all heretofore vaunted sure cures, without reservation. Vomiting from the use of opium, morphine, codeine, etc., always delays a cure in cases of laryngitis; not so with Glyco-heroin, which in my hands thus far has not produced vomiting.

CASE III.—*Chronic bronchitis, asthma, and emphysema*.—Mrs. H. D., aged 44, has had asthmatic attacks, every fall and spring, for the past eleven years; not in winter, but only at the beginning and end of seasons. Iodines, senega, squills, digitalis, and cupping gave relief, but with the penalty of a return of more severe attacks. Dyspnea, cough and expectoration in this case was something frightful to witness. In this case, prompt hypodermic injection of 1-8 grain of morphia relieved somewhat, followed by the use of Glyco-heroin, one teaspoonful every hour for three doses, then every four hours, and on the third day every six hours. In this case the Glyco-heroin seemed to continue the effect of the morphia.

A new point in favor of Glyco-heroin is that it enhances the effect of morphia when given hypodermically. Although in seven other cases of asthma, with attacks similar to the above, Glyco-heroin was administered, in two-hourly doses, with the remarkable effect that the cough and dyspnea ceased within four hours.

CASE IV.—*Pharyngitis*—Miss D. F., aged 17 years, complained of fever, hoarseness, cough, and soreness in throat. Culture of reddened throat did not reveal any streptococci or Klebs-Löffler bacilli. Glyco-heroin, given every three hours, cured in two days. The after-cough was removed in four more days, by the administration of Glyco-heroin in doses of one teaspoonful every six hours.

CASE V.—*Acute bronchitis*.—Carl F., aged 22 years; chills, fever, soreness of throat, pain on swallowing; cough dry, no expectoration; Glyco-heroin, one teaspoonful every two hours, promoted expectoration, changed the character of the cough, and gave relief in a most happy manner. In my opinion there is no doubt that patient would have ended up in a pneumonia, unless he was relieved inside of 48 hours. As regards his cough, character of it was so completely changed that the bronchial disease seemed to "flow from him," as it were.

In whooping cough, 22 cases from my case-book show that I prescribed Glyco-heroin with permanent and speedy results, given in doses of five and ten drops, as indicated, to these little sufferers. It seemed to be borne well and efficaciously. Readers do not care much for the recital of cases; bare facts are meat from which all can subsist with profit. Glyco-heroin (Smith) is far superior to codeine, as sedative, in affections where a direct action upon the respiratory center is looked for. For, certainly, its action must be direct where it is noted that respiration is deepened and prolonged. No vomiting, no nausea, no headache, no depressing of powers of mind and body, no untoward symptoms. Glyco-heroin is *par excellence* the remedy for conditions affecting the respiratory organs, whether in children or adults, in the weakly and in the strong.

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#### HEPATIC COLIC AND GASTRIC CATARRH SUCCESSFULLY TREATED BY LAVAGE OF THE STOMACH WITH HYDROZONE.

By FRANCIS H. WEISMANN, M.D., New York City.

THE patient, an engineer by profession, of fair size and weight, about 45 years old, of temperate habits, nervous temperament, has been a severe sufferer of hepatic colic and catarrh of the stomach for several years. Although having a fair appetite, the patient had frequent attacks of vomiting a large quantity of mucus and bile.

In addition to the above symptoms, he was troubled with periodical attacks of hepatic colics, which were so severe that I was induced to diagnose his trouble as being caused by the presence of gall stones.

None of the remedies which were prescribed previous to January 5, 1904, seemed to have any beneficial effect, while the priodical acute attacks made their reappearance more frequently (every four or five weeks).

Having read in medical journals several clinical reports in which Hydrozone and Glycozone were highly recommended in the treatment of diseases of the alimentary canal, I concluded to prescribe Hydrozone before meals and Glycozone after meals in varying doses for about two months without any appreciable benefit. A dose of castor oil was also administered every other week, while olive oil was given at bedtime.

The patient was growing weaker quite rapidly until an acute attack of hepatic colic, which occurred beginning of April, 1904, plainly showed that the above treatment was not powerful enough to subdue the cause of his trouble.

Then I persuaded him to resort to lavage of the stomach with diluted Hydrozone.

I commenced treatment on the 5th of April, 1904, with Hydrozone 100 grammes, warm water one quart; the stomach was washed every third day in April and every second day in May, when the Hydrozone was increased to 150 c. c. (about five fluid ounces), and was kept at that amount throughout the treatment; during the month of June the stomach was washed out every day, July every fourth day, August and September once a week.

The improvement was noticeable already at the end of April, when the quantity of bile and mucus was much lessened. In September the benefits derived from this treatment proved conclusively that it had not been used in vain. Internal treatment was by means of Glycozone, two teaspoonfuls before and after each meal, and every three weeks a good dose of oleum ricini.

Up to date the patient has not had another attack of hepatic colic since April, 1904, while he is now enjoying good health.

The results that I have obtained in this particular case are so gratifying that I resort now exclusively to Hydrozone and Glycozone in the treatment of all cases of stomach diseases, and I believe that with the exception of stomach and intestinal disorders resulting from the presence of a malignant growth, all other cases can be successfully treated as above outlined.—(Published by *The Saint Louis Medical and Surgical Journal*, August, 1905.)

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#### VIRTUE RUNNING WILD.

The sentiments which underlies the present efforts of certain worthy medical men, to protect the profession from imposition and to make

our therapy clean, reliable and trustworthy, is entirely laudable and commendable. The extent to which some of these gentlemen are permitting their enthusiasm to carry them is lamentable. The judgment passed upon many of the pharmaceutical preparations which have stood the test of time for years in the practices of thousands of successful medical men, has seemed hasty and ill-advised. To one who is prejudiced in neither direction, who endeavors to look at the matter with perfect fairness, it is very questionable if it is right that a small faction of the American Medical Association should use the organ used by all of the members to condemn or detract from the reputation of long established pharmaceutical preparations, many of which are used regularly by a large part of the membership of the Association. The manufacture and sale of pharmaceutical preparations is, and must be, commercial in its character. It can never be strictly professional. The average preparation which has been used by medical men of intelligence for years with good results must have something in its favor, even if its manufacturers are not willing to conduct their business exactly as we may wish to dictate. I have no desire to uphold in any way the secret medical nostrum, but I question, as a matter of fairness, the propriety of attacking any well-tried preparation until it is demonstrated beyond reasonable doubt that the members of the Association are opposed rather than being users of the preparation in question. Those who have been placed in positions of power--which may be used for the accomplishment of evil as well as good—should appreciate that such an office is one of trust, and there should be an effort to carry out the will and wish of the majority rather than to be led by personal prejudice or petty motives. G. T. P. *The Chicago Clinic and Pure Water Journal.*

#### IN NEURALGIC DYSMENORRHEA.

We find those cases which suffer from rheumatism, gout, malaria, usually anemic, of a highly susceptible nervous temperament, and often hysterical. The woman's general condition has an intimate relation with her suffering, and in treatment should receive its full share of attention. Many women frequently state that they suffer only when run down, overworked, or nervous and worried. A leading physician states in regard to this condition: "I have seen menstrual suffering, if not entirely cured, at least much lessened by the building up of a generally run down system." Pepto-Mangan (Gude), a chalybeate tonic of tested merit, has proven of inestimable value in rebuilding run down condition of the general system. In anemia, amenorrhœa and dysmenorrhœa, menorrhœgia, metrorrhœgia, etc., its action has been prompt and efficacious to a marked degree. It does not distress the stomach or produce nervous sequelæ.