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THE ADDRESS IN MEDICINE,

DELIVERED AT THE FOURTEENTH ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

By J. E. GRAHAM, M.D., M.R.C.P. LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital.

Mr. President, and Members of the Ontario Medical Association:

IN response to the kind invitation of your Committee on Papers, I shall endeavor in this, my address in medicine, to make a few remarks of a plain and practical nature upon the management of some chronic diseases frequently met with, emphasizing the necessity for greater care in the study of their etiology and early diagnosis.

This subject was chosen because I have been impressed, whether rightly or wrongly, with the idea that we, as general practitioners, do not in all cases pay that attention to the early treatment of chronic diseases which their importance demands.

The Ontario Medical Association, throughout its career, has been noted for the practical nature of its discussions, and the courteous but free criticism which has been given to the various papers read. The members have certainly never indulged in empty compliments, or taken up much time in passing meaningless votes of thanks, but have endeavored to render the meetings as useful as possible.

It is, therefore, with greater confidence that I approach this subject, and speak plainly of what I consider to be the duties and responsibilities of the profession in relation to the care of chronic cases.

Are we not too much inclined to look upon many of the chronic diseases as incurable, and therefore become too easily discouraged if our patients do not soon exhibit signs of improvement? At the recent International Medical Congress held in Rome, Dr. Jacobi made the following remarks, speaking of the treatment of acute diseases: "Many chances of saving human life are thrown away by too great delay in interfering medically, and this occurs especially in inflammatory and infective fevers. The so-called expectant method is frequently a most pernicious proof of indifference or ignorance." These remarks are applicable to the treatment of chronic as well as of acute affections, and often, for the same reason, a want of faith in our power to control the disease.

In reviewing my experience in practice, I can recall cases which I looked upon as incurable which have afterwards made good recoveries. I can also recall cases in which, on account of want of care in my diagnosis, a superficial and consequently unsuccessful line of treatment has been carried out, when a careful study of all the circumstances of the case might have led to the adoption of more thorough and radical methods.

We should, I think, exercise great caution before giving an unfavorable prognosis. Such an opinion will often prove injurious to the patient, and, if incorrect, will not add to the reputation of the practitioner. I think that in this respect we do not now err as often as formerly. We do not condemn a patient to early and sudden death because we hear a valvular murmur, nor do we consider him incurably ill with Bright's disease because we find albumin and casts in the urine. Those instances of want of success of which we have spoken are principally due to the following causes:

(1) A faulty diagnosis.

(2) Want of sufficient care in the study of the case, which results in the adoption of inadequate methods of treatment.

(3) Want of faith in the use of remedies.

We must not here forget that in a large proportion of the unsuccessful cases the physician is, from the first, to a great extent, powerless; the disease is from its very nature incurable, the patient has not applied until serious organic changes have taken place, or, owing to uncontrollable circumstances, a thorough method of treatment cannot be adopted.

In the diagnosis of a chronic ailment, we should never be satisfied with the discovery of the pathological condition present without finding out the cause. We may, for instance, by careful examination, make a diagnosis of dilatation of the stomach; but unless we go further, and find out whether the dilatation is due to an abnormal condition of the gastric juice, to retained ingesta, to enfeeblement of the muscular walls of the stomach, or to all acting together, we will not likely succeed in our treatment.

To illustrate the point, the following brief histories of two cases of dilatation may be given :

Both patients were admitted under my care in the hospital about the same time last winter, and before an analysis of the gastric contents was made a diet was ordered for both consisting of scraped beef, thin toast, and milk. Lavage three times a week was prescribed, and strychnine was given.

The first patient, a young man, in whom the dilatation and accompanying catarrh were produced partly by taking large quantities of badly cooked food while working in a lumber camp. In his case the method of treatment adopted worked admirably. The gastric symptoms quickly disappeared, and the stomach became much reduced in size. The second patient was an elderly man, much enfeebled by exposure, and the condition of the stomach appeared to have been produced by taking badly cooked food while that organ was in an atonic condition.

In his case the treatment had an injurious rather than a good effect, and in a few days it was found necessary to change the diet to peptonized milk, to which, afterwards, a small quantity of farinaceous food was added.

About a week after their admission an analysis of the gastric juice was made in both cases.

In the first, hydrochloric acid and pepsin were both found in normal amounts. This accounted for the excellent digestion of meat.

In the second case, hydrochloric acid was not found, and pepsin existed in very minute quantity. Here was an explanation of the bad effects of a meat diet.

If in these cases an analysis of the gastric contents had been made before any treatment was adopted, an appropriate diet would have been given to each.

In the treatment of chronic gastric catarrh, we ought first to find out the exact condition of the stomach, the chemical character of the gastric secretion; whether dilatation exists or not; whether the movements are normal, and the rapidity with which absorption takes place. We have now means within our reach of obtaining an accurate knowledge in all these particulars. The analysis of the gastric juice is of special importance, as

one of the most frequent predisposing causes both of acute and chronic gastritis, in either a deficiency in quantity or defective quality of the gastric juice. It will, then, be necessary to investigate as to the patient's surroundings, habits of eating, drinking, and working. The condition of the stomach may be largely the result of mere exhaustion from overwork or anemia, and unless care is taken to remove this condition the direct treatment of the stomach may be unsuccessful.

It is safe to say that as great progress has been made in the treatment of diseases of the stomach as in any other department of medicine, and that we are now able to bring to bear upon the subject an amount of accurate scientific knowledge which was not conceived of even ten years ago.

The use of the soft rubber tube, as introduced by Leube and Ewald, has revolutionized our treatment of stomach diseases. Leube says: "With the introduction of this practice, the treatment of dilatation of the stomach has for the first time become a rational one, and all other remedies sink, by comparison, into the second and third rank." Ewald says: "The advantages resulting from this method are evident, and the only wonder is that it was not made use of earlier."

The question of the administration of acids or alkalies can best be settled by first ascertaining the chemical character of the gastric juice. Alkalies are often needed for the purpose of neutralizing acids, such as acetic and butyric, which result from fermentation; but they ought not to be given to neutralize the natural acid of the gastric juice. They should, therefore, be given near the end of the digestive process, or shortly before the next meal. Hydrochloric acid, on the other hand, may be given with benefit when there is a deficiency of that acid, and the proper time for administering it is shortly after the meal.

Notwithstanding the great advances, only a few of which we have spoken of, how often are we tempted to go on in the old way, to give a tonic or some aid to the digestion which may temporarily relieve the patient, but will not cure the case. This is, no doubt, largely due to the great amount of labor involved in making the analysis, and the difficulty of finding time to devote to it. Of this I shall speak hereafter.

Now, let us turn our attention to an entirely different class of cases—the chronic inflammation of the kidney, generally spoken of under the head of Bright's disease. The subacute and chronic forms in which the glomeruli and tubes are primarily affected shall be more particularly referred to.

It is a matter of doubt if in these cases we are not too apt to give an unfavorable prognosis, and to treat the patient from the first, not with the hope of curing, but simply of ameliorating the symptoms and of prolonging the life. Who can draw the line, in many cases, between the curable

and incurable? Or who can, in a certain case, say when it passes into the incurable stage?

It is sometimes said that a case is incurable when the symptoms extend beyond a period of six months. I have seen one recover after the symptoms had been nearly a year in existence. Bartels mentions three cases in which anasarca lasted eighteen, twenty, and thirty years respectively, and in all of which a complete recovery was made, so far as the dropsy was concerned. One died of pericarditis three years after the disappearance of the fluid, the second two years after from pneumonia, and the third died of toxemia. Fagge mentions two cases of recovery, one after six years, and another after twenty months. When, therefore, a case of subacute parenchymatous nephritis first presents itself for treatment, and we find albumin, together with hyaline and epithelial casts, as well as the constitutional symptoms of the disease, if cardio-vascular changes have not taken place to too great an extent, we should make an effort to cure the patient. We should not be satisfied to give remedies which will uniformly relieve the kidneys, but we should put the patient under a thorough course of treatment, both as to diet and general régime. In fact, we should place the patient in such a position that nature will have the best chance to overcome the disease.

The inflammation of the kidney is due to some continued form of irritation which may be the result of the presence of bacteria, of toxins produced by bacteria, or the toxin produced in a faulty metabolism. These causes should, if possible, be removed, and the weak and diseased organ should be guarded against all outside forms of irritation. Chilling of the surface of the body, which we know has a directly injurious effect upon the kidney, should be especially prevented. We also know that rest is essential to the treatment of any form of inflammation. To accomplish both of these objects, it will, therefore, be necessary to enjoin rest in bed in a room in which the temperature is even. I am not at all certain that we have yet discovered the form of diet best suited to these cases. We are too much governed by the idea that nitrogenous food is always bad for the patient, and that milk and farinaceous food are always indicated. I have had under observation a patient, a physician, suffering from chronic parenchymatous nephritis, who is always benefited by the use of a strictly meat diet. On two different occasions the albumin has been made to disappear from the urine and the general symptoms to improve by an exclusive diet of scraped beef. In such a case it would seem that the patient was not able to assimilate milk or starchy food. He had also tried an exclusively milk diet, without any effect upon the symptoms. The urine was at all times free from sugar.

It cannot be doubted that, in the great majority of cases, a large

amount of nitrogenous food is injurious, but there are exceptions, as in the case above mentioned. The whole question of diet in disease depends largely upon individual peculiarities. Although man is an omnivorous animal, some individuals, so far as their digestive and assimilative powers are concerned, belong rather to the herbivora, while others belong to the carnivora. Some digest starch and sugar better than meat, while with others the opposite is the rule.

A careful study of the urinary sediment will often enable one to judge if the diet is suitable. An abnormally large quantity of lithates will indicate a malassimilation. There is no specific treatment known for parenchymatous nephritis. I have not time to go further into the management of cases, so far as the edema and the neuremia are concerned.

I am sure I must express the sentiments of all present when I deplore our great lack of success in the treatment of that very prevalent and fatal disease, pulmonary tuberculosis. Patients seek our advice in what we consider the earliest stages, and, notwithstanding all our efforts, notwithstanding the great advance which has recently been made in the study of its etiology, we are compelled, in many cases, to be mere witnesses of the gradual decline and fatal termination, without being able, in any material way, to influence the course of the disease.

It is probable that, as long as the present state of society exists, this will continue to be the case, so far as the poorer classes are concerned. From the very nature of the disease, I do not think it at all likely that we shall ever find a specific, a true germicide. We must, therefore, resort to the inherent vitality of the animal cells to successfully withstand the invasion of the bacilli. So long as we are unable to change the surroundings of the great mass of our consumptive patients, we cannot hope to assist, in any great degree, the leucocytes in their conflict with the germs of tuberculosis.

At some future time, perhaps, when the public becomes more fully aware of the nature of the disease, the great mortality attending it, as well as of the great loss, commercially speaking, produced by it, the government or private benefactors will provide for our consumptive patients public institutions in the same way as asylums are now built for insane cases. Not until some such movement is made will it be possible for us to grapple successfully with this terrible disease, as it exists among the poorer classes.

The question here arises, Do we achieve all that is possible in our treatment of the disease as it is found in the wealthier classes? Are we sufficiently careful in making an early diagnosis?

A suspected case should be kept under constant observation, and frequent examination of the chest and of the sputa should be made until we

are quite satisfied that there is no further danger. How many of us make careful and frequent examination of the sputa? Yet the life of a human being may be saved by our care or lost by our negligence. Great are the rewards in our profession, and correspondingly great are its responsibilities. The examination of the sputa is of such value on account of the positiveness of the diagnosis when the bacilli are found. We may be suspicious of the condition of a lung after physical examination, but we may not be sufficiently convinced of the presence of tuberculosis to advise the patient to change the whole course of his life—to give up business, for instance, or to move to a more favorable climate. When, however, the bacillus is found, we have no longer any doubt, and can, with assurance, advise the patient as to the course which he should pursue.

In a paper which I had the honor of reading before the Dominion Medical Association two years ago, after giving the results of different methods of treatment of pulmonary tuberculosis, I mentioned the fact that, under any circumstances, we shall be compelled to treat a large proportion of these patients at their own homes. I then ventured to express the opinion that the hygienic management of the disease could be frequently carried out at home, and that as good a measure of success could be achieved as in those cases sent to other climates.

When a patient comes to us in the earlier stages of the disease, and when we are convinced that the case is not of the acute form, we should assure the patients, as well as the friends, of the possibility, and, in some cases, of even the probability, of a cure if the details of treatment are thoroughly carried out. We should look upon a patient with a diseased lung in somewhat the same way as with a broken limb; so that, leaving every other consideration aside, we should at once place the case in such a position that nature will have every chance to heal the diseased organ. I am strongly opposed to the practice of sending such patients to a warm climate, with no other directions than simply to go there and afterwards follow the dictates of their own judgment. In too many instances they unnecessarily expose themselves to cold and exhaustion, become chilled, and, as a result of lowered vitality, the disease makes more rapid progress. When such cases are sent away they should be referred to some experienced physician, and advised to remain constantly under his care and observation. Whether a patient remains at home or goes abroad, he should be under constant treatment so long as there is any evidence of active disease. During the last two or three years I have been in a position to observe the progress of some cases treated at home by careful attention to hygiene and the use of appropriate remedies, and have been much gratified with the results. A marked improvement was noticed even in some advanced cases, and an apparent cure in a few in whom the disease had

just commenced. The method adopted was an imitation of that carried out by Dr. Dettweiler and Dr. Turbon at their special hospital, and as described in my paper already alluded to.

Of the many remedies recommended for pulmonary tuberculosis, I regard creasote as that one which is most frequently followed by positively good results.

When all signs of the disease have passed away a line of life should be mapped out, so that recurrence of the disease may be prevented. Here many difficulties arise. The patient is often unable or unwilling to follow the instructions given, and finally becomes a victim to the malady.

The management of the various forms of anemia is a matter of great importance. Here, again, it is not only necessary to make a diagnosis of anemia, but to find the cause of the defective blood condition.

I have lately had under treatment four cases of anemia whose histories are very instructive in this respect. The first, a man over 50 years of age, was pale, and complained of distress and vomiting after eating. A microscopical examination of the blood revealed a greatly diminished number of red corpuscles, as well as of hemoglobin. The corpuscles were irregular in form. Megalocytes and microcytes were also present. The diagnosis made was the gastric form of anemia. The stomach was washed out every second day, an appropriate diet ordered, and arsenic was given. Rapid improvement followed, and the patient left the hospital in five weeks apparently well.

The second case, a woman of 55 years of age. Very anemic, heart dilated, dyspnea on exertion. Complained of nausea, and had frequent attacks of diarrhea. There was, however, very little, if any, emaciation. Moderate elevation of temperature. The clinical symptoms pointed to pernicious anemia; but, upon a microscopical examination of the blood, to our surprise we found the corpuscles not much diminished in amount, nor much changed in form or size, but a marked diminution of the hemoglobin. Upon examination of the urine we did not find either albumin or sugar, but we discovered a marked diminution in the urea excreted, one-sixth of the normal amount at our examination. We therefore concluded that the patient was suffering from a simple anemia, perhaps due to the impurity of the blood from retention of urine. No doubt the dilated heart also aggravated the condition. Rest, massage, careful dieting, and the administration of iron and arsenic produced a very great improvement.

In the third case, a woman of 27 years, the anemia followed confinement, and was probably due to the absorption of toxic matters during or shortly after confinement.

April 1. The red corpuscles were much diminished in number,

1,464,000 per c.m.n. Megalocytes and microcytes were seen. Poikilocytosis was also well marked.

April 13. Red corpuscles, 1,672,000 per c.m.n.

May 2. Red corpuscles, 3,400,000 per c.m.n.

The treatment adopted was arsenic, massage, and good diet. She left the hospital, May 8, almost quite well.

The fourth case was one of idiopathic anemia, in which we could find no cause for the disease. The principal symptoms were weakness, pallor, dyspnea, exertion, and vomiting, and diarrhea at times. Emaciation slight; slightly elevated temperature.

April 9. Number of red corpuscles, 1,800,000.

April 16. Number of red corpuscles, 1,400,000.

In this case massage was adopted, arsenic given, and the stomach was washed out twice a week. It was exceedingly difficult to find any kind of food which he could relish. On April 26th he left the hospital unimproved.

In this case we did not really find out the cause of the anemia, and, perhaps, partly for that reason we were quite unsuccessful in treatment. We have much to learn about these cases of so-called true idiopathic anemia.

I might further illustrate the importance of the use of every means which modern science affords in the diagnosis and treatment of chronic diseases. I might, for instance, refer to the great success now attending the treatment of neurasthenia. I well remember, while attending the meeting of the British Medical Association at Worcester in 1882, hearing the remarks made by the late Dr. Mahommed in a discussion of one of the earlier papers on the subject by Weir Mitchell. The plan of treatment, he said, commended itself to him on account of its thoroughness, and the attention to the minutest detail. He went on to deplore the half-hearted way in which physicians often undertake the treatment of chronic diseases.

We frequently hear the assertion made that while there has been great progress in the science of surgery very little headway has been made in internal medicine. I am very skeptical about the truth of this statement, and am rather of opinion that, if it were possible to obtain statistics, we would find that in successful treatment the science of medicine has kept well abreast of its sister department. It may, however, be safely said that the physician has not taken advantage of the results of investigation as soon as the surgeon.

The principal reasons for this may be stated:

(1) The great difficulty in applying many of the later methods. In the treatment, for instance, of stomach diseases, the analysis of the gastric juice is a matter of great importance. To make the analysis a small

laboratory is necessary. How difficult it is for the practitioner, after having acquired the necessary knowledge, to find time to give to such complicated methods!

Again, the detection of the pathogenic bacteria is often of great importance. For this a microscope of high power is required, as well as a number of chemicals often difficult to procure.

It has occurred to me that the science masters in our collegiate institutes might be encouraged to take up the work. They have the laboratory and much of the necessary apparatus at hand, and a little attention to this department would enable them to analyze animal fluids correctly. They might also acquire sufficient knowledge of bacteriology to examine for the bacilli of tuberculosis, as well as other micro-organisms.

Then, again, we cannot, as a rule, see in medicine the results of treatment as in surgery. We can, however, point to some very striking results in chronic cases. The cure, for instance, of stomach dilatation, of anemia, of neurasthenia, of myxedema by thyroid extract, and even of tuberculosis.

The success has been quite sufficient to encourage us to put forth greater efforts in this direction. The work done in our medical colleges should be thorough and quite up to date.

We have found that the establishment of a fully equipped laboratory in connection with the Toronto General Hospital has been of great advantage not only in the education of the student, but also in the successful treatment of the patients. The vast extent of knowledge now to be acquired makes greater demands upon the student's time and energy, and the Ontario Medical Council acted wisely in lengthening the course.

In looking over some old numbers of London *Punch*, not long ago, I came across two very suggestive pictures. One represented the medical student of 1846, and the other one of 1886. In the former the student, evidently of the Bob Sawyer type, sat lazily before the fire, his feet resting on the mantelpiece, a pipe in his mouth, and a mug of ale by his side. Upon the table were a copy of *Bell's Life* and a guitar. The walls of the room were decorated with the portraits of renowned pugilists and horse jockeys. Upon the mantelpiece was a skull, a pipe placed between the maxilla, and crowned with a worn-out beaver.

The man of '86 sat at his desk deeply engaged in his work, and everything about him gave evidence of the presence of an earnest, painstaking student.

We are pleased to observe that the medical students of the '86 type are becoming more and more in the majority, and those of the type described by Dickens are rapidly passing away, and will, we hope, soon become an extinct species.

In conclusion, I will repeat the points which I mean to emphasize in this somewhat rambling address :

(1) That we should be more hopeful in the success of treatment of some chronic affections.

(2) That greater care in the early diagnosis, and more attention to details in treatment, would ensure greater success.

(3) That we should, as far as possible, endeavor to make practical use of all the more recent discoveries made in the pathology and management of chronic diseases.

McGILL'S OPERATION FOR PROSTATIC ENLARGEMENT, WITH THREE CASES.*

—
BY ANGUS MCKINNON, M.D.,
GUELPH, ONT.
—

THE vesical disturbances directly due to prostatic hypertrophy are so common, and so distressing, that I need offer no apology for bringing this subject before the association for discussion. There may be considerable hypertrophy, when the direction of principal growth is downward, without giving rise to any bladder symptoms. But when the growth extends into the bladder cavity, it sets up irritation from its presence, and renders the patient eventually unable to empty the organ completely. This condition may be fully relieved, at least for a time, by the regular and proper use of the catheter. In some cases this relief may continue for many years, perhaps for the remainder of life. Generally, however, cystitis slowly develops, and may become so severe that the patient spends most of his time, day and night, in painful efforts to empty the bladder—the urine being ammoniacal, and containing slimy mucus, blood, and pus. Life in such a condition is unendurable. The patient urgently demands relief at the hands of the surgeon, failing which he will gladly welcome death as a happy release. In these cases, the operation now sometimes called by the name of the lamented McGill offers not only the prospect of relief, but also a hope that the natural bladder function may be restored. Too frequently the operation is so long delayed that there is no reasonable chance of success. The patients are so worn out by suffering that they have no power to bear the necessary shock of operation, or there may be a pyelo-nephritis already developed from the old cystitis. In such conditions a high death rate should not be a matter of surprise. The operation may also be required in less advanced cases. For example, in patients where the use of the catheter causes considerable hemorrhage; where, from enlargement of the middle lobe, it is difficult even for the surgeon to pass an instrument; and also where, from any cause, it is impossible to teach the patient the proper use of the catheter.

*Read before the Ontario Medical Association, June 6th.

Diagnosis. Ordinary hypertrophy of the prostate is easily recognized by rectal examination. When the hypertrophy is intravesical, no reliance should be placed on such examination, because there may be a large growth in the bladder, yet by the fingers in the rectum no enlargement of the prostate can be recognized. In these cases, in addition to the ordinary symptoms of cystitis, some residual urine will always be found in the bladder. On using the catheter, it will be found that a longer instrument is required. Failure to relieve retention sometimes arises from the use of a catheter which does not reach the bladder cavity. Buckston Brown says: "If the urethra is nine inches long or more, and if not much enlargement can be felt by rectum, there is almost sure to be intravesical hypertrophy."

The absence of evidence of tubercle in any other organ in the body will add probability that the prostatic enlargement is not due to tubercular disease, and the history, often showing a duration of six, eight, or ten years, will aid in excluding cancer.

Method of operation. The suprapubic method of opening the bladder in order to remove prostatic obstruction was very ably commended to the attention of surgeons in several articles by the late Mr. McGill, of Leeds. It was largely due to his advocacy that it was so generally adopted, though Belfield, of Chicago, was the first surgeon who removed, in 1886, a portion of the prostate by this method. Jessop, Atkinson, Harrison, Mayo Robson, Teale, Buckston Brown, Bennett May, McEwen, Manseil Moullin, Bruce Clarke, Jordan Lloyd, Belfield, and Keyes have placed themselves on record as favoring this method. The list does not include the illustrious Sir Henry Thompson, from whose writings I quote the following: "I am entitled to require that if it does happen or has happened to any surgeon to divide or remove any part of the enlarged prostate for a patient who had previously been compelled to pass all his urine by catheter, say, for a period of twelve months, and after the division in question he was enabled to dispense with the instrument, or at any rate to pass, say, half his urine by natural effort, the case should be seen and examined by others. I have long wished to see this sight, and have travelled considerable distances, abroad and elsewhere, expressly seeking it, but so far without success." Thus implying, in the strongest words, his disbelief that any operation on the enlarged prostate could restore the natural bladder function to a patient who had been dependent on the catheter for a year or longer. In answer to this wholesale skepticism of the work of other surgeons, Buckston Brown furnishes the full history of a man who had passed all his urine by catheter for ten years, and who was in a position months after the operation to say that he voided all his urine naturally, and could retain it for six or eight hours. So many similar cases have been placed on record

that, notwithstanding Sir Henry's want of faith, it must be admitted that this operation may restore the power to void urine naturally to many patients who have been dependent on the catheter for years. It is not claimed that it will do so in every case.

Any surgeon who performs suprapubic cystotomy for the first time will be amazed at the ease with which the finger, through the wound, can explore every part of the bladder. If there be a stone, even if it be encysted, and unrecognized by the more usual methods, he finds it readily. He can ascertain if the organ be unduly contracted, sacculated, or if there be any other tumor within it besides the enlarged prostate. The extent and form of this enlargement he can easily define; also its hardness, whether it involves the lateral or middle portions, and the practicability of its removal. Compared with any possible examination by the finger through the perineal route, any surgeon who once explores the bladder by the suprapubic method will admit its very great advantages. Though the exploration is so simple, I do not claim that the removal of the prostatic growth is by any means easy. On the contrary, McGill, on one occasion, found the growth so intensely hard that he failed to remove the obstruction, and the patient received no benefit. Belfield mentions a case where he found a hard mass in the middle lobe, occupying the floor of the urethra, that he could not remove from within the bladder. He made a median perineal incision, and, with the point of the finger so introduced, he succeeded in dislodging the mass.

Mr. McGill mentions that this operation is not indicated in cases where the bladder is much contracted, with thick, non-distensible walls. Simple drainage will give as much relief.

Technique. Possibly owing to prejudice in favor of the perineal method, or on account of the unfavorable statistics published, suprapubic cystotomy is seldom practised by the general surgeon. I may, therefore, be pardoned for presenting a few suggestions as to its performance. The operation is extremely simple, and, if performed with reasonable care, the peritoneum should not be exposed to injury. The use of Petersen's bag I do not regard as essential, nor is it necessary to place the patient in the Trendelenburg posture, though in certain cases such a position may facilitate operation.

Before the operation the bladder should be thoroughly washed out with a warm solution of boracic acid, and six or eight ounces, or more, left in it.

The incision in the abdominal wall should be precisely in the median line, from three to four inches long, and extending upwards from the upper border of the symphysis. The part of the incision nearest the pubes should be carried boldly down through all the structures, separating

the prevesical fat with the finger or handle of the scalpel. A large, long-curved sound should now be introduced into the bladder, and its point turned upwards close behind the pubes. The finger in the bottom of the wound should readily feel the point of the sound through the wall of the bladder. An assistant should keep the sides of the wound well separated by suitable retractors, and another, by means of the sound in the bladder, should keep its front wall well up in the bottom of the wound. The bladder should be opened on the point of the sound, a probe-pointed knife being used to extend the incision downward. Once the finger can be introduced, any necessary extension of the incision should be guided by it. Before proceeding to remove the prostate, the lips of the bladder incision should be securely attached to the deeper parts of the abdominal walls by sutures, and, at the completion of the operation, a suture should be inserted at the lower angle to attach the bladder at this point also to the abdominal wall, as a security against urinary extravasation into the retro-pubic space.

The mucous membrane over the projecting part of the prostate should be snipped through with a knife or scissors, but, when possible, it should be enucleated by the finger. The removal should be accomplished by the finger and forceps rather than by sharp-cutting instruments, which cause severe hemorrhage. Whether it be the lateral lobes or the middle lobe, all of the gland that projects into the bladder should be removed. Sometimes there is only a little nodule to be removed. In other cases the mass is very large. From one of Mr. McGill's patients he removed a mass weighing about half a pound.

The prostatic portion of the urethra should be carefully examined. The aim of the operator should be to dilate it very fully, and to lower the level of its floor, so that it will readily drain the whole base of the bladder. It is only by careful attention to these two points that the operation can be successful in restoring the power to pass the urine by natural effort. Belfield advises, in those cases where it is not possible, by operation within the bladder, to obtain a sufficiently low level for the urethral floor, to make a perineal incision also. If necessary, such additional incision may be quickly made, and should not materially increase the gravity of the operation. A large drainage tube should be kept in the bladder for forty-eight hours. The upper part of the incision should be closed by two or three sutures. Very hot water is usually sufficient to check undue hemorrhage.

Results. I cannot deny that published statistics up to the present time give a very high death rate after suprapubic cystotomy. Judging from my own limited experience, I cannot believe that these statistics give a true estimate of the mortality from this operation alone. I have seen it

performed on a patient over eighty years of age, on several over seventy, and on two patients in a very bad general condition, though not so old. In not one case was there evidence of severe shock, and all recovered from the operation. Beyond question, many of those on whom this operation was performed were *in extremis*, and their death should properly be attributed to their pre-existent condition, and not to the operation. Yet these cases are included in the statistics, and are used to prove the great mortality after this simple operation. I hope no surgeon will allow the influence of such statistics to prevent him giving the aid of his skill to the sadly afflicted victims of intravesical prostatic hypertrophy.

As showing the position the operation should hold, I quote the following from a paper by Buckston Brown, read before the London Medical Society, March, 1893 :

"I would express my present opinion as follows :

"(1) Suprapubic prostatectomy should never be undertaken at the outset of catheter life, unless regular catheterism is impossible.

"(2) It should not be undertaken as long as ordinary catheter life is tolerable.

"(3) If, from any causes, catheter life becomes intolerable, suprapubic cystotomy should be resorted to. By means of this proceeding, the bladder can be thoroughly explored. The intravesical growth, if it is found to exist, and of its existence we can never be sure till the finger is in the bladder, can be fully examined and removed if the operator thinks right to do so. If he deems removal inadvisable, or if there is nothing which can be removed, he can leave the patient with a suprapubic tube for permanent after-wear, with the certainty that he will have materially improved the condition of the patient.

"(4) Should the operator decide to remove the prostatic obstruction, there is a very good prospect, but not a certainty, of the power of natural micturition being restored to the patient."

CASES. I will close this paper giving a few points in the following cases that were operated upon in the General Hospital in Guelph in the past two years :

(1) J.G., over sixty years of age. Twelve stones were removed in January, 1892, by the lateral operation. Finding that his bladder condition did not improve, he returned to the hospital the following May. He could not void his urine naturally. The catheter was difficult to pass, and always caused hemorrhage. The urine constantly showed the presence of blood and pus. On making a suprapubic opening, the prostate was found projecting into the bladder cavity on both sides of the urethral orifice. It was not a complete collar, having been split below in making the lateral section. Above, a part was also missing. The part on the right side

projected an inch and a half into the cavity of the bladder. By means of the finger and a small forceps, the whole of this intravesical growth was removed. This man wrote me a letter in May, 1894, two years after the operation, in which he says he has only to rise once during the night to void urine, and that he has not required a catheter for months.

(2) P.S., æt. 82, a patient under the care of Dr. Stewart, with whom I had the privilege to be associated in the operation. This man, also, had stone. The high operation was selected, in the belief that his symptoms arose in part, at least, from prostatic obstruction. After the removal of a considerable quantity of easily broken-down phosphatic calculous matter, the intravesical prostate was as freely removed as possible. Owing to its extreme hardness, it was very difficult to get away all that projected into the bladder. Notwithstanding his great age, this patient made an excellent recovery, and regained power to void his urine by natural effort. He is very well now, nearly two years after the operation.

(3) J.R., æt. 64. This patient's bladder symptoms began about ten years ago. Before operation he was compelled to pass urine ten or twelve times every night, with great pain and strangury. The urine was very foul, and always contained blood, pus, and a ropy slime. On opening the bladder, an enormous enlargement was found occupying the whole base. The bladder was sacculated, and its walls near the base presented patches of papilloma. Besides, they were non-distensible. The operation was performed in January last, and the suprapubic opening is still used for drainage, and must be as long as he lives. He eats and sleeps well, is free from pain, and has improved very much in his general health.

A NOTE ON THE THERAPEUTICS OF DIURETIN.*

BY ALEXANDER MCPHEDRAN, M.B.,
TORONTO.

THIS remedy consists of a combination of theobromine (49 per cent.) and sodium salicylate (38 per cent.), or, rather, is the salicylate of theobromine and sodium. Of therapeutic effects there is much diversity of opinion. According to some writers, it increases the blood pressure and causes diuresis, while others have failed to note either effect from its use. It is difficult to understand the cause of such differences of opinion, unless it be due to variation in the composition of the drug. My own experience with it has, on the whole, been fairly satisfactory, and in cases in which it has been useful the blood pressure has been raised, the pulse becoming stronger and steadier, and the flow of urine increased, as shown in the following cases:

CASE 1. Dr. R., æt. 42, had arterio-capillary fibrosis. In 1891 he first sought advice for recurrent attacks of asthma, not suspecting that he was suffering from renal and vascular disease, the asthmatic attacks being, in fact, uremic. His heart was greatly hypertrophied, vessels hard, urine of low specific gravity, and contained one-sixth by volume of albumin. Nitro-glycerine relieved the asthmatic symptoms, but early in 1892 he became dropsical on account of cardiac failure. The urine, formerly copious, became scanty. Diuretin was given—20 grs. every four hours—and in two days he was passing over seven pints of urine, the heart became regular in action, and his general symptoms were much relieved. He resumed practice in about ten days, and was able to attend to it for over a month. Then the dropsy began to return. Diuretin was again taken, but with less marked effect this time. He improved slowly, however, and again attended to his professional duties, but only to break down sooner. Diuretin was tried again, but without material benefit. Some time afterwards it was given again, but the heart failed to respond to it, as it did also to digitalis. Death took place suddenly in September, 1892. The failure of diuretin here may, with reason, be attributed to the advanced degeneration of the heart, rendering it unable to respond to stimulus or tonic of any kind.

* Read before the Ontario Medical Association, Toronto, June 7th, 1894.

CASE 2. A. McC., æt. 45. This man also suffered from arterio-sclerosis, with very great enlargement of the heart, with consequent dropsy and much distress. I saw him, during 1891-92, on several occasions with his physician, Dr. Atherton. Diuretin acted equally promptly and satisfactorily in this case as in Case 1, the urine increasing to over eight pints in twenty-four hours, and dropsy disappearing. In time it again returned, and the subsequent use of diuretin proved unavailing to improve the heart or increase the urine. Digitalis was equally powerless. There was a history of syphilis in this case, and Dr. Atherton gave potassium iodide with the most satisfactory results. He spent the summer in fair comfort. Death took place late in the autumn of 1893.

CASE 3. J.B.S., æt. 75, I saw from time to time during the last two years, with Dr. Uzziel Ogden. He was a large, robust man, who had led a very active life. He first suffered from heart strain in 1891, caused by over-exertion. There were no signs of renal disease. Repeated attacks of failure occurred, each more marked, with dropsy, etc., than its predecessor. In August, 1893, his condition appeared to be almost hopeless, the heart being very weak and irregular, breathing very labored, urine scanty—all this notwithstanding the use of general and heart stimulants, purgatives, etc. Diuretin was ordered, and within forty-eight hours the urine became quite copious, the heart steadier, and the breathing easy. In a week he was comfortable, able to sleep lying down in bed, and move about his room. Later, he was out driving. He enjoyed his food, and was very comfortable. The heart continued steady, and the urine about 50 oz. Diuretin was stopped in a week, by which time the pulse had become regular, the dropsy had disappeared; that is, as soon as the indications for its use had been removed. About two months later the symptoms began to return again, but it had much less effect than during the previous attacks. Subsequently, as the heart grew decidedly weaker, it produced no appreciable effect on pulse or urine. Death occurred suddenly in March last.

CASE 4. Mrs. Y., æt. 70, has suffered for years from mitral incompetence with some degeneration, probably, of the cardiac muscle also. She has had several attacks angio-neurotic edema. Her sleep is greatly disturbed, and she often awakes in great distress from dyspnea, having to rise quickly to get her breath. There has been much dropsy, with scanty urine. Diuretin was given with much benefit for a time. Later, it gave much less relief, and the following modification of the pill triplex, or Guy's Hospital pill, was given:

R.—Pulv. digitalis.....grs. xxiv.
 Hydrargyri submur.....grs. xij.
 Ext. nuc. vomic.....grs. vj.

M. and div. in capsulæ.....xij.

Sig.—One to be taken three times a day.

This gave much relief, reducing the dropsy, increasing the urine, and rendering the heart fairly regular. This improvement will, of course, be only temporary.

CASE 5. J.D., an old man, lately in the Toronto General Hospital, with dilatation of the heart, chiefly of the right ventricle, due to chronic bronchitis and emphysema, was discharged in very good condition. There was dropsy, scanty, high-colored urine, orthopnea, rapid, weak, irregular pulse, and cough. At first he was purged fairly freely with mercurials, followed by salines to deplete the portal system, and thus relieve the over-distended right ventricle. Digitalis and strychnine were given as cardiac and general tonics. Considerable improvement resulted. Diuretin was then given $\bar{3}$ ij. per day, and the urine increased 10 oz. per day, becoming clear; the dropsy disappeared, and he was able to sleep comfortably in bed all night. Of course, the other remedies given did much to bring about this desired result.

These five cases are a fair indication of the results of my experience with this drug, and several of my friends have had similar results. On the other hand, others have been greatly disappointed in its use, the effect of its use being only slightly beneficial or wholly negative. The explanation of such a difference of experience is not very clear. It would seem probable that diuretin is effective only within a very narrow range of morbid condition; that when the heart has failed beyond a certain degree it will not respond to the stimulus of diuretin. This seems to be true, at all events, in my own cases, in all of which its use has been temporarily more or less effective, but only temporarily, as recurrence of the dropsy and cardiac failure was little, if at all, benefited by a repetition of the drug. Diuretin is, unfortunately, a patent remedy. Its composition is known, but the process of manufacture is secret. The salicylate of theobromine and sodium is composed of the same ingredients, but is much less agreeable to take, and its effect, so far as I have tried it, is not so satisfactory, possibly from its being less soluble. In some cases diuretin causes headache, nausea, and feeling of depression, probably due to the salicylic acid in its composition. Some of these symptoms presented themselves in Case 2.

In concluding this brief note, I may say that while diuretin is not a reliable remedy, yet I think that, in suitable cases, its beneficial effects are so decided as to render it worthy a trial in those distressing cases in which the heart is failing and dropsy increasing. Even if its good effects are only temporary, they are in some cases so satisfactory that the respite given amply repays its administration. Most drugs are temporary in their effects, and we do not refrain from their use on that account. It is probable it will be found most useful in chronic diseases of the heart muscle,

with disease of the kidney, as in arterio-capillary fibrosis ; less so in purely renal cases. It may sometimes prove useful also in valvular disease with ruptured compensation. In ascites from hepatic affections and in pleural effusions, it will probably have no effect.

Like all patented preparations, diuretin is unnecessarily expensive, about twice the price of the salicylate of theobromine and sodium. It is to be hoped that an equally useful preparation without the patent may soon be placed within our reach.

Selected Articles.

THE INFLUENCE OF MORGAGNI ON ANATOMICAL THOUGHT.*

BY RUDOLF VIRCHOW.

ALTHOUGH the history of medicine has always had a certain connection with the history of the general culture of mankind, it still offers a few remarkable peculiarities. In the first place, without a break in continuity for about twenty-five centuries—from the time of Hippocrates until now—the consciousness of this connection has never been lost. While religions have changed, and systems of law have superseded each other, medical traditions have still been preserved. The terminology of to-day, and even the barbarisms of youthful writers, try to preserve the appearance of Hellenistic origin. No other science has ever been in its origin so firmly grounded, and none of them is really so old, as that of medicine. The history of medicine, such a long continuance of the doctrine, would scarcely have been possible if there had not been an element of unity in the object with which it concerns itself, an element which outlasts all changes of time and place, and which presents the same problem of research to each succeeding generation—the problem of disease. Of course, particular diseases differ according to place or time, but the inquiry into the science of disease in general always remains the same; and the task of the physician—the preservation of health—does not cease, whether it be in Italy or Russia, America or Europe. At first sight nothing is so marked or confusing as the change of medical schools according to time and place. Certainly, until towards the Middle Ages, all the schools were to be found in one or other of the countries bordering the Mediterranean. The Asclepiades and their successor, Hippocrates, had taken their doctrines from the policlinic of the Temple of Cos and other pre-

*An address delivered at the eleventh International Medical Congress, held at Rome, March 30th, 1894.

Asiatic places, whence the new doctrines spread over the whole Grecian world more rapidly after the rise of the empire of Alexander the Great. The first Greek physician appeared in Rome in the time of Cicero. Galen brought the pathological doctrine of Hippocrates with him from Pergamos. But even then no change of doctrine took place. The humoral pathology of Galen did not pretend to be anything but a faithful exposition of Hippocratic teaching; although more than half a century separated the two men, posterity had accustomed itself to consider the two as contemporaries, nay, almost as manifestations of a single personality. Rome furnished no rivals during the century. The only classical author of the Latin race was so little original, and, what is still more marked, so little general, that he only acquired renown for his interpretation of portions of this doctrine. It was only in the eastern portion of the Roman Empire that the school preserved any activity; in Asia Minor, as well as in Byzantium, independent authors existed, who, however, owe their fame to the study of special branches of the system. Nevertheless, humoral pathology remained, and especially in the form which it had received from Galen, the acknowledged doctrine of the whole civilized world east and west. The four cardinal humors, the *chumoi* of the Greeks, were everywhere considered the foundation of physiological and pathological modes of study of the component parts of the human body, and of the changes they indicate during the course of disease. Every disease, according to that doctrine, appeared to be a change in the mixture of the juices in parts or in the whole of the body. It is, therefore, an idle question to ask how they arrived at this conception, and where the doctrine found its origin. The only other Mediterranean country which has left to us a more comprehensive medical literature, Egypt, offers us no sufficient basis for a possible explanation. As to other more remote lands, we only have some few works from India in which certainly links may be recognized, but they also differ considerably in various parts, and no intimate connection can be discovered between them. At all events, none of these countries has ever had a decisive influence on the progress of the doctrine of medicine. The first influence of this kind belongs to quite another time, and to quite another region. This influence also has been raised on the foundation of humoral pathology. When after the decline of Alexander's kingdom a series of independent kingdoms arose out of the ruins of his conquests, the seeds of medical science were preserved amongst peoples who, until then, had seemed to be quite without the pale of the interests of science. Smaller and more local centres formed themselves in Syria and Persia, and there arose continuously a line of noble physicians, who not only gained influence in their native homes, but spread this doctrine far and wide. This was the period when the Jews and Arabs distinguished them-

selves as amongst the most respected teachers of medicine. Quite lately, in our own time, have Hebrew manuscripts been brought to light which prove with what zeal and learning the Jewish physicians of the early Middle Ages preserved and furthered the science of medicine. The inherited capacity of the Jews, who since then have done so much for the advancement of science, was very apparent at this period. The Greek heroes might have fallen into oblivion had it not been for the Arabs, who held aloft the lamp of science; first in Mesopotamia and neighboring lands, then in North Africa, and especially in Spain, they founded schools which became the nurseries of science for the West. Here were read the Greek authors translated into Arabic, and interpreted in the light of progressive experience. The Arabs brought a new and influential element into medical thought, the doctrine of the Spirit, an element almost entirely foreign to the objective mind of the Hellenes, except in a similarity which I wish particularly to mention. In Hippocrates the idea is scarcely found at all, but among the shepherds and nomads of the East belief in supernatural powers had been preserved, no doubt, from prehistoric times. These, different from the natural powers of the material world, were effective partly outside the body in independent existence, and partly within it for a shorter or longer time. The "vital air" was considered as a prototype of this, and found expression in the Hellenic term *pneuma*, and in its inferior phenomena was called by the Latin translators "Halitus," and in its higher manifestations "Spiritus." Echoes of this thought has even in our time arrived at a position of some importance in the form of animal magnetism, spiritualism, and also to some extent in hypnotism. Among the Arabs all this lay in the region of speculative thought, such as a lonely brooder might evolve at his fireside. A kind of natural history background was gradually formed for him out of a second mode of observation, the chemical, by which the Arabs acquired such an important position in the history of natural science. It is well known that they were the creators of this form of investigation, which only at the end of the last century assumed its true position among the natural sciences. The Arabs themselves never got beyond alchemy, but in taking the first steps in analysis and synthesis, and by the methods of extraction, of distillation, sublimation, precipitation, and the procuring of pure metals and salts, confirmed still more the idea that finer matters were hidden in the raw substances, and these were, in their ideas, the real forces of nature which underlay the activity of the grosser matter. Thus the idea of spirit came gradually to be linked with the conception of a true reality, a refined embodiment of the effective forces, and in this kind of special vitalization this idealistic conception was imported into the western world, which even in prehistoric times held ideas that foreshadowed these. The contact of the western

with the eastern countries at the time of the Crusades contributed largely to ensure the entrance of such ideas into the minds of eastern peoples. Perhaps that would not have had much influence, but there then existed no western science at that time—at least, no medical science. The West received its scanty store of medical science directly from the learned schools of the Arabs, partly from Spain, and partly from North Africa. For Spain the principal point of contact was Southern France; for North Africa, Southern Italy. But, while the importance of Montpellier developed itself slowly and almost imperceptibly, the school of Salerno has remained the place where the breach was made through which the ideas penetrated which Constantine had imported from the East in the eleventh century. To this was soon added the monastery of Monte Cassino, and the transmission of this doctrine to the Benedictines, as well as later the acceptance of this doctrine in the monasteries. It is not surprising that the medical science of the monks should be the old humoral pathology. When it was seen that the medical science of the Arabs was found in the Greek authors people began to translate the Arab translations into Latin, and these revised translations very much later have been the foundation of the study of medicine, not only in Italy, but in the whole West. When Latin, since the time of Charlemagne, had become the speech of science, Hippocrates, and, in a greater degree, Galen, were acknowledged by the church, and they acquired by and by, although not through the express sanction of the church, the position of real fathers of the church, to doubt whose reliability would be considered a sacrilege. So that the doctrines of Galen, already venerable by age, became the absolute dogmas of the church. It would, perhaps, have happened differently if that kind of institution, in which modern medicine has found the real source of her knowledge, had then existed—I mean the hospitals (*Krankenhauser*); but the so-called hospices of the Middle Ages, especially of the early Middle Ages, were, indeed, mainly intended for pilgrims, and afforded a short rest to the traveller, whilst the priests who superintended them had rarely an opportunity to give assistance to sufferers. It is true that not a few of these old hospices, when they had existed a long time, became true hospitals. To-day we must recall that the first hospital known to us, built on the Tiber Bridge in Rome in the seventh century, had been founded for Anglo-Saxon pilgrims. This was the Hospital Spiritus in Sassia, in connection with which later, through Pope Innocence III., the organization of the hospitals of the Holy Spirit spread over the whole West. This hospital on the Tiber still stands in the old position, transformed into a large non-lay hospital. I have before now described the history of these hospitals, and explained how little they did in the way of affording true help to those in need of assistance and to medical science.

Those among them deserving of mention in the history of medicine owe it almost unexceptionally to the circumstance that they were finally superintended by laymen, and, as a rule, were in the hands of the civil authorities; for only since the beginning of last century have the governments almost everywhere taken a share in this humanitarian task, especially since medical instruction in the universities categorically demanded the use of hospitals for this purpose.

For my present purpose hospitals have but little concern, for I wish to show this great assembly how the old and dogmatizing medicine regained its freedom, and became modern scientific medicine. This remarkable change was led up to by a long series of battles, that, for the most part, were fought out on Italian soil, although other nations contributed to this victorious result. The prize of this battle, or, more exactly, the prizes, have fallen to the science of anatomy. It is scarcely necessary to prove that throughout antiquity an opportunity was only once, and that during a short space of time, offered for anatomical researches on the human body. That was the time after the death of Alexander, when the government of Egypt fell into the hands of the Ptolemies. Afterwards a similar possibility was never again given to a physician of the ancient time. And so even Galen could recommend nothing better than to study animals which, in his opinion, were nearest to men—that is, apes and swine. As we can well understand, the sacrificial cult, which demanded the confirmation of the normal condition of animals and their organs, gave many an opportunity for comparative and even pathological observation. Even the usual sacrificial animals must often enough have given a thoughtful observer material for considerations and conclusions which were capable of being utilized for the determination of human pathological conditions; and there can be no doubt that Hippocrates already knew and made use of many facts that have been confirmed centuries later. But it is evident that both anatomy and pathology must remain hypothetical so long as no examination of the human body could yield strict proof of the particular condition of individual parts. The real difficulty lay in the church. The natural dislike of the people to dissection of the human body was confirmed by ecclesiastical prohibition. To this was added that those who were convinced of Galen's infallibility had no need to dissect. Why undertake dissections if one knew the arrangement of the body? By means of this argument the singular dilemma was reached that hindered the development of anatomy for at least two centuries; in order to prove that Galen had erred, dissections must be made. Science demanded this, but the church declared that it was quite certain that Galen had not made a mistake; therefore it was not advisable to undertake such reprehensible action. Here only the highest ecclesiastical authority could come to the

rescue, and it finally decided in favor of science. In Rome itself there have never been wanting physicians who felt it their duty to forward the acknowledgment of truth in science, and not a few of the papal body physicians have belonged, down to our own times, to the most energetic advanced guard in this struggle. Thus it is explained how, from the beginning of the fourteenth century, Mondini in Bologna got permission to dissect human corpses and demonstrate upon them before students. When once the path was opened up, it became available for others. Thus the Italian universities gained a valuable extension of medical instruction at a time when it was still long lacking in most other universities, and thus there were anatomists in Italy when elsewhere such a line of study was not yet known. From that time there began a pilgrimage of students from northern lands to the Italian universities, particularly to Bologna and Padua, and sometimes there even arrived a man who had finished his studies, but wished to complete here his full culture. Among these was also the young *savant* whose fate it was, by his own systematic researches, to destroy forever the belief in Galen's infallibility, and then, at least in the anatomical field, to found, in an ineradicable manner, the rights of necropsy. This man was Andrea Vesalius, of a low German family, born in Belgium, educated in France, but who, when professor at Padua, arrived at the high position which enabled him to become the true reformer of the doctrine of the institutes of medicine, and, at the same time, to conquer for anatomy, for all time, the position of a true (*grundliche*) science. Vesalius was one of those rare men of universal importance so seldom found to appear in history; so that almost all civilized nations of the Europe of that day—Italy, France, Germany, the Netherlands, and even Spain—could look upon and reverence him as belonging to them, and the value of his victories in anatomy was acknowledged at the same time with respect to all other branches of medicine. Nevertheless, it is not quite correct to call him the reformer of medicine. His anatomy, as such, was not able to set aside humoral pathology. Nothing could prevent the idea that the organs of the body, even those whose position, connection, and arrangements were exactly known, were made up of four *humores*. To procure a change in this, it needed a direct front attack against the centre of the battle line of the dogmatists against the doctrine of *crasis*. This was accomplished with the violence of a conqueror by a German, who, in truth, despised anatomy, and used, instead of it, the Arabian tradition, but in a very changed form, as the means of his effectiveness. This man was Theophrastus Paracelsus, a contemporary of Vesalius. While proving the chemical impossibility of the four *humores*, and their acceptance as elementary matter, he succeeded, with the assistance of spiritistic additions, to build up a kind of anti-doctrine, which, mixed, half naturally, half

spiritually, unfortunately acquired in the hands of his successors a predominantly mystical character.

It is difficult to say what might have proceeded from this doctrine, which, although bared of dogma, was, on the other hand, a prey to the most wilful subjectivity. But salvation was near. Already at the beginning of the seventeenth century William Harvey founded the doctrine of the circulation of the blood, and thereby laid the foundation stone of a new study, which soon arose gloriously beside anatomy—that of physiology. He, too, had come as a young man to Padua, principally in order to improve himself in anatomy. Under the direction of Fabricius ab Acquapendente he studied the arrangement of the blood vessels and the heart, and so (instead of the blood as *one* of the four *humores cardinales*) he finally looked upon the blood as the “noblest humor,” the real *humor cardinalis*. His doctrine of the circulation left only one gap, but that was a sensible one. He could not prove how the blood reached the veins from the arteries. To have given this proof through direct observation is again the merit of an Italian investigator, the celebrated teacher of the University of Bologna, Malpighi, who applied the new invention of the microscope to the observation of the living body, and discovered the capillary circulation. In this way, to a certain degree, the crown was set on the building in the erection of which Vesalius and Harvey and innumerable other men of science employed their powers. Thereby also was confirmed the change of the humoral pathology into a hematopathology, and a line of research founded, to the furnishing and transformation of which the following two centuries labored, and which have not yet found their final close (ending). Strangely enough, none of the investigators above named arrived at the point of applying the results given by pure anatomy and its development into an experimental physiology to pathology; but no one can continuously occupy himself with anatomy without becoming attentive to the changes caused in the living body by disease. Indeed, we know that from Eustachio to Vesalius the pathologico-anatomical differences have occupied attention; but neither they nor their immediate successors have noticed these differences with such accuracy that the foundation of a practical doctrine of disease could proceed therefrom. On the contrary, the old idea that disease was something general became all the stronger the more the conviction that a single liquid streamed through the whole body and was the centre of all essential changes became fixed. Even the comprehensive studies of the great Leyden teacher, Herrmann Boerhaave, could not break down that conviction. It had only the result of removing the importance of local processes into the sphere of the interests of physicians; but it finally culminated in the referring of their local processes to the circulation. Therefore the

circulation always remained in the foreground of pathological observation, and Paracelsus' idea of the *vita propria* of the organs was set aside as a spiritualistic error. It was in this time that the fresh development due to Morgagni occurred. His good star first led him into surroundings which were less favorable to pathological than to anatomical study. Let us dwell on this for a short time. When Giovanni Battista Morgagni, in 1698, at the age of scarcely sixteen years, left the school of his native place, Forli, and went to the Bologna University, he found himself, so to say, placed in an anatomical atmosphere.

Everybody still remembered the discoveries which had been made by Malpighi, Aranzi, and Varoli. Morgagni first became closely connected with Valsalva, who made him share directly in his anatomical work, and also introduced him to pathology and medical practice. In 1701 he received his diploma in medicine and philosophy, and a few years later the presidentship of the *Academia Inquetorum*, from which later on proceeded the *Istituto delle Scienze*. In 1706 there appeared his first independent production, the "*Adversaria Anatomica Prima*," which was gradually followed by further pamphlets. His fame grew so rapidly that the Venetian Republic called him to a chair in Padua in 1711, which had before been occupied by Vesalius. There was then developed such an extensive scientific activity that the number of students could not be accommodated in the narrow space of his lecture room. I may venture, I hope, in spite of the international character of this Congress, to remind my hearers how large a share Germany had in this frequency, and how was developed a particular relation of our countrymen to the great master. As early as the year 1715 Malpighi was chosen by his German students as *patronus Germanorum*. With his help they erected a special house with a library, which bore the inscription: "*Inclyta natio Germanica adjuvante liberalissimo protectore Cel. viro Io. Bapt. Morgagni M.P.L.P. has sibi emit sedes.*" But even seven years earlier, in 1708, he had received from Germany the first great foreign distinction which he ever obtained: the *Academia Curiosum Naturæ*—from which later on the *Academia Cæserea Car. Leopold Cur. Nat.* was developed—elected him as member, and in 1732 as adjunct. How much Morgagni felt bound by these honors he has himself repeatedly proved, especially when, at about eighty years of age, he published the first book of his great work, "*De Sedibus et Causis Morborum.*" It is dedicated to Trew, the well-known member of the above-named academy; and he showed the same gratitude (in the last book) to the Berlin Academy of Sciences, which, on the proposal of Johann Friedrich Meckel (to whom the fifth book is dedicated), nominated him member. The method of research, such as practised in Italy by Valsalva and Morgagni, was, in fact, the same used by the best physicians.

in Germany, in the first place by the members of the Academy of Naturalists, who had already published the first natural history medical review—the “*Ephemerides Naturæ Curiosum*.” When one turns over the leaves of Morgagni’s five books how often does one find quotations from that review, and how gratefully does the otherwise keen critic speak of those observers? Certainly, it was not only yesterday that German physicians and naturalists visited Padua and Bologna with a kind of preference, and Italians will not take it amiss that we, when we cross the Brenner on the old imperial road, renew in those towns the memory of old *camaraderie* on the battlefield of science. Vesalius and Morgagni were the geniuses whose images always rise before us, whose fame has outlasted all the warlike deeds of later times, and at whose call we renew the old bonds. These bonds have nothing offensive to other nations. For Morgagni does not belong only to Italy, and still less to Germany; though he was not, like Vesalius, a citizen of several states, he still became in quite as great a measure the representative of science common to all peoples. To recall to memory his relations to Germany seemed to me a duty of gratitude for all that we have received from him; but I gladly acknowledge that a still higher duty of gratitude enjoins us all who are assembled here to offer to his spirit a tribute of acknowledgment for all that he has done for science. But who can briefly express what he has done for science?

When Giovanni Battista Morgagni, at the age of eighty-nine, closed his eyes forever on December 6th, 1771, he left to the world, as the outcome of the work of such a long life so early dedicated to science, the five books, “*De Sedibus et Causis Morborum*.” The new study which was thereby called into life was not then yet named with the name which it afterwards received—pathological anatomy; but every one already knew that these books contained the sum of all practical knowledge of the material changes of disease which till then had been gained. The recent observations of Valsalva, and the yet more numerous ones of Morgagni himself, were here united with all the innumerable experiences which were scattered through the academical and periodical publications of all western countries. Morgagni had collected them with anxious fidelity. Unlike the frequently uncritical and unreliable collections and *sepulcra* of earlier times, every single observation was here controlled by reference to its sources, and then exactly criticized, not only in order to fix the anatomical facts, but also to expound the relations of the same to clinical processes, and to form conclusions with regard to diagnosis and prognosis. It was by no means a mere work of collection and reference, like those of his predecessors—Schenk von Grafenberg and Bonet; it was rather a methodological guide; and, on the other hand, the aim of the book was not only the furtherance of anatomy as a pure science, but in almost a greater degree the develop-

ment of the same into a fundamental science of practical medicine. So it is to be understood that the clinic did not attain its true importance until after Morgagni's time, and therefore we can say that, first with and through Morgagni, the dogmatism of the old schools was completely broken, and that *with him begins modern medicine*. But I have another observation to make. When I said that the work, "De Sedibus et Causis Morborum," was also, from the methodological point of view, to be considered a pattern guide, I did not mean it alone of the method of actual observation and the *épicrise* of single cases, but also of the method of the scientific treatment of the doctrine of disease in general. Wherein does this method of Morgagni differ most from that of his predecessors? and in what consists its special merit? It seems to me that neither the historian of medicine nor the representatives of special departments of study have done full justice to the genius of the great Forlisan. Till Morgagni the general or casuistical contemplation of disease or of the patient stood for every one before the considerations as to the nature of the disease, or, as one rather said, as to the essence of the disease. The processes were examined, the symptoms fixed, the changes in the body were attempted to be discussed, all was collected into one picture of disease, and a name was given to it. If, as was often the case, the real nature or essence of disease was not ascertained, it was attempted to clear up the matter in a constructive way, and formulate the result. Then anatomical, or clinical, or etiological points of view became decisive, and yet these names of disease (chosen from such different points of view) were treated as co-ordinated denominations. If one did not succeed with the local phenomena one helped oneself out with a hypothesis, whereby the most wild hypotheses were accepted as reliable—nay, even as scientific. What has not happened with fever and with inflammation? Is there an essential fever? Is inflammation an *einheitliche* idea? How different do the answers sound that have been received during the course of time to these questions! Morgagni, who observed diseases as an anatomist, did not consider the question of their essence as the first object of research. The title of his great work begins with the words, *De sedibus morborum*. Indeed, this is justified by the series of observations which the physician in general and the pathological anatomist in particular has to undertake. I am accustomed to condense all that for my students in the question, *Ubi est morbus?* Where is the disease? And therewith the scientific method of examination and the preassumption of the local process are predicated; for it is evident that such a question would be absurd if real general disease existed. To discuss the question of disease before such a learned assembly would seem to be an anachronism. Should any one of those present still preserve in a hidden fold of his brain the memory of general

diseases, he will, on consideration, find that in every sick man there still exists a part, and, as a rule, a predominating part, of healthy life, and that the disease or even dead part forms only one portion of the body. Whoever does not understand this cannot be spoken to at all about pathology in the sense of a natural science. Pathological anatomy has been called upon to demonstrate this conviction *ad oculus*: there is no sick body that is changed in every one of its parts. This is the meaning of the words "*sedes morbi*" which Morgagni puts at the head as the quintessence of his experiences. But pathological anatomy is not in a position to prove the seat of every disease. In the great sphere of nerve disease, and even in that of poisonings, there exist innumerable cases in which anatomical observation is insufficient, not because there is thereby no *sedes morbi*, but because the disease has produced no visible changes in the parts attacked; but anatomy has only to do with visible things. Therefore, the pathologico-anatomical *Befund* (finding) is not covered by the idea of the seat of the disease; on the contrary, we hold ourselves justified on the ground of our physiological and chemical knowledge to speak of the seat of the disease even where we do not discover any visible change.

This it is that I call *the anatomical idea in medicine*. I affirm that no physician can properly think out a process of disease unless he is able to fix for it a place in the body. *Ubi est morbus?* is the question with which not only the examination of a living patient must begin, but also that of a dead body; but when this examination does not give a practical result the examination is not therewith at an end, but rather the new task commences, to gather from the whole of the clinical history, and particularly from the etiological facts, where the seat of the disease must be accepted as existing. The anatomical thought, according to this, extends far beyond the pathologico-anatomical sphere. It is no longer bound to the visible changes which the knife of the anatomist lays open to observation; it is rather connected with *vital function*, and comprehends a large portion of what the modern division of labor points out to the clinician. In Morgagni's time this division of labor was not yet completed, and, though he was more of an anatomist than a clinician, still many a division of his great work belongs principally to the clinical sphere. This explains why so great a number of his successors belonged to the clinical schools, and why he had such a decisive influence on the methods of research. Nothing is more characteristic in this connection than the fact that the Parisian school of Bayle and Bichat, of Laennec and Dupuytren, is directly recognized as the school of "organicism."

Since then we have far outstripped the aim of that school. The research into the *sedes morbi* has progressed from the organs to the tissue, and from the tissues to the cells. But, at the same time, practical medi-

cine has ever more extended the principle of local treatment, and, to an extent till recently unforeseen, has applied it to the innermost parts of the body, which, till now, were regarded as absolutely unapproachable. Pharmacology as well as surgery have become every year more localized; so much so that the old Morgagni, if he could stand among us once more, would be probably horrified at conduct that so much contradicts the old tradition—that modern medicine has, in fact, very little resemblance to the science of Galen. And yet we might succeed in gaining absolution from Morgagni by convincing him that it is his *own* idea which celebrates such triumphs—an idea that he himself did not work out to perfect clearness, and the last consequences of which he did not draw, but which first flowed in full strength from his works—the idea of the *sedes morborum*, or, as I have called it, the anatomical idea. It is this idea which now governs all physiologists and pathologists. Whether one traces it with me back to early times or searches for another formulation for it, it will certainly become the idea of the future. And this future will place the date of its origin—its yesterday—in the days of Morgagni. To him be the honor.—
The Lancet.

Clinical Notes.

PYEMIC INFECTION OF THE BASE OF THE BRAIN, SECONDARY TO DEEP ABSCESS OF THE NECK.*

BY WM. OLDRIGHT, M.A., M.D.,

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THE patient, C. F., æt. 58, a manufacturing stationer, sent for me on the 18th December. A few days previously he had been exposed to a current of air between two open doors in his warehouse. On examination I found that there was much pain in the region of the left temporo-maxillary articulation, with inability to open the mouth. Pulse and temperature were normal. I ordered him two grains of hydrarg. submur., to be followed by a seidlitz powder, and after free evacuation to have salicylate of soda and quinine in antiperiodic doses, with small doses of morph. mur. The next day I received a telephone message that he was much better, and had gone to business.

I heard nothing more of him until nearly midnight on the 5th January. I was then informed that there had been a return of the pain and stiffness of the jaw a few days after I had seen him, and that on the 25th of December he had resolved to try homeopathy, and had continued to do so until the afternoon of the 5th of January. I found him suffering from great pain and distress; the neck was greatly swollen from the lobe of the ear down to the thyroid cartilage. There being distinct fluctuation, I incised opposite the lower angle of the jaw, and took away a saucerful of extremely offensive pus. Although much relieved and obtaining sleep for the remainder of the night, he had some delirium when awakening. His temperature was 103° F., when seen in the morning. Assisted by Dr. H. H. Oldright, who applied ethyl-chloride spray, I made a counter opening close to the *pomum Adami*, washed out the sinuses with a solution of hydrarg. bichloride 1 in 2,000, and passed through a drainage tube.

On the following day, finding that bogginess and fluctuation were still persistent behind the sterno-cleido-mastoid muscle, I passed a long probe across

* Read before the Toronto Pathological Society.

to that region from the lower end of the incisions already made, and gave another outlet in that direction. I also found bare bone at the angle of the jaw, and that a sinus ran behind it into the deep tissues. In this I kept a small drainage tube. Later, I found that this sinus also connected with another running on the inner side of the body of the jaw parallel to the external one first drained, and discharging by the same external opening. The discharge from these various sinuses was extremely offensive for several days, and contained shreds of sphacelated fascia and other tissues.

The patient became easier and able to swallow, but there was a good deal of deep-seated pain, delirium when half awake, and photophobia. Dr. R. A. Reeve saw him with me on the 10th; found no disease of the eardrum, middle ear, or mastoid; from the retinae we could gain no information, owing to the existence of cataract in both eyes.

The obscure cerebral symptoms persisting, Dr. J. E. Graham saw the patient with me on the 12th. The condition at this time and for ten days afterwards was one of semi-stupor, with alternate intervals of restlessness, muttering in sleep, and fright and delirium on awaking, but answering rationally when thoroughly awake, and for some days pronouncing himself better when interrogated. Photophobia persisted.

In the latter part of the following week he was seen two or three times by Drs. Graham and Strange. An edematous swelling, with pitting and redness of the skin, occurred above the right ear, and extended a short distance behind and in front of its upper portion. There was also much tenderness on the right side of the neck, especially about the situation of the facial vein and the region beneath and posterior to it. Exploration down to the temporal bone was made on two or three occasions, a hypodermic needle being employed. The results were negative, and we did not consider ourselves justified, in the weak condition of the patient, in making random explorations of a more heroic and hazardous nature. The cerebral symptoms became more and more aggravated, the patient trying to get out of bed, and shouting in a condition of semi-consciousness. Death ensued at 1.50 a.m. of the 27th.

The *post-mortem* examination was made some fourteen hours later. The sinuses already described, in the left submaxillary region, were opened. The scalp was now reflected, and the skull cap removed. Pus was found along the line of the middle meningeal vein, and, on removing the brain, pus was found in large amount in the circular and cavernous sinuses, and over the upper and anterior surface of the sphenoid bone. I removed the body of the sphenoid, and found it bathed and soaked in most offensive pus. I divided it vertically and horizontally; the odor from all the cut surfaces was most offensive, but I discovered no pus cavities in it.

On making the incision through the right temporal muscle for the purpose of removing the skull cap, I discovered pus which had evidently been working its way upward from the zygomatic fossa. This collection extended along the inferior surface of the base of the skull, almost to the middle line.

The course of the infective process seems to me to have been upwards from the collection in the deep tissues internal and posterior to the angle and ramus of the jaw on the left side, following the course of the vessels through the base of the skull, along the cavernous groove, then infecting the circular sinus, and across to the right cavernous sinus; thence extending out through the base of the skull by the communicating branches, and thus infecting the whole pterygoid plexus, and giving rise to the collection of pus described in this region. The free intercommunication will account for the great tenderness in the course of the facial vein.

It is probable that the infection of the middle meningeal vein was the latest, and would take place by extension through the internal maxillary vein. Would this later extension account, in part, for the more active and painful delirium towards the termination of the case?

A CASE OF CARCINOMA CORDIS, WITH SOME NOTES ON TUMORS OF THE HEART.*

BY HIBBERT HILL, M.B.,

TORONTO.

THE literature of tumors of the heart, as represented by the list of published articles compiled under the direction of the Surgeon-General of the United States, begins in 1819. About fifty of these articles treat of carcinomata, twelve of various cysts, ten of fibrous tumors, three of sarcomata, three of myxomata, two of polypi, and one each of lymphadenoma, angioma, tubercle, and lipoma. The first case of cancer was reported by Andral and Bayle in 1824. In 1846, Dr. Walshe knew of twenty-five cases. In 1877, Reynolds had collected records of forty-five cases. I have been unable to find any record of the number reported up to date. Hektoen, of Chicago, states that about one hundred and ten cases of tumor of the heart were recorded in 1892. However, such statistics are of little value in estimating the actual number of times that cancer deposits occur in the heart, since the condition has always been overlooked *ante mortem* so far; and judging from the cases reported, especially from the present one, there may often be small nodules which are overlooked *post mortem*.

Fibrous tumors of the heart are not very uncommon. Luschka reports one in a boy of six, situated in the left ventricle, the size of a hen's egg. Albers reports a second in the anterior wall of the left ventricle, as large as a pigeon's egg. A third has been described as growing from the auricular septum, and hanging downward through the tricuspid valve. It is possible that some of the scirrhous cancers formerly described were really fibromata.

Of all tumors of the heart, primary cancer is one of the rarest. Secondary cancer, on the other hand, is the most common. Primary cancer is generally colloid or melanotic. Secondary cancer is generally encephaloid. Structurally, epithelioma, by which is meant an epithelial new growth retaining the characteristic arrangement of the epithelium of the part from which it sprang, is the rarest form.

*Read before the Toronto Pathological Society.

Apart from primary growths, and growths by direct extension from immediately adjacent parts, the local infection must take place by the blood vascular system. The lymphatic system of the heart consists of sub-epicardial and sub-endocardial ramifications, which follow the course of the coronary vessels, those of the right side terminating in the right lymphatic duct, those of the left side in the thoracic duct. Without admitting reflux currents in the lymphatic system, it is impossible to account for infection of the heart otherwise than through the blood vessels. Such infection has occurred from primary growths in the eye, cheek, and bones of the face, lower lip, breast and axillary glands, ribs and pleura, abdominal organs, inguinal glands, uterus, vagina, labia, penis, testis, and upper and lower extremities. It is worth noting that in all cases the infective material, whether living epithelial cell or living protozoan, must pass through the lung tissue to reach the heart. That this occurs at all is due to the large size of the pulmonary capillaries.

Cancer of the heart, since it is nearly always secondary, occurs at the age at which primary cancers are most frequent. Hence, it is commonly found after middle life, although cases have occurred at the ages of twenty-five years, eighteen years, and in a child or three days. Males are more frequently affected than females. As regards heredity, at least two cases are recorded as occurring in the sons of men who had died of this disease.

The clinical symptoms are not pathognomonic. No case has yet been diagnosed *ante mortem*. In one case, where the pericardium was infiltrated and thickened as much as an inch in some places, the heart had been regarded as normal in position and sounds. Flint diagnosed only chronic pericarditis, with effusion, in a case where the heart was involved in a great cancerous mass. Eccentric pressure symptoms, especially if the aorta be thrust upward, a slow course, frequency of hemoptysis, and pleural and pulmonary inflammations, are given as distinguishing points from aneurism. It will readily be seen that a diagnosis based upon such points would nearly always be absolutely worthless. It may be concluded that it is next to impossible to diagnose large growths with certainty. Small growths will invariably escape recognition.

The gross anatomy of cancer of the heart varies in different specimens. Simple infiltration has occurred in one reported case so extensive that but a twelfth of the original heart substance was free from the growth. Multiple nodules scattered throughout the muscular walls have been found. Dupuytren recorded more than six hundred as occurring in one case. Large masses may occur alone, or, as in Hektoen's recently described specimens, accompanied by smaller nodules. The right side of the heart is more frequently affected than the left. The nodules often occur in the course of the

coronary arteries. Occasionally, the growth is pediculated, as in a specimen in the St. Thomas' Hospital museum. The nodule is described as medullary structure. It lies in the left auricle, attached to the auricular wall by a slight membrane. Such a foreign body might easily obstruct valvular action.

The pathological changes produced by the growth differ with its size and situation. Apart from the effects of the pressure exercised by a large nodule, and the rigidity of the heart wall caused by an extensive infiltration of its substance, pericarditis is the most common result of epicardial deposits, interference with the valves of endocardial deposits. Ulceration and softening are rare. One case of hemorrhage into the pericardium has, however, occurred as a result of erosion of the anterior coronary artery, which was involved in a nodule.

The case which I have the honor to report is an example of the commonest variety of carcinoma cordis, and, therefore, of tumors of the heart generally. I submit extracts from the *post-mortem* report, together with microscopic sections from the heart, from the sigmoid, and liver.

Post-mortem notes. Male, æt., apparently, 35. Died in April, 1893. *Post mortem* by Dr. John Caven. History of cancer of rectum. Inspection: Short, small, emaciated. Edema of left ankle. Ulceration about anus. Colotomy wound in left lumbar region posteriorly. Section: Bladder and rectum infiltrated with cancer, and intimately adherent. Walls of sigmoid show subperitoneal nodules. Abdominal glands infiltrated. Right kidney shows extensive cortical deposit in the form of single and aggregated rods radiating towards the capsule. Left kidney shows fewer rods, not aggregated. Liver contains small nodules, from the size of a pin's head to that of a large pea. Lungs emphysematous. Heart shows extensive brown atrophy and small white nodules, pin's-head size, in the substance of both ventricular walls, and under the epicardium and endocardium of the right ventricle.

Of the clinical history the only interesting points are the recognition of the rectal growth, the colotomy done to relieve the stricture resulting from it, and the absence of any cardiac symptoms, which might not be readily explained by the patient's exhausted condition.

SPECIMENS.

No. 1. *Cancerous nodules in sigmoid.* The chief part of the new growth is situated between the outer muscular coat and the peritoneum. Some smaller nodules lie in the inner circular muscular coat, and still others between this coat and the *muscularis mucosæ*. The arrangement of the epithelium is not that of a typical epithelioma, since the cells, although occurring in columns, are not cylindrical, nor have these columns any lumen.

No. 2. *Cancer nodule in liver.* The growth is situated between the capsule of the liver and the liver substance. Its increase in size has failed to break through the capsule, which can be traced across the specimen. As the growth enlarged, it compressed the liver cells, which are much flattened, especially at the point most remote from the free surface. In places the epithelial cells are cylindrical, and are arranged about a central lumen.

No. 3. *Cancer in muscle of heart.* The growth is spindle-shaped, lying between the bundles of muscle fibres which have been thrust apart by its development. Very little stroma can be made out. The cells are large, polygonal, and have well-stained nuclei. Many of them appear to have undergone degeneration. Very little infiltration of the tissue is found. The muscle fibres adjacent to the growth show distinctly brown atrophy, as do the fibres in other parts of the field.

No. 4. *Cancer under the endocardium.* The nodule is readily distinguished with the naked eye, situated upon a musculus papillaris which has been cut across. It is roughly oval in outline. The endocardium may be traced over its projecting surface, and is intact, although greatly thinned at the most prominent point. The cells are arranged in columns lying in a fairly abundant stroma. Inflammatory infiltration is not marked.

No. 5. *Cancerous nodule under the epicardium.* The growth appears to have begun at a point below the epicardial fat, between the epicardium and the muscle. It has extended both ways, compressing the loose areolar tissue of the fatty epicardium, and forcing the muscular fibres downward to form a hollow nest. The fibrous stroma is here well marked. The inflammatory infiltration is again conspicuous by its absence.

It appears evident that the growths in the heart were of recent origin. Their small size and the absence of inflammatory reaction is thus readily explained.

Other specimens were examined from the diaphragm and the pleura, all of which were cancerous. There can be no doubt that the new growth in the heart was a secondary cancer, originating in the rectum. The fact of its encephaloid structure is not against this, since it is well known that the cylinder-celled epithelioma of rectal cancer may give rise to encephaloid growths in the internal organs.

The suggestion has been made that the rarity of alveolar arrangement in cancer of the heart, and the absence in this case especially, where the original growth was one noted for its likeness to an alveolated gland, are explained by the fact of the constant motion of the heart fibres, tending to prevent any definite form of development.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

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THE TREATMENT OF TYPHOID FEVER.

Dr. Osler, of Baltimore, in discussing the treatment of typhoid fever at a recent meeting of the Clinical Society of Maryland, said :

He thought that the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice ; but all the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When the temperature is high, ice sponging—not with ice water, but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient, and satisfactorily to the doctor. Delirium and stupor are also effectively treated by ice sponging. The use of modern antipyretics in typhoid fever is, in nine cases out of ten, positively hurtful. They reduce the heart's action, and cause weakening sweats, and their use is an unmitigated evil. In the great majority of cases the treatment may be taken from old Dr. Nathan Smith, of Yale, which was pretty much that of to-day : Plenty of fresh air, liquid diet, and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor, and then dashing water, handed through the window by an assistant, over the patient.

RATIONAL THERAPEUTICS.

Dr. P. H. Pye-Smith, in *The Practitioner*, concludes a very readable paper with the statement that the list of specific remedies, mercury,

quinine, ipecacuanha, iron, arsenic, and salicyl compounds, is not a large one. He would urge the importance of (1) first giving fair play to direct and simple remedies. (2) Testing the efficiency of physiological remedies; to make sure that potassium acetate, or broom or resin of copaiba, does increase the amount of urine passed, and not give them with the vague notion that they do good in dropsy. (3) Using our true specifics, which are well tried and certain, thoroughly with confidence and perseverance, pushing the doses until we get some evidence of their physiological action. (4) Mixing our purgative, diuretic, and other physiological drugs, but always giving our specifics each by itself. Lastly, he would urge the uselessness of many and much-advertised new drugs, for which are claimed wonderful specific or physiological powers on the slightest possible grounds. It takes a lifetime to know how best to use opium, digitalis, and other trustworthy drugs.—*American Journal of the Medical Sciences.*

OBSTETRICS

IN CHARGE OF

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THE DANGER OF INTRA-UTERINE INJECTIONS OF GLYCERIN FOR THE PRODUCTION OF ABORTION.

Pfannenstiel, in the *Centralblatt für Gynakologie*, 1894, No. 4, relates his experiences with intra-uterine injections of glycerin for the production of premature labor. He states that when this procedure was first published he admired its boldness, and concluded that the dangers of it were but occasional. His later experience in two cases, the histories of which he gives, has led him to a change of opinion regarding the above method. In the first case, labor was induced on account of advanced albuminuria, after the usual therapeutic means had been tried. Following consultation with his colleague, Wilke, the author, under all aseptic precautions, injected 100 cms. of chemically pure glycerin between the fetal membranes and uterine wall. In a short time the patient showed symptoms of profound collapse, which, notwithstanding all means of restoration, ended fatally in a few hours, the patient dying undelivered. The autopsy showed death to have been due to nephritis.

In the second case, induction of labor had been attempted by bougies four weeks before term on account of rhachitic pelvis combined with stenosis of the os uteri and cervix. The bougies not having the desired result, after consultation 100 cms. of concentrated glycerin were injected. One hour afterward the patient suddenly became cyanotic, and the temperature, which had been 39°, fell to 37° C., rising again to normal.

The urine drawn off by catheter an hour after injection showed blood, albumin, and casts, and spectroscopic examination demonstrated methemoglobin with hemoglobin. In twenty-four hours these abnormal constituents gradually disappeared. The glycerin failed to excite uterine contractions, but a small living child was delivered later by other means. The mother recovered.

The author believes the glycerin, in the above cases, caused decomposition of the blood, and he agrees with Afanassiew, who found that, in dogs, glycerin produced hemoglobinuria, glomerulo-nephritis, and even interstitial nephritis. Although, in the first case, nephritis undoubtedly existed, it is his opinion that the glycerin injection hastened the fatal termination.—*American Journal of the Medical Sciences.*

THE INFLUENCE OF CORNUTIN AND ERGOTIN UPON THE COURSE OF LABOR.

Krohl (*Archiv. fur Gynakologie*, Band xlv., Heft 1) discusses at length the effects of preparations of ergot upon the uterus during and after labor. He finds that the uterus is favorably influenced by both ergotin and cornutin, but particularly the latter, the diminution in the size of the uterus caused by these agents being most noticeable in the first three days of the puerperal period. In labors, when ergotin or cornutin has been employed, there is apt to occur an expulsion of clots of coagulated blood at an earlier period than when no medicament has been used, and it has also been found that the internal os uteri closes much sooner, this rapid closure being particularly noticeable after the exhibition of cornutin.

The lochia alba is found to appear sooner when cornutin is used than without this means. The pulse undergoes some slowing during the administration of ergotin and cornutin, but no temperature change was noticed, nor was the secretion of milk influenced in any way. These agents distinctly favor uterine involution, and diminish considerably the congestion of that organ following labor; besides this, they prevent the collection of great masses of blood in the puerperal uterus, thus preventing decomposition.

As the whole inner surface of the uterus after birth presents a great irregular wound, these remedies by compression prevent the absorption of wound secretions through the lymph spaces. The author does not recommend the employment of ergot in substance, because of its uncertainty of action, but holds in high regard cornutin, or cornutin containing ergotin. Of these preparations, Bombel's ergotin is particularly to be commended, although he fears the very considerable cost will prevent the extensive use of this preparation.

In concluding his article, the author sums up the indications and contraindications for the use of ergotin as follows:

It is indicated:

- (1) In all obstetric operations, and especially shortly before Cæsarean section.
- (2) In atony of the uterus.

(3) After manual deliverance of the placenta, and after abortion and macerated fetus.

(4) In cases of twin labor, when atony of the uterus is threatened in consequence of the sudden evacuation of the over-distended uterus.

(5) In the puerperal period, in subinvolution of the uterus, and in recurring sanguineous lochia.

(6) In puerperal endometritis combined with vaginal inflammation, and particularly after vaginal irrigation.

It is contraindicated in :

(1) Hemorrhage during pregnancy.

(2) In cases of weak pains in the period of dilatation and expulsion.

It is particularly contraindicated in the latter when combined with contracted pelves. In cases of tumors filling the small pelves or the soft parts of the birth canal. In tetanus uteri, and when stricture of the os uteri exists.—*American Journal of the Medical Sciences.*

THE VAGINAL SECRETION OF PREGNANT WOMEN.

Konig (*Centralblatt für Gynäkologie*, 1894, No. 1), after reference to the investigations of Doderlein, Winter, Steffek, and others, who claimed to have found pathogenic micrococci, particularly the staphylococcus albus and aureus, as well as other pus-producing microbes, in the vaginal secretion of women after labor, relates the results of his own experience in one hundred cases of women aseptic at the period of labor. He claims to have found in the lochia the streptococcus most frequently, and but seldom the staphylococcus aureus, and never the staphylococcus albus. After considering minutely the reaction of the vaginal secretion, which in three hundred pregnant women he found to be distinctly acid, he concludes that in pathological conditions the secretions attain a much higher degree of acidity, so that the streptococcus pyogenes can hardly thrive therein; at least he was unable to obtain cultures of this germ. The author further concludes that the vaginal secretion of every untouched pregnant woman contains nothing pathogenic, the thrush or gonococcus germ excepted. Both are bacteria which upon the usual media of culture are aerobic at the body temperature. The vagina of every untouched pregnant patient is therefore aseptic.

Vaginal injections of antiseptics he considers dangerous in the ordinary patient, as they may chemically lessen the resistance of the tissues to bacteria, and may increase the intensity of septic endometritis by washing bacteria into the uterine cavity.—*American Journal of Obstetrics.*

GYNECOLOGY

IN CHARGE OF

JAMES F. W. ROSS, M.D. Tor.,

Lecturer in Gynecology in the Woman's Medical College; Gynecologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

LIGATION OF THE BASE OF THE BROAD LIGAMENTS PER VAGINAM, INCLUDING THE UTERINE ARTERIES, FOR FIBROIDS OF THE UTERUS.

Dr. Augustin H. Goelet, of New York, in a contribution to the *American Medico-Surgical Bulletin*, June 1st, reports favorably upon this operation in his hands for the control of uterine hemorrhage and reduction of fibroid growths. He believes it should be done in lieu of hysterectomy when that operation would involve too great a risk, and as a preliminary step, with a view of avoiding the necessity of the more hazardous operation. When extensive attachments have not been formed which would afford additional nutrition, considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths, the result has been more satisfactory. In some instances complete atrophy has been reported. This result, as well as the arrest of the uterine hemorrhage, is accounted for by the diminished nutrition furnished the uterus and these growths by the interference with the blood supply and nerve supply which are included by ligation of the base of the broad ligaments. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a profound effect will be produced upon that organ and growths arising from the walls if this is suddenly cut off.

The sole danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only half an inch from the cervix, and are, consequently, in the field of operation. Dr. Goelet suggests, as a preliminary step, to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator, accustomed to working in this region, may easily avoid the ureters.

The technique of the operation, as described by Dr. Goelet, shows an important departure from the usual method followed. Instead of ligating each artery in only one place on a level with the internal os, he applies a second, and often a third, ligature to the artery on each side as it ascends along the side of the uterus, the result of which is to cut off the compensating blood supply from ovarian artery to the lower part of the uterus.

Dr. Goelet gives all the credit of priority to Dr. Martin, of Chicago, who has recently suggested and popularized the operation and perfected its technique, but states that he first ligated the uterine artery, *per vaginam*, on one side in January, 1889, in the case of a large fibroid, the size of a seven months' pregnancy, with a view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not ligated, because the position of the tumor made it inaccessible. Six months later the tumor was one-third smaller, and was giving no inconvenience.

He quoted his last case operated upon to show how promptly uterine hemorrhage may be controlled by this operation.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D., Tor., L.R.C.P., Lond.

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NEPHRITIS IN ITS SURGICAL ASPECTS.

Dr. E. L. Keyes (*American Journal of the Medical Sciences*, June, 1894) discussed "Nephritis in its Surgical Aspects" before the Congress of American Physicians and Surgeons at the meeting held in May at Washington. The paper is replete with information of a valuable character. There are two most important points dwelt upon at the close of the paper—points that should be carefully considered by every physician in the treatment of these cases. He says: I cannot terminate this study without here laying emphatic stress upon, and calling especial attention to, the value of abundantly flushing the urinary passages with bland mineral waters of the diluent variety, as a means of flooding out both pus cells and micro-organisms mechanically in many forms of chronic suppurative disease all along the urinary tract.

I know of no one single agent that possesses so much power for good. The enemy is decimated by this method of warfare, and can be taken at a disadvantage. I refrain from speaking the names of the mineral springs that possess this power—and there are many of them—because the commercial spirit of to-day prostitutes such utterances.

The character of the mineral ingredient in the spring is not material. All that is required is that one may be able to stomach the water freely—to drink a gallon, two gallons a day, or more, and that the water shall not affect the bowels.

A number of such waters exist. Distilled water does not do the work, nor does rain water. Ordinary clear spring water fails. In selecting a mineral water, it is only necessary to find a cheap one that may be consumed in vast abundance without a feeling of repletion—one that will pass rapidly through the kidney, having no influence upon the individual other than the diuretic one.

And, in closing, I wish further to emphasize two prognostic points : one is the common error of believing that the presence of pus in the urine is capable of accounting for a considerable amount of albumin. One constantly hears this expression : "Albumin in the urine accounted for by the pus." Surely this is true of a trace of albumin—but only of a trace. An admixture of blood with the pus, or of blood serum coming from an excoriated tumor in the bladder, or from an ulcer—this will account for albumin in quantity ; but when there is no tumor, no stone, no ulcer in the bladder, there may be very considerable amounts of pus with barely a trace of albumin, and, if under such physical conditions the amount of albumin be relatively large, it usually means pyelitis—implication of the kidney in interstitial or parenchymatous change, and by so much becomes a factor of importance in prognosis. Anything over one-half of one per cent. by *weight* of albumin in urine, however purulent—if there be no blood in the specimen, no tumor, no stone, no ulcer in the bladder—becomes a factor in the question of prognosis when the point of the expediency of an operation comes to be considered. These cases may be assumed to have already reached a degenerative stage, and the chances of lighting up surgical kidney by operative interference below are relatively great.

He summarizes briefly the following conclusions :

- (1) Healthy urine is sterile.
- (2) Purulent urine is always microbic.
- (3) Microbic infection takes place from within the body by a number of methods in the course of disease ; it is often brought about by instrumental manœuvres on the part of the surgeon.
- (4) A healthy organism and vigorous bladder may cope successfully with microbic invasion, and rid itself spontaneously, or with a little aid, of all damage arising therefrom—showing little or even no inflammatory response.
- (5) A suitable condition of the patient's soil is essential to the propagation and perpetuation of inflammatory phenomena upon the urinary tract—after microbic invasion.
- (6) This condition, intensified by traumatism and physical weakness, notably of the degenerative variety, is most intense when there is vesical distension with atony, and when the ureters are dilated, and the kidneys involved in the changes incident to tension below—namely, atrophy and sclerosis above, with or without surface catarrh.
- (7) Under these circumstances surgical pyelonephritis is most likely to declare itself as a result of microbic infection from below (occasionally from above)—in the course of suppurative disease or after operative interference.

(8) Asepsis, antiseptis, and sterilization of urine are ends to be aimed at in genito-urinary surgery—but, like all other greatest goods, not yet attained in perfection. Much, however, can be done by local means in a prophylactic and curative way, little by internal medication, and possibly as much or more than by any other means by flushing the urinary passages with natural mineral waters.

THE USE OF ICHTHYOL SUPPOSITORIES IN THE TREATMENT OF PROSTATITIS.

Freudenberg reports (*Centralblatt für klinische Medicin*, 1893, No. 26) his experience with the use of ichthyol in from thirty to forty cases of prostatitis. The cases were almost exclusively of the chronic variety, or in the late stage of the acute form. The preparation used was the sulphate of ammonium ichthyol, made into suppositories with cacao butter. Some of the cases were gonorrhœal or post-gonorrhœal, and others were non-gonorrhœal.

In the acute stage, especially in gonorrhœal prostatitis, the author had no occasion to use ichthyol, inasmuch as he was quite satisfied with the result of the usual treatment for these cases.

Marked improvement was observed in the cases in a remarkably short time, and in nearly all cases complete cure of the existing symptoms followed. He uses the following formula: R.—Ammon. sulpho-ichthyol., 0.3–0.6–0.75 grammes (5–10–12 grains); ol. theobrom., 2–2.5 grammes (30–45 grains). One of these to be used in the morning after evacuation of the bowel, and another in the evening, at bedtime, and a third only if there has been an evacuation during the day. In some cases he combined iodoform with the ichthyol and cacao butter. The author concludes by the statement that in the treatment of prostatitis, at least in its chronic form, ichthyol is a valuable acquisition to the therapy of this disease.

The experience of Scharff, Ehrmann, and Ullmann in the acute and gonorrhœal forms of prostatitis are quoted. These observers all report very satisfactory results.

Freudenberg advises against the employment of ichthyol in hollow suppositories, as when the former comes in contact with the rectal mucous membrane it might give rise to irritation.

Editorials.

THE UNIVERSITY OF TORONTO.

THE Convocation of the University of Toronto on June 14 was, probably, the most interesting event of the sort that has ever been held in Toronto. The Vice-Chancellor, in his short address, referred to the results of the examinations of the College of Physicians and Surgeons of Ontario as follows: "At the recent examinations conducted by the Ontario Medical Council five universities were represented in addition to Toronto. There were awarded 192 positions in the honor class. These were the results in the primary examinations. Forty-one honors were awarded in the subject of toxicology, and of these 28 were obtained by the students of Toronto University Medical Faculty, leaving 13 honors awarded to the competitors from the five other institutions. In chemistry, Toronto obtained 22 of the 27 honors awarded; in anatomy, 10 out of 12; in materia medica, 7 out of 7 awarded; and in physiology, 9 out of the 9 awarded. In the final examinations, out of 96 honors awarded 53 fell to Toronto. In the primary only one student succeeded in obtaining the honors in every subject, and he was a Toronto man." In addition, we learn that of the 171 students who passed the Council's examinations 90 (fifty-three per cent.) were from the Toronto University Faculty; and of the 75 who got the Council's license 40 were trained in the Toronto University Faculty.

THE ONTARIO MEDICAL ASSOCIATION.

THERE is no better time, as a rule, for a meeting of a medical association in this province than the month of June. The exigencies of a political contest in full blast from one end of Ontario to the other prevented many from attending this year; but, notwithstanding this drawback, the association made an excellent showing. The number present was fairly large, but not equal to that in some former years. There were

present 169, showing a fair increase as compared with last year, when the number was only 141.

In looking over reports of past meetings, we find the numbers registered vary from 88 (Hamilton, 1884) to 233 (Toronto, 1890). It is likely that in the future the numbers will seldom be less than 200, and we can see no reason why they should not be much greater. Last year it was generally remarked that the character of the papers was quite up to the average. In commenting at the time, we expressed the opinion that the association should advance, and not simply maintain its average. We think we are in a position to say this year that some advancement has been made, and that the character of both papers and discussions was above the average—perhaps better than in any former year.

We desire to congratulate the officers upon the admirable way in which they performed their duties. The president made an excellent chairman, and there is no doubt that the promptitude, tact, and firmness he exercised in wielding the gavel did much to make things run smoothly. He showed commendable modesty on two occasions in giving to his committees the chief credit for the success of the meeting; but it is only fair to add that he worked faithfully and well with the various committees for months previous to the meeting, and the enthusiasm he thus manifested did much to keep his committees in good working order.

There was a general desire expressed to keep Dr. Wishart in the position of secretary, and a corresponding feeling of regret produced by his decision to retain it no longer. During the six years of his tenure of office he worked ever faithfully in the interests of the association, and his persistent efforts, together with his unvarying courtesy towards all the members with whom he came in contact, have contributed much towards its success.

THE WORK OF COMMITTEES.

The machinery by which the society is worked includes the formation of certain temporary committees with definite work to perform. Two are especially important. The Committee on Papers and Business becomes responsible for the programme, so far as it includes the delivery of addresses, the reading of papers, and the various discussions which may arise. All special invitations to physicians living in other provinces, or other countries, are issued by this committee. It exercises a supervision over all papers presented, and excludes any that are considered undesirable. It decides the time allowance, and controls *the bell*.

The Committee of Arrangements, as indicated by its title, makes all the arrangements for the meeting. One of its most important duties is to provide for the entertainment of members living out of Toronto, and guests from a distance. In recent years the members resident in Toronto have

given a luncheon on the second day of the meeting. At the last meeting this entertainment was given in the building of the Royal Canadian Yacht Club on the island, under the chairmanship of Dr. Albert Macdonald, by virtue of his office as chairman of this committee. The luncheon was a decided success. Dr. Macdonald presided with grace and dignity. The short and witty speeches of Drs. Hingston, Fox, Stockton, Pilcher, Montgomery, and others, were all well received. After the weary and hungry had feasted to their hearts' content, it required an extra pair of *tugs* to get them back to the city.

THE PRESIDENT-ELECT.

There appeared to be a singular unanimity among the members with reference to their choice of a president. When the Committee on Nominations met there was only one name proposed—Dr. R. W. Bruce Smith, of Seaforth. When his name was presented by the chairman, Dr. Temple, for this important office, it was received with enthusiastic applause, and no vestige of a sign of dissent. Dr. Smith is a strong man in his own section, a progressive and able physician, a faithful worker in this and other medical societies, and well deserves the honor which has been conferred upon him. We hope that he will receive the same active support and cordial sympathy which Dr. McFarlane received from his committees and other members of the association, and that he will hold, in 1895, the most successful meeting the society has known.

THE INVITED GUESTS.

THE Ontario Association is always delighted to see our dear friend, the genial and cultured Dr. Cronyn, Buffalo; and, this year, our feelings assumed substantial form in unanimously electing him to honorary membership. Our list of honorary members has been purposely kept very small, and includes only the following: T. A. Emmet, New York; W. J. Mickle, London, England; G. M. Moore, Rochester, N.Y.; William Osler, Baltimore, Md.; the late Joseph Workman, Toronto; and now John Cronyn, Buffalo.

Dr. Hingston, of Montreal, the Canadian Paget (Lawson Tait at Montreal, 1884), is recognized at home and abroad as an able surgeon and a polished speaker. In 1892 he was chosen to deliver the address in surgery at the Nottingham meeting of the British Medical Association. The *British Medical Journal*, in commenting, said: "For the first time in the history of the association, one of the addresses to the general meeting has this year been delivered by a colonial member of the British Medical

Association. Professor Flint and Professor Gross have been heard as representatives of our American colleagues, and it was only right that the first opportunity should be taken to ask a representative of one of the many colonial branches to become a spokesman of the science and the practice of our art in Greater Britain." It will be remembered that Dr. Hingston's address was very well received, and highly complimented. The members present were more than pleased to see and hear Dr. Hingston this year; and we have good reason for saying that one and all will be glad to give him a cordial and hearty welcome if, on future occasions, he honors us with his presence at our meetings.

The American contingent added much to the interest of the meeting. Dr. Fox, of New York, has visited us before, and we have only to say that, if he does not refrain from growing any deeper into our affections, he had better not revisit Toronto. If New York takes any interest in him, and does not want to lose him, it ought to make a note of this. Dr. Stockton, of Buffalo, paid his first visit to the association, and his interesting paper was highly appreciated. Dr. Pilcher, of Brooklyn, N.Y., was present, but did not read a paper. Dr. Montgomery, of San Francisco, is a Canadian, and happened to be making a visit in Toronto at the time of the meeting. His many friends in this vicinity were delighted to see him on this occasion, and will be glad to extend to him the most kindly greetings in future years, if he can be present at many or all of our annual gatherings.

Meetings of Medical Societies.

ONTARIO MEDICAL ASSOCIATION.

The fourteenth annual meeting of the Ontario Medical Association was held in the Educational Department of the Normal School, Toronto, June 6th and 7th, 1894.

The President, Dr. L. McFarlane, Toronto, occupied the chair.

This meeting was one of the most successful that has ever been held. There were in attendance some 160 members, 24 new members being added.

After the usual routine business of opening, Dr. A. J. Johnston presented a resolution asking that a committee be formed to take into consideration the question of contract and lodge practice. This was unanimously consented to.

The opening paper was one by Dr. J. H. Duncan, of Chatham, on the

USE OF STRYCHNINE IN PNEUMONIA AND CHRONIC EAR DISEASES.

He pointed out that it acted upon the vital nerve centres, making them more susceptible to external stimulation; that the heart weakness was due largely to the affection of the nerve centres by the pneumonic poison. This drug increased the irritability of the motor centres. No rule could be laid down as to doses, but he had given in average cases a thirtieth of a grain every three hours with marked benefit. He referred also to the statement made by certain investigators that its use increased the number of white corpuscles, and thus the phagocytic action of the blood would be materially increased.

Dr. Saunders, of Kingston, said that there was another positive element in the heart weakness, viz., the increased amount of resistance of the consolidation in pneumonic cases, and pointed out that the drug was of value in its direct action in stimulating the heart to overcome the obstruction until the crisis arrived.

Dr. Gaviller spoke of the great value he had derived from the use of strychnine in acute and chronic cases. He had found it particularly help-

ful in the bronchitis of children. He had found it assist very materially in the getting rid of the mucus from the bronchial tubes. He cited cases where he had used it in chronic bronchitis of the adult with great benefit, having pushed it in one case till tetanic spasms ensued. He had employed it with digitalis with good success, but he had not given the digitalis in heroic doses as some advocated.

Dr. Temple followed with a paper on

PLACENTA PREVIA.

He gave an account of the history of the treatment this condition had received in the past, and outlined the present lines of treatment. No hard rule could be laid down, but each case must be treated according to the symptoms presented. The great weight of evidence was in favor of the termination of gestation, especially if it were the first attack and severe, and prior to the seventh month. He considered that where hemorrhage occurred in the early months there should be no hesitation, if the mother's life was in danger, in sacrificing the life of the fetus. It would only be justifiable to prolong gestation where the woman was near the seventh month, the hemorrhage slight, the placenta latterally situated, and the woman in reach of a medical man. The patient should be put to bed, kept physically and mentally quiet, and an opiate might be administered. He did not consider there was any virtue in astringents. The procedure, if hemorrhage occurred severely after the seventh month, he repeated, was to deliver. The membrane should be punctured, the cervix dilated, if possible, the placenta around the os separated, and ergot administered. If the cervix were hard and undilatable and hemorrhage persistent, he advocated plugging, and that thoroughly and antiseptically, the woman being closely watched.

Dr. Burns alluded to the occurrence of post-partum hemorrhage in these cases, and the necessity of taking extra precautions. Another point he referred to was the greater frequency of placenta previa in multipara than in primipara.

Dr. Mitchell coincided with Dr. Temple in the main, but referred to the difficulty of always being able to diagnose these cases. He thought possibly there was a danger of considering that, whenever hemorrhage occurred during gestation, it was due to placenta previa; when perhaps this might not be the case. He had used, for dilating the os, Barnes' dilators. He referred to one or two satisfactory cases he had had, and spoke of the great gravity of all such.

Dr. Sangster said that his method⁴ of dilatation of the os was with the fingers, which he found to be the most satisfactory way of accomplishing it. Dr. Hillier agreed with this.

Dr. Oldright pointed out the dangers of plugging. The uterus was a dilatable structure, and, after the plug was inserted, there was danger of intra-uterine flowing. He thought that, in most cases, the os could be dilated by the fingers.

Dr. Harrison, of Selkirk, spoke of the difficulty country practitioners had in these cases by living, as a rule, so far from them. His plan was to dilate the os, and deliver as soon as possible.

Dr. McLaughlin wished to know why ergot should be given, as it produced tetanic spasm of the uterine muscle, not producing expulsive efforts. There was thus danger of causing the death of the child. He spoke of the old method of plugging with a silk handkerchief advised by the early teachers.

Dr. Powell reported having eight cases of placenta previa centralis, with seven recoveries. He emphasized the point that no two cases could be treated alike. He thought the statistics would be materially improved if the process of inducing labor in all cases were adopted where the diagnosis has been satisfactorily established.

Dr. Bruce Smith said that plugging should be the last resort in placenta previa. The uterus should be emptied at once. He cited cases in proof of the value of this procedure. He repeated that the patient should be very carefully watched.

Dr. Temple said he had not found post-partum hemorrhage occur after these cases any more than after ordinary ones. In reply to Dr. Mitchell, he said he took it that the diagnosis had already been made; the subject he was to discuss was the treatment of the condition. As to the use of Barnes' bag, he said they were not usually at hand. He contended in favor of plugging, where it was well done, to check hemorrhage and induce dilatation of the os. Of course the silk handkerchief would not fill the bill at all. He deprecated the use of ergot in ordinary cases of labor, but in these cases, where the child was not viable, its use was all right.

WEDNESDAY AFTERNOON.

The first item of interest on the programme was the President's address, which was a very able one, and was listened to with marked attention. He referred to the history of medicine in the past, gave an idea of its present position, and referred to its future possibilities. He outlined the rise and fall of the various schools of medical thought, dwelling more particularly on the present one, the principles of which depended upon a knowledge of physiology, pathology, and kindred sciences. He spoke of the immense strides that had been made in the development of these special branches, and of the immense aid they were to scientific diagnosis and treatment. He paid a high tribute to the late Dr. Hodder's influence

upon his students in stimulating them to the study of scientific medicine. He referred to the wonderful accuracy with which the educated physician of the present day can detect the presence of disease in the most occult parts of the human frame. He also paid a tribute to the workers in the line of preventive medicine, and to those who were studying the effects of the action of the attenuated virus of certain specific bacilli in the treatment of diseases caused by these bacilli. We were not in a position, he said, to speak of the value of animal extracts in the curing of disease. He advocated the establishment of an institute similar to Koch's and Pasteur's for the advancement of those studies, the results of which tended, perhaps, more than any others, to the well-being and happiness of the people. This should be under government control, and outside the influence of party politics. He argued that, if we had institutions for training farmers, schools for civil engineers, etc., aided by government, why not an institution of this sort, whose objects were the saving of life and the prevention of disease? If the province would take such in hand, he was sure that generous aid would be given in the way of bequests by many who are in sympathy with such a work.

Dr. McFarlane, on motion of Dr. Temple, seconded by Dr. Harrison, president of the Dominion Medical Association, was heartily thanked for his address.

THE TREATMENT OF STRANGULATED HERNIA

was the title of the next paper, read by Dr. J. Wishart, of London. Dr. Wishart's first point was a reference to what Mr. Jonathan Hutchinson had said regarding the fatality of strangulated hernia, how that, while mortality in all other surgical procedures had materially lessened in recent years, the mortality following operations for strangulated hernia had increased. This he attributed to the fact that the step of performing taxis had been left in the background, surgeons being too desirous of using the knife. Dr. Wishart gave a tabulated statement of some seventeen cases he had had during the past twelve years, in sixteen of which he had operated with twelve recoveries. He detailed the special points of interest in each operation.

Dr. Whiteman, of Shakespeare, discussed this paper and cited some interesting cases he had had, outlining the symptoms, diagnosis, and treatment. He spoke of the ease with which the operation could be done, and its freedom from danger. It was often difficult to know how much taxis should be used. If operation were done, and the bowel looked suspicious of gangrene, the question as to whether to return it or not was also difficult.

Dr. Rennie, of Hamilton, followed. He spoke of the high mortality in these cases. He believed there was a decrease instead of an increase.

All cases have not been reported, and we have no large tabulated statements regarding the question. He believed, too, that taxis should not be placed in a subordinate position. Chloroform should not be given any oftener than necessary, as it tended to excite vomiting. Where the bowel was gangrenous, it was because operation had not been done early. In this condition of affairs the use of Murphy's button would be a favorable form of treatment.

Dr. Grasett said that the importance of this subject was shown from the fact that it had come up for discussion so often during the meetings of these associations. He would not like to dispute such an authority as Mr. Hutchinson, yet he was of the opinion that the mortality after operation for strangulated hernia had decreased rather than increased. He had operated with good result on a patient eighty-nine years of age. As to gangrene no law could be laid down; each must be judged on its merits. There were fewer cases of gangrene now than formerly, because the strangulation was sooner recognized. He cited a case he had had where gangrene was present to a small extent where he had stitched up with a Lembert suture, returned the gut, and recovery followed.

Dr. Peters said that Mr. Hutchinson was certainly very pronounced in his view regarding the use of taxis, not by gentle manipulation, as one of the members had spoken of, but by using all the force he possibly could, and, after he was tired, of getting an assistant to continue the process. Notwithstanding the statistical report, he thought the results were exceedingly good because if these cases were left to themselves they would certainly, in most instances, end fatally. Under operation, thirty or forty per cent. being saved was a good record.

Dr. Teskey said that the maxims as laid down by the leader of the discussion were correct enough, but the difficulty was in knowing how to apply them; a great deal of judgment was required. In regard to taxis, he could understand how, in a large hernia which would fill the hollow of his two hands, one's whole strength might be placed upon it to reduce it, but this same rule would not apply to a very small hernia. With regard to the increased mortality in hospital statistics in this operation, he suggested that it might be due to the fact that the ordinary outside medical man was now so well trained that he undertook these operations himself with success, and only the worst cases were sent to the hospitals.

Dr. Wishart did not agree that this was an easy operation and lightly to be undertaken. There is always danger in opening the abdomen. He believed that where a country practitioner far removed from help met such a case, he should give chloroform and try to reduce at once, as delay was very serious. He had never seen in the cases where taxis had been used, even to a considerable extent, any damage done to the bowel

when he had opened up. The speakers agreed that where the knife had to be used the radical operation should be done, as a rule.

Drs. G. W. Fox, of New York, and Cronyn, of Buffalo, were invited during the session to seats on the platform.

The association then divided into sections.

SURGICAL SECTION.

Dr. Bruce Smith was appointed to the chair.

M'GILL'S OPERATION FOR PROSTATIC ENLARGEMENT*

was the subject of the next paper, by Dr. A. McKinnon, of Guelph. The reader of the paper gave the history of several cases he had had of prostatic hypertrophy, accompanied by urethral stricture, cystitis, and severe bladder spasms. The operation consisted in a suprapubic cystotomy and removal of a portion of the prostate, with very gratifying results. He outlined the technique of the operation fully, and of subsequent drainage. He quoted statistics furnished Bellfield at Chicago of forty-one such cases where thirty-two had made recoveries, having regained the power of voluntary micturition.

Dr. Primrose discussed the question of the use of Petersen's bag and the dilatation of the bladder; how this would enable the operator upon completion of the abdominal incision of stitching the bladder wall and holding it by means of the stitches while it was being opened, instead of cutting down upon a sound, as Dr. McKinnon had advised. He asked also how hemorrhage was controlled, in view of the vascularity of the prostate. He advocated the advisability of perineal drainage, referring to the danger of infection of the cellular tissue in front of the bladder by the high drainage.

Dr. Grasett said that his experience was limited in this line of work, having done but one, and that a partial prostatectomy. The result in this case was good. He thought a combination of the suprapubic and the perineal method to be the best, so as to avoid the necessity of incising the mucous membranes above the prostate, the sections being scooped out from below, the opening above enabling the operator to exert pressure downwards on the gland.

Dr. McKinnon said that he had found hot water would control the hemorrhage, but, if necessary, the opening might be plugged.

Dr. R. Whiteman, of Shakespeare, followed by a paper on

CHOLECYSTOTOMY.†

He described the history of a case of obstructive jaundice. It was difficult to decide whether it was due to gallstones or malignant disease, but the diagnosis inclined to the latter. Cholecystotomy was performed in the

*See page 410. †Will appear in THE CANADIAN PRACTITIONER.

usual manner with success. As all of the bile passed out of the abdominal incision, a number of interesting features were observed in connection therewith. On the administration of calomel the flow was lessened, but increased on the giving of salicylate of bismuth. It was also noted that when the bile decreased the urine increased, and *vice versa*. On *post mortem*, it was found that an epithelial cancer occupied the region of the duodenum at the junction of the bile duct.

Dr. Graham said he was much interested in this case, as he had seen it in consultation. The diagnosis was comparatively easy, as the distended gall bladder was in the position one would expect it to be, and the accompanying symptoms pointed in the direction of obstruction to the outflow of bile; but he had seen cases where the diagnosis was exceedingly difficult, the gall bladder having assumed such a curious shape as to make it unrecognizable. Regarding the treatment of catarrhal jaundice, he advocated the use of large doses of calomel at first, then salol for three or four days, followed by the continuous administration of salicylate of soda. He was pleased with the experimentation on these cases, as it tended to throw light on the obscure pathology of this trouble.

Dr. Teskey reported the history of a case where cholecystotomy had been done, in which he had assisted Dr. Powell and Dr. A. A. Macdonald in operating. The gall bladder was not enlarged. The crescentic incision was made through the abdominal wall. There was considerable inflammatory adhesion of the omentum. Seventy small gallstones were removed. On account of the adhesions, it was impossible to reach the duct, but it must have been patent, as the bile soon flowed through to the intestinal tract, as was shown by the coloration of the feces and the closure of the incision.

Dr. Oldright told of a case he had operated upon where there was pyemia, the seat of pus formation being supposed to be in the neighborhood of the liver. A stone was found blocking the cystic duct, which was pressed along the duct by means of the fingers into the duodenum. The diagnosis was supposed to have been distended gall bladder before opening the abdomen; on opening, the lump was discovered to be floating kidney.

Dr. Macdonald said that in these cases death occurred after the primary operation in 19 per cent. of the cases, but where it was done as a secondary the death rate was reduced to about 10 per cent. An objection to this operation was the loss of such a large amount of bile which was needed in the intestinal economy. By its loss there was intestinal indigestion. This loss would not occur after cholecystectomy. Another procedure was cholecystenterostomy by aid of Murphy's button. Murphy's latest results show 100 per cent. of recoveries.

Dr. Starr presented a patient suffering from

LUMBAR HERNIA.

About twelve months ago, while stooping down and lifting, he was seized with a stitch in the side. This was accompanied by the occurrence of a swelling about the size of a duck's egg in his back below the last rib. The lump has persisted. It is slightly tender on pressure, elastic to the touch, and reducible. As it returns into the abdominal cavity it gives a gurgling sensation, and omits a tympanitic note if percussed while the patient strains. Its exit was through the triangle of Petit. Its relations. Dr. Starr showed by means of charts.

MEDICAL SECTION.

Dr. Mitchell in the chair.

THE ARTIFICIAL FEEDING AND CARE OF CHILDREN

was the title of a paper by Dr. McCullough, of Alliston. He condemned the use of proprietary foods, and spoke of a combination of foods he had used, indicating the amount prescribed for an average-sized child at varying periods up to the age of twelve months. The artificial food, especially in the country, had to be at once cheap and easily obtainable. The composition he advocated consisted of barley water, diluted cow's milk, and sweetened water.

Dr. McPhedran thought the general principles outlined in the paper good, and hardly to be improved upon. The remarks as to temperature of food reminded him of the Irish nurse who got the proper temperature of the child's food by inserting her hand in it—if it burnt it, too hot; otherwise, all right. But, seriously speaking, that was about the way people tempered a child's food. He advocated the thermometer for this. The food prescribed by the paper read might suit in the country, where the sanitary conditions were good, but not in the city; and physicians had to resort to other artificial foods—often barley water alone, tea, broths, etc., sometimes a little starch and arrowroot. But there was no universal rule, and each case had to be considered by itself.

Dr. Gregg severely denounced proprietary foods. Though people had been warned as to the evil nature of them, these foods are still largely used—more so in Canada than in the United States. From forty to fifty per cent. of such foods consist of starch, which an infant under seven months is unable to digest. He thought that instead of whole barley being used, as advocated by Dr. McCullough, crushed or even ordinary pearl barley was preferable, because more easily prepared and attended with better results. He thought the subject of fixing amounts for children at certain ages beyond our control, as the stomachs of infants were of different sizes at the same age. The proper rule was to give the child as much as it wants; if it takes too much, the surplus will be thrown up and no harm

done. Sterilization of milk was not important, save in large cities, where abundance of fresh milk was not procurable. Experiments in American hospitals showed that children were practically starved to death by the use of it where it had been sterilized at a temperature of 212° . As a result, the practice was to have the milk placed at a temperature of about 145° for fifteen or twenty minutes.

Dr. Machell said that although part of the albumen in cow's milk is coagulable, part is not, and in this respect it is similar to the mother's milk, but in the latter the percentage which is non-coagulable is twice as great as in the former. He agreed with Dr. Gregg in denouncing proprietary foods, which, he said, were manufactured, not for the purpose of benefiting patients, but to make money, and physicians should not recommend them when other good foods could be prescribed. He advocated the Berlin bottle, obtainable in all drug stores at a cost of fifteen cents.

Dr. McCullough, in reply, said that pearl barley did not come up to the mark, as the virtue of the ordinary barley was the mucilagine principle, which is the most active. It was contained near the surface of the hull. In pearl barley it was removed. The amounts mentioned in his paper were only guides, and not intended to apply in every case. He did not think, in the case of a child any more than in that of an adult, that food should be taken till vomiting results.

Dr. Price Brown read a paper on

ATROPHIC RHINITIS,

which was exhaustive in the cause and treatment of this trouble. Though believed by some, it is by no means incurable, but requires a long and careful course of treatment.

Dr. Wilson, of Fenelon Falls, asked if any constitutional treatment was used. He thought, in some of his patients, he obtained good by using some of the alteratives. He thought the origin of the disease was in infancy, and caused by the carrying of the infant with bare head, or by exposing it to draughts or cold temperature; also later on in life by the clipping of the hair to the scalp.

Dr. Price Brown said he used the ordinary prescribed tonics. Patients improved in health without any medicine if the offensive discharges can be got rid of, but these foul secretions do injury to the system. Where a tonic was required, he generally gave iodine and strychnine. Douches of water in large quantities were objectionable. Where secretion took place was where cleansing was required. He did not approve of covering children's heads; he considered it well, indeed, to give them cold baths.

Dr. Doolittle explained the operation of electrical massage worked by a small storage battery which he showed.

Dr. Campbell, of Seaforth, read a paper on

PLACENTA PREVIA,

giving the history of cases in his practice, and touching on most of the points raised on a discussion of the subject at an early part of the convention.

Dr. Temple wished to know, as Dr. Campbell advocated early termination of labor, why, in a case he cited, he did not follow this rule. He did not see, either, the rationale of giving sulphate of magnesia after delivery, as blood had been lost and the patient was weak, unless it was to prevent milk fever.

Dr. Spence agreed with Dr. Temple. He spoke of the difficulty of the diagnosis. Good common sense was necessary in the treatment, and by the exercise of this one would get as near the subject as by following any particular treatment laid down. He reported the different stages of an important case in his practice. He thought sufficient aseptic precautions were taken by thoroughly washing the hands with soap and water.

Dr. Scadding described the method of dilating the os followed by Dr. Harris, of New Jersey—the thumb being placed at one side of the cervix, while the first and second fingers are flexed, thus getting the strongest muscles with which to dilate. In a series of eight cases he was able to dilate the os in each of them within twenty-five minutes.

Dr. Mitchell asked the reason for using injections so frequently after labor terminated. He did not think injection of antiseptics necessary, unless there was reason for it; and this could be readily ascertained if the patient was watched.

Dr. Campbell, in reply to Dr. Temple, stated that the patient was being watched by him, and there had not been enough loss of blood to weaken her; otherwise he would have operated. His object for delay was that the patient was not in a fit state to be delivered, the os and the cervix being rigid. He gave chloral to soften the os and relax the parts, accompanied with a small dose of morphine. In this way he prevented laceration. The reason he syringed out the vagina afterwards was to prevent sepsis.

EVENING SESSION.

The first paper of this session was read by Dr. J. E. Graham, the amphitheatre of the Normal School being well filled by medical men, lady practitioners, and students in medicine. The subject of Dr. Graham's paper was

SOME REMARKS ON CHRONIC DISEASES.*

He made special reference to Bright's disease, the anemias, and tuberculosis. Treatment of these cases required a great deal of patience and

*See page 399.

tact. Strict attention should be paid to the patient's diet, clothing, and general environments. Cases of parenchymatous inflammation of the kidneys were quite amenable to treatment; prognosis was fair even after edema occurred, even in apparently chronic cases. He knew of one case in which, contrary to the general teaching, the patient did best on nearly a complete meat diet, after having tried the milk diet with unsatisfactory results. Regarding anemia, the gastric form, he had seen it helped very much—in fact, cured—by lavage of the stomach every second day and the exhibition of arsenic. In another case of a woman aged sixty-five with a dilated heart, who had nausea, vomiting, diarrhea, and considerable emaciation, accompanied by elevation of temperature, making the case suspicious of being one of pernicious anemia, until the blood corpuscles were counted and found not diminished in numbers, it was found that there was a diminution of urea in the urine, although no albumen nor sugar were present. Here the anemia was due to the poisoning of the urea. Rest, careful dieting, administration of iron and arsenic, produced a great improvement. Cases of other varieties of anemia were referred to where treatment based on a careful observation of the condition present led to recovery. Regarding tuberculosis, most patients must be treated at home, and this could be done very satisfactorily by attention to the above-mentioned precautions, particularly in the first stages. As to medicine in these cases, he recommended the use of creosote as being the most helpful. The points to be observed in treating all chronic affections were, first, the necessity of more hopefulness in treatment; second, greater care in making an early diagnosis; third, making a practical use of all the more recent discoveries in pathology and management of such diseases.

Dr. Bruce Smith followed, and pointed out very good results that followed examination of the stomach contents. He also referred to the causation of anemia, and in its treatment he knew of nothing better than the old Blaud's pill, after the bowels had been opened with saline. He believed that, in pernicious anemia, complete rest should be enjoined on the patient, and it was necessary that the functions of the body should be naturally performed before the administration of medicine. He would give arsenic in small doses first, with compound tincture of gentian. He spoke highly of the use of the stomach tube in dyspepsia, and he had found good results follow the use of a glass of hot water containing half a dram of soda half an hour before breakfast in gastric catarrh. He, too, spoke very highly of creosote in the treatment of pulmonary tuberculosis, administered with *nux vomica*. These patients did best, he thought, in the country, where the air was pure and they could obtain lots of cream. Cream was much better than cod-liver oil.

THE SYMPOSIUM ON INFLUENZA

came next, Dr. L. M. Sweetman opening the discussion, his paper dealing with its general features. He spoke of its causation, its usual symptoms, its tendency to cause cardiac asthenia or pneumonia more particularly. He referred to the many cases of sudden death during convalescence. Regarding treatment, the big point was rest. He did not advise the use of the coal-tar products for the fever, except phenacetin in small doses. He also recommended modes of treatment for the other forms of the disease.

Dr. Lett, of Guelph, spoke of its nervous phenomena. This form was very common, owing to the tendency of people nowadays to become the subjects of nerve strain, as a result of the tremendous activity of the age. He referred to the various neuralgias, neurites, paralyses, and mental affections, such as melancholia, occurring with la grippe.

Dr. Gregg spoke of the thoracic phenomena seen in this disease. There was a great tendency towards bronchitis pneumonia, and tuberculosis. The bronchitis in such cases attacked the right side more than the left. He spoke of a form of pneumonia which he had seen with indefinite symptoms. It did not run a normal course; the onset was insidious, there being no chill; there was no cough, and no râles, perhaps; but the temperature might run high, dyspnea be present, and some dullness on percussion, the character of the pneumonia being modified by the poison of the influenza.

Dr. Harrison, of Selkirk, in speaking of the digestive phenomena of the trouble, gave a history of his own case, the principal features being dizziness, loss of appetite, bilious vomiting, with increased pulse and respiration, and some rise in temperature. It made him very ill. He got up, went out in the cold, and in two days was attacked by the thoracic form of the trouble, which he was not yet rid of. To his remembrance, in his early days in England the coryzal form was most common. He found stimulants good in many cases, especially strychnia. *Nux vomica* was useful in the stomachic form.

Dr. A. H. Wright's paper referred to the

INFLUENCE OF LA GRIPPE ON THE PREGNANT AND PUERPERAL WOMAN.

Influenza, he said, might cause abortion in the pregnant woman, especially in severe cases where the temperature was high and the prostration great. The danger was still greater where thoracic complications were present. Severe gastro-intestinal catarrh accompanying this disease was a serious complication, and frequently terminated pregnancy. The high temperature might lead to the death of the fetus. The influenza itself might be transmitted to the fetus, but he did not consider this likely. Menorrhagia and metrorrhagia were not uncommon accompaniments in this

disease. Influenza uncomplicated induced abortion less than any other of the infectious diseases. During labor, this disease was a serious complication, its tendency being to weaken the expulsive efforts of the uterine and abdominal walls. Dr. Wright had collated nineteen cases of influenza, made up of lying-in women at the Burnside Lying-in Hospital. All recovered without any serious symptoms in from two to five days. Perfect rest in a dry, warm place was the best treatment; the influenza germ loved moisture and cold. On the whole, this class of patients stood influenza well.

Dr. McDonagh spoke of the phenomena of influenza as seen in the nose and throat and adjoining cavities, the antrum, the ethmoid sinus, frontal sinus, etc. He pointed out the characteristic features seen where each of these was involved. The effects of the poison were also noticed on the nervous and muscular structures of the parts involved. The sense of smell was often lost.

Dr. Fox, of New York, then gave an exhibition of lantern slides, illustrating syphilis of the skin principally, in its various forms. The first slide showed an immense nevus immediately below the eye on a patient's face. The second slide showed the appearance of the face after its removal. The operation had been a brilliant one, as the nevus had been completely eradicated. The patient himself was present, whom the members examined. The result was extremely good. The other slides which had been prepared by Dr. Fox were excellent, and the views of them upon the canvas were splendid illustrations of all the various forms of the cutaneous syphilides. A vote of thanks was tendered to Dr. Fox for his interesting and instructive lecture.

THURSDAY MORNING, JUNE 7TH.

Dr. Harrison, of Selkirk, in the chair.

Dr. E. E. King read a paper on

UNCURED GONORRHEA, CAUSES AND CONSEQUENCES.

He dealt with the unfortunate result of an infected person marrying, and the great care that should be taken, in examining, to see if the disease had been wholly cured. He dwelt on the difficulty of getting these patients to follow directions and to appreciate the really dangerous character of the trouble. He read certificates furnished by physicians to the husband of a patient of his who had taken the precaution before marrying to secure documentary evidence as to his freedom from this disease, when a careful examination would have shown that the disease was still lingering. He characterized the giving of such certificates as actionable malpractice; only the nature of the affair relieved the culpable physician from having the matter aired in a court of law.

Dr. W. H. B. Aikins asked that Dr. King be more specific as to the character of injections he prescribed.

Dr. Campbell, of Seaforth, liked the paper, and thought the subject important. In his practice he had not had a case of disease of women produced by this cause. He thought no man ought to marry when afflicted with this disease, and physicians ought to be careful about giving certificates in relation thereto.

Dr. Harrison thought it was by reason of his being a country practitioner that he had not seen these cases. At an American medical convention he attended, it was recommended there that there should be circumcision in the case of all male infants as a protection against syphilis and gonorrhoea; but considering that only one in a thousand is afflicted with the troubles, he did not think that all should be deprived of their foreskins. If reports were true as to the results of city education, he thought the persons in the city ought to be very much interested in the paper read.

Dr. King, in reply, was pleased to state that the percentage of cases in cities was not so high as was sometimes reported, though more frequent than imagined. The disease was one alike neglected by patient and physician. It would take too long for him to indicate the treatment. There were cases of uncured gonorrhoea, not permanent in their symptoms; and a person might have the dregs of the disease locally situated and not be thoroughly aware of it; having had it so long, he had become used to it. Too often, when such a patient came to the physician, he got just the advice he wanted—to be told that he was all right. The urine had to be carefully examined for shreds. Without doing this, one could not safely give a certificate.

Dr. Graham Chambers read a paper on the

TREATMENT OF MORPHIA POISONING BY PERMANGANATE OF POTASH,*

giving a report of experiments. These experiments were made with the view of comparing the results with those obtained by Dr. Moore, who had himself taken three grains of morphia and followed it by a few grains of permanganate of potash, suffering no ill effects. Dr. Chambers had made some experiments on dogs, having given as high as six grains to a dog at one dose, hypodermically followed by ten grains of permanganate of potash, without marked change in the animal's condition. The inactivity of the alkaloid he believed was due to the oxidation of the morphia by the permanganate of potash. The doctor presented to the association some reactions of permanganate solution and morphia solution, the permanganate solution becoming decolorized.

Dr. Lett said the subject was important, and, if permanganate of potash did all that was claimed for it, the discovery would be hailed with satisfac-

*Will appear in THE CANADIAN PRACTITIONER.

tion. Dr. Chambers, in his paper, had referred to Dr. Moore's experiment, but Dr. Lett thought, before that could be relied on, it should be ascertained whether Dr. Moore was a morphine eater. Dr. Chamber's experiment with a dog produced a condition similar to what Dr. Lett had seen produced by strychnine, so he did not think the test could be relied on. The test for the detection of morphia shown by Dr. Chambers, he thought, very delicate. He wished to know how to get rid of the products in the urine so as to detect a very small portion of morphia.

Dr. Cameron thought, if there was much organic matter in the stomach, that the permanganate would lose its effect in oxidizing the matters there, before having an opportunity of operating on the morphia itself.

Dr. McLaughlin reported the case of a woman patient coming under his observation where permanganate of potash was used hypodermically, and did no good.

Dr. Chambers, in reply, said that with regard to the action of permanganate on foodstuffs it was a disputed point, but that from experiments made by himself it appeared that foodstuffs would not interfere with its action. There was a difference in the quickness of its action when such were present. As to its action on alkaloids, as inquired about by Dr. Cameron, he said some work had been done. He had made experiments with strychnine and found the permanganate was decomposed by the strychnine, but he thought it was of doubtful utility in poisoning by this drug. As to detection of morphia in urine, his method was to make it alkaline and then evaporate down. The best test was the iodic test.

THURSDAY MORNING, JUNE 7TH.

SURGICAL SECTION.

The first paper in the section was presented by Dr. Welford, of Woodstock, entitled

FRACTURES AND DISLOCATIONS OF THE VERTEBRÆ.*

His plea was for operation in these cases before degenerated changes take place in the cord. He reported two cases he had had where considerable relief was afforded by operation. He maintained that if they had been operated upon earlier there would have been a good chance for complete relief. The first case was a fracture-dislocation. All above the sixth were dislocated forward. The right arch of the fifth was fractured. Spicula of bone protruded into the canal, but did not puncture the membranes. On the sixth day he was called. Pulse was 155, temperature 104°, and respiration feeble. Although some relief was afforded, the patient succumbed. In the second case, there was a fracture-dislocation between the eleventh and twelfth dorsal. The posterior arches were

*Will appear in THE CANADIAN PRACTITIONER.

removed. The sheath was adherent to the arches, so that the marrow was exposed. The patient gained some power in the right leg and foot, and a return to sensibility two and a half inches below where it was prior to the operation. There was no improvement on the left side, nor in the bladder nor rectum.

Dr. Peters agreed that the operation should have been done earlier. Degeneration took place in such cases in three days. Every spinal injury was not favorable for operation. Where it was known that the fracture-dislocation had severed the cord across, operation was useless. If there was a history of motion and sensation for a short time after the lesion, hemorrhage was likely the cause, and improvement would take place without operation.

Dr. King presented a blacksmith who had sustained an injury to the back while working under a heavy cart. The props slipped and the cart fell on top of him, bending him forward so that his head was brought between his knees. Both clavicles were anteriorly dislocated, and a knuckle presented in the neighborhood of the eleventh dorsal vertebra. There was considerable separation between the eleventh and twelfth. There was no impairment, however, of motion or sensation, but there was difficulty in getting the bowels to move.

Dr. Spencer thought that the patient presented had not sustained any injury to the spinal cord, that there was no effusion of spinal fluid, but that hemorrhage had probably taken place.

Dr. Welford closed the discussion.

Dr. N. A. Powell then interested the association with an illustration of his method of photographing pathological specimens, and also of procuring photographs of operations while in progress. He also showed an ingenious device for making the flash in taking photographs by the flash light.

Dr. Meek, of London, reported four cases of abdominal section. The first was for dermoid cyst of the ovaries, the second for hematosalpinx, the third for suppurative appendicitis, and the fourth for cancer of the pylorus—cholecystenterostomy. He had good success in all. The history of the cases were very interesting.

Dr. Bingham read a paper on

APPENDICITIS,

in which he discussed the classification and treatment. He also gave the report of a case. In the first type of this trouble the symptoms were mild, being usually associated with accumulated masses of feces in the cecum. Recovery usually followed. The second class was where the disease, progressed to suppuration. These cases required to be closely watched,

for there was great danger of perforation and general peritonitis. He thought this not likely to occur within four or five days. Perforation sometimes took place into the intestine, bladder, or externally. The third class was the relapsing appendicitis. Operation in these cases might be left till the subsidence of the acute attack.

Dr. McKinnon and Dr. Whiteman discussed the paper.

The next paper was by Dr. J. D. Gibb Wishart, the subject being

EMPYEMA OF THE ANTRUM.

This was the history of an obscure case; it was difficult to diagnose because few of the symptoms were referable to the antrum; the pain was outside the orbit; the patient failed to lie on the diseased side, the reverse being usually the case. Then the character of the discharge was white, like casein, instead of yellow, as is usually the case. Drilling was performed through an upper molar cavity, and the antrum washed and drained.

Dr. Price Brown discussed the paper.

Both sections then adjourned. About two hundred of the members were then conveyed to the Royal Canadian Yacht Club on the Island, where the city members entertained the outside members to luncheon. A very enjoyable social time was spent.

The association reassembled at 4 p.m. to listen to a paper on

GASTRECTASIS

by Dr. Stockton, of Buffalo. He defined the meaning of the term, and spoke of its effects on the functions of the stomach. For its relief, drugs were of not much service. He recommended the use of lavage and faradization of the stomach walls. He showed Einhorn's button, which the patient swallowed for the electrical seances, a cord being attached to the electrode to withdraw it when the treatment was over. Dr. Stockton also showed an ingenious device of his own for the electrical treatment. It consisted of an electrode on the end of a stilette, which was introduced through the stomach tube, which had previously been inserted to convey the salt water needed. At the end of the treatment, the electrode could be withdrawn, then the salt water, then the stomach tube.

Dr. Doolittle gave the history of a severe case where he had used Einhorn's apparatus with good success.

Dr. Hingston thought such treatment was unnecessary, if the patient would observe three rules: First, to eat less; second, to eat more slowly; third, to refrain from drinking at meals.

Dr. Davidson said that the precautions referred to by the previous speaker were not sufficient, in his idea, when the disease had become established. He favored the treatment by lavage and electricity.

Dr. W. H. Hingston, of Montreal, then read a paper on

CANCER OF THE BREAST.

He referred to the various theories with regard to the causation, inclining to the microbic or inflammatory. He advised that the axillary glands should not be removed unless affected. In dissection, after the primary incision, the finger was better than the knife to enucleate the mass. If the pectoral muscle were affected at all, he advised its entire removal. The stitches should be put in back from the line of incision, so as not to cause any undue irritation to the edges. He advocated removal even up half a dozen times, if necessary.

Dr. E. E. Kitchen, of St. George, gave a graphic account of the great International Congress held at Rome, to which he was a delegate.

Dr. J. F. W. Ross read an interesting paper on

PAPILLOMA OF THE OVARY,

reporting two cases. The disease usually attacked both ovaries. Two varieties might be spoken of: the first being supplied to the growth before its rupture of the capsule, till which time it might be considered as non-malignant; the second, its condition after rupturing the capsule, when it might be looked upon as malignant. He advised early operation. He presented sketches and water colors of the pathological specimens. He also presented a cyst of the broad ligament which he had just removed.

Dr. McPhedran read a paper on

DIURETIN,*

and cited several cases where it had been useful. These were cases of arterio-sclerosis and chronic cardiac diseases. He had found diuretin very helpful in relieving the symptoms where edema was present, or where there was mitral incompetence. In large doses, its effect was similar to poisoning by salicylic acid.

EVENING SESSION.

The first paper was by Dr. Primrose on

SPRAINS.

He went into the pathology, diagnosis, and treatment of these cases. He presented the history of some cases. His plan of treatment consisted in swathing the joint with a large quantity of cotton batting, and bandaging over this very firmly. Massage was useful. Passive movements should be used where there was danger of adhesions at the end of eight or ten days, especially if accompanied by a Pott's or a Colles' fracture.

The secretary then read a communication from the secretary of the Prison Reform Association regarding the establishing of a home for

*See page 416.

inebriates. The association passed a resolution in favor of this movement.

Dr. McKinnon introduced a motion recommending the establishment of a home for epileptics. This was unanimously supported.

Dr. E. Herbert Adams introduced a resolution favoring the establishment of a home for sufferers from pulmonary tuberculosis. This was also unanimously carried.

Dr. Johnston then presented the report of the special committee appointed to report on the matter of lodge practice: "The special committee on lodge practice begs to report that, in their opinion, the time has arrived when this association should pronounce its judgment on the evils of club, lodge, or contract practice, or engaging to do work at any rate below that fixed by the legal tariff of the district, and should take some decided action in, first, calling upon all members of the association to cease making, after the end of the current year, any further engagements to do such work; second, that the secretary of this association communicate at once with the Medical Council, and urge that body to issue a circular to each member of the College of Physicians and Surgeons, informing him that any medical man persisting after this year in doing lodge or club practice shall be considered guilty of unprofessional conduct, as defined by the statute in such case made and provided."

Certain phases of the question were warmly discussed; the resolution carried.

The report of the Committee on Nominations was adopted. The following gentlemen were elected as officers of the association for the coming year: President, Dr. R. W. Bruce Smith, Seaforth; vice-presidents: first vice, Dr. A. A. Macdonald, Toronto; second vice, Dr. A. B. Welford, Woodstock; third vice, Dr. W. J. Saunders, Kingston; fourth vice, Dr. Forest, Mount Albert; general secretary, Dr. J. N. E. Brown, Toronto; assistant secretary, Dr. Charles Temple, Toronto; treasurer, Dr. J. H. Burns, Toronto.

The general secretary, Dr. Wishart, then gave his report.

Dr. Harrison, president of the Dominion Medical Association, extended a hearty invitation to all the members to attend the Dominion Medical Association to be held in St. John, New Brunswick, in August.

The president-elect, Dr. R. W. Bruce Smith, was then installed, and after a neat speech, in which he thanked the association for the honor done him, he declared the fourteenth annual meeting of the association adjourned.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—I desire to direct the attention of the medical profession to the pernicious system of lodge doctoring throughout the country. In Port Hope it has become a perfect craze. There are here a great many societies, nearly all of which have lodge doctors galore. These attend the members of the different societies for \$1 to \$1.50 per member for a year.

Just think—from two to three cents per week! There are in this town about four hundred and fifty men who belong to one or more societies employing the cheap lodge doctors, and some men have the services of more than one doctor, at the rate of \$1 to \$1.50 per doctor per year. Pretty cheap, isn't it?

Surely there cannot be any satisfaction for a physician to attend people at the above prices; and, besides, the necessary medicines are included. Why do these doctors attend the lodges at such a low rate? Because they expect to attend the families of members of the societies, and thus recoup themselves. Can anything be more unprofessional than such tactics, and such underhand methods of obtaining patients? But these lodge doctors claim that the members of the societies are all healthy and comparatively young, and thus do not require much medical attendance. But just wait a few years—for most of the societies are young in employing physicians—till these same men become older, when the need of medical attendance will become something enormous in a body of four or five hundred men. Some, as time goes by, will require medical attendance daily and nightly for months at a time, and then, and only then, will the absurdity of the whole affair become apparent to the selfish lodge doctors. I have, in the last six years, since coming to Port Hope, been offered the position of lodge doctor for three different societies, but declined in every case, much to the surprise of the members of the societies. Now, I am informed, on very good authority, that this custom of lodge doctoring is springing up in nearly every place in Ontario, and even in small places, where there is but one doctor for miles around.

What can these people be thinking of, and what does the doctor himself mean? Surely the doctors have themselves to blame for the custom, and they can remedy the matter if they only have the courage to do so. For they ought to know that by taking positions of this kind they lessen the incomes of the members of the profession. For if the doctors all refuse the offers of positions of the societies, there will be just as much money made—and a great deal more.

Now, some persons writing in defence of this miserable lodge-doctoring business, claim that the physicians who oppose this system have been unable to obtain positions as society doctors; but this is not the case, for I believe that almost any doctor can obtain a position as lodge doctor if he so desires. A position of lodge doctor is humiliating, in the highest sense of the term. How can these societies expect to obtain the best medical treatment at such low rates? There must necessarily be neglect in a great many cases.

A theory has been advanced that this lodge doctoring is necessary for the poor who are unable to pay for medical attendance at the ordinary rates, but such poor people do not belong to these societies—at least not in Port Hope. The members are nearly all able to pay for their own medical attendance.

This lodge-doctoring rage is of far greater importance to the medical profession than the annual tax imposed by the College of Physicians and Surgeons of Ontario, to which so much attention has been directed lately. Why cannot the Medical Council, when it is reorganized, deal with this gigantic evil?

I need hardly dwell any longer upon the injustice of the custom of lodge-doctoring, but would call upon the candidates for the approaching Medical Council elections to give us their opinions and intentions in regard to this matter, when elected to represent the medical men of the province in the Council of the College of Physicians and Surgeons of Ontario. Would it not be a good plan to disqualify all physicians accepting positions as lodge doctors?

F. T. BIBBY, M.B.

Port Hope, May 31st, 1894.

Book Reviews.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynecology, Ophthalmology, Laryngology, Otolaryngology, and Dermatology, by Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain; and Canada. Edited by J. M. Keating, M.D., Colorado; Judson Daland, M.D., Philadelphia; J. Mitchell Bruce, M.D., London, Eng.; and David W. Finlay, M.D., Aberdeen, Scotland. J. B. Lippincott Co., Philadelphia.

Volume II., Third Series. The section on medicine includes clinics on many interesting subjects, among them being clinics on Asiatic cholera, hepatic colic, appendicitis, cirrhosis of the liver, aneurism, etc. W. H. Porter, New York, believes we should not wait until we have demonstrated the presence of albumen and casts in the urine before deciding that we have parenchymatous disease of the kidneys, because in many cases we will only find a diminution of urea and uric acid, with a scanty high-colored urine. In these latter cases, a sudden cold or excesses of eating or drinking, or operations on the kidneys or adjacent organs, increases the amount of work thrown on the overworked and poorly-nourished kidneys, and the nervous system becomes influenced by the retained by-products; toxic symptoms and death ensue. His treatment, early in the disease, is a well regulated mixed diet, stimulation of the secreting and excreting power of the bowels, tonics, with pile and pancreatic extracts to aid digestion.

R. W. Parker, London, believes in early treatment in congenital club-foot. He begins with gentle manipulations of the foot every day, and in many cases he is able to remedy the deformity without further trouble. The whole limb should be massaged several times a day to strengthen the muscles. As a rule, he does not use mechanical appliances until all other means have failed, and then he employs both active and passive movements to ensure a normal development of the rest of the limb, the splints being removed to effect this.

Under the head of surgery, an interesting clinic on septic arthritis is given by J. H. Dunn, Minneapolis. He presents several cases in which the patient has been subject to painful joint affections a few weeks after having contracted gonorrhoea. These have, in some cases, been followed by eye trouble, which, together with the joint affections, did not disappear until the gonorrhoea was completely cured. Later gonorrhoeas brought back the joint and eye affections with increased intensity. He also describes several cases in which septic joints have followed the absorption of pus cocci and their products after dysentery, the exanthemata, and suppurating wounds. He first removes the exciting cause, and applies hot fomentations, blisters, uses the cautery or taps the joint according to circumstances, and later fixes the joint in its proper position until the acute stage is passed, and then employing massage and douching until the function of the limb is restored.

Stephen Smith, New York, thinks more care should be taken in examining old people who have fallen upon the hip, as he believes there is often a partial fracture of the neck of the femur which is undiscovered. The symptoms of

incomplete fracture are more or less eversion of the foot and a slight shortening of the leg. Treatment is rest on a firm bed, an extension weight of two or three pounds, and sand bags to support the leg in position.

Genito-urinary diseases includes a clinic by F. S. Watson, Boston, in which he discusses the uses of suprapubic cystotomy as opposed to external perineal urethrotomy in the treatment of hypertrophy of the prostate gland. In uncomplicated cases, where drainage is the only requirement, he thinks the latter may be used; but he has come to the conclusion that the suprapubic method, though not quite so safe, still is more efficient, as it gives better drainage, and allows for the removal of any foreign matter in the bladder, or of parts of the prostate, if necessary, without further cutting. Both operations are described, together with the radical operation for the removal of the prostate gland. The style and typography are in the same good style as the former numbers of this series.

HOW TO USE THE FORCEPS, with an introductory account of the Female Pelvis, and of the Mechanism of Delivery. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Starling Medical College, Columbus, O. Revised and enlarged by Charles H. Bushong, M.D., Assistant Gynecologist and Pathologist to Demilt Dispensary, New York. Illustrated. E. B. Treat, publisher, 5 Cooper Union, 1894. Price, \$1.75.

This is an exceedingly valuable little book, although we are not certain that the first edition was as highly appreciated as it should have been. The description of the anatomy of the pelvis is especially good, being clear, concise, and well illustrated. Some of the author's statements with reference to the mechanism of delivery and proper application of the forceps, especially in vertex and face presentations, differ materially from the teachings of many authors of high repute in the science and art of obstetrics; and, while we are not inclined to endorse all his statements, yet we desire to give him due credit for the great ability which he has shown in the advocacy of his views. As to forceps, among the great variety at present at our disposal, he strongly favors the Davis instrument.

As to position, he is not in accord with British authors, but prefers the dorsal. Most obstetricians on the continent, and in America, will agree with the author in this particular. He holds a very decided opinion that the forceps should be applied to the sides of the child's head, and describes in a very lucid way the proper methods of making such application.

In the high operation, he recognizes the difficulty of making traction in the right direction; and, while he gives some credit to Tarnier for his intelligent recognition of this fact, he thinks that the instrument known as Tarnier's Axis Traction forceps is an unnecessarily ingenious contrivance, because, as he says, we possess in the ordinary forceps all that is necessary if we will use them correctly, and describes his device, which is fairly well known to the profession. Dr. Landis' method is fairly good, particularly in the hands of an experienced obstetrician, but we have no doubt that the use of our modern axis traction instruments will be much more safe, and much more effective, when the head is at the inlet.

The editor, Dr. Bushong, has added an interesting chapter supporting, in a general way, the views of Dr. Landis, and also gives a description of the operation of symphysiotomy, pointing out the indications and the risks connected therewith. It is not the sort of a book that is likely to become popular with students, but it is a very admirable work in its way, and one that we can recommend with confidence to all who are engaged in general practice.

Medical Items.

SUCCESSFUL CANDIDATES AT SPRING EXAMINATIONS IN MEDICINE.

UNIVERSITY OF TORONTO.

The following fifty-six gentlemen, having completed their course of study and successfully passed the necessary examination, will receive the degree of M.B. :

T. Agnew, W. H. Alexander, W. A. Ball, J. Becket, W. L. Coulthard, G. M. Ferris, L. O. Fiset, E. B. Fisher, A. E. Gardner, E. D. Graham, G. B. Gray, W. A. Hackett, R. G. Laycock, K. C. McIlwraith, J. W. McIntosh, H. McLaren, J. Park, G. D. Porter, H. H. Sinclair, F. W. Smith, J. Stenhouse, W. Stephen, F. W. Stockton, T. Wickett, H. L. Reazin, D. J. Armour, W. B. Boyd, J. Bull, B. Campbell, F. Coleman, W. E. Cram, J. Crawford, J. D. Curtis, H. A. Cuthbertson, J. W. Ford, A. Galloway, A. B. Greenwood, H. Guelph, N. M. Harris, R. H. Hastings, T. C. Hodgson, H. A. Johnston, A. H. Jones, J. A. Lawson, R. M. Lipsey, D. A. McClenahan, W. J. McCollum, J. F. McKee, J. R. Mencke, H. N. Rutledge, J. P. Sinclair, C. E. Smyth, N. C. Wallace, R. B. Wells, J. A. White, T. H. Whitelaw.

Medals.—Faculty gold medal, W. J. McCollum ; first faculty silver medal, H. N. Rutledge ; second faculty silver medal, W. E. Crain ; third faculty silver medal, H. A. Johnston.

Scholarships.—Third year—First and second scholarships divided between M. Currie and A. K. Merritt ; second year—first and second scholarships divided between W. Goldie and E. L. Roberts ; first year—first scholarship, J. H. Elliott ; second scholarship, A. H. Addy.

George Brown memorial scholarship in medical science—in order of merit—W. E. Crain, C. E. Smyth, J. D. Curtis, R. B. Wells, W. J. McCollum, J. Bull.

Of the third year, 38 passed, 1 starred. Primary, 2 passed, 5 failed. Second year, 54 passed, 4 starred, 11 failed. First year, 54 passed, 9 starred, 6 failed.

QUEEN'S UNIVERSITY, KINGSTON.

The following passed for the M.D. and C.M. degrees :

James Ross Allin, William J. Anderson, Jos. A. Boucher, W. T. Connell, F. J. Farley, G. D. Fitzgerald, Cyril Fulton, P. J. Kinsley, B. J. Leahy, J. W. Morden, A. R. Myers, F. C. McCutcheon, A. B. Partou, W. W. Sands, James Seager, J. A. Stevenson, H. G. Williams, W. A. Young.

University Medals—Gold, Walter T. Connell ; silver, J. W. Morden.

MANITOBA MEDICAL COLLEGE, WINNIPEG.

M.D.—J. N. Andrew, F. W. E. Burnham, F. G. Brien, George Camsell, J. S. Conklin, E. A. Crokot, S. J. Elkin, J. R. Gunne, Robert Goodwin, John Gahan, J. K. McLennan, Don. McDonald, H. C. Norquay, William Stevenson, J. S. Stewart, A. E. Versailles, C. M. Vanstone.

C.M.—F. G. Brien, F. W. E. Burnham, J. S. Conklin, E. A. Crokat, George Camsell, S. J. Elkin, John Gahan, Robert Goodwin, J. R. Gunne, Don. McDonald, J. K. McLennan, William Stevenson, C. M. Vanstone.

Scholarships.—Intermediate—A. Hamman, \$80; J. A. Watson, \$60; H. P. Hargrave, \$40; A. S. Munro, \$100; J. R. McCrae, \$80; G. E. Curtis, \$60.

WESTERN UNIVERSITY, LONDON.

M.D.—C. F. New, J. Hughes, H. J. Ferguson, C. A. Elliott, A. F. Franklin, J. D. McLean, D. M. Dunn, D. McBlain, H. Stevenson, J. C. Forsyth, W. Northrup, D. M. Kelly, A. J. Peel, B. F. Leys.

HALIFAX MEDICAL COLLEGE.

M.D., C.M.—Annie Isabel Hamilton, Arthur A. Dechnan, Wm. F. Cogswell.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degrees.—Certificates of Honor—Candidates who obtained 75 per cent. and over: Prosper D. White, T. G. Devitt, Geo. H. Field, James Semple, A. K. Ferguson, C. B. Shuttleworth, A. L. Danard, H. R. Frank, Thos. Kerr.

Sixty per cent. and over.—T. M. Manes, C. D. Parfitt, C. C. Field, J. McMaster (B.A.), E. L. Procter, J. L. Bradley, W. H. Millen, H. E. Armstrong, J. T. Somerville, H. D. Livingstone, W. W. McQueen, S. H. Murphy (B.A.), M. S. Lane.

Passed.—D. Thomson, R. R. MacFarlane, C. H. Thomas, C. M. Kingstone, A. G. Ashton Fletcher.

Dr. Sheard's prize in physiology for the first year—J. S. McEachern.

Scholarships.—The 1st First Year's Scholarship, \$50, J. S. McEachern; the 2nd First Year's Scholarship, \$30, C. A. Campbell; the 3rd First Year's Scholarship, \$20, F. A. Scott; the 1st Second Year's Scholarship, \$50, J. R. McCrae; the 2nd Second Year's Scholarship, \$30, V. A. Hart.

Medals.—The Second Trinity Silver Medal, Geo. Henry Field; the First Trinity Silver Medal, Thos. G. Devitt; the Trinity Gold Medal, P. D. White.

TRINITY UNIVERSITY.

M.D. C.M.—*Class I*.—Gold medal and certificate of honor, C. B. Shuttleworth; silver medal and certificate of honor, C. D. Parfitt.

Certificates of Honor.—A. L. Danard, A. K. Ferguson, *aq.*; H. R. Frank, S. H. Field, T. G. Devitt, J. S. Goodfellow, E. L. Procter, *aq.*; J. L. Bradley, C. C. Field. *Class I*.—T. Kerr, J. McMaster, J. Semple, *aq.*; H. E. Armstrong, J. D. Windell, H. N. Rutledge, *aq.*; J. R. Mencke, W. H. Millen, M. Baker, H. D. Livingstone. *Class II*.—S. H. Murphy, C. H. Thomas, M. S. Lane, J. D. Leith, T. C. Hodgson, D. A. McClenahan, W. H. Scott, J. Park, J. T. Somerville, F. W. Smith, C. M. Kingstone, P. D. White, E. R. Brown, F. A. White, A. Galloway, T. Agnew, W. W. McQueen, J. S. Matheson, E. D. Graham, A. G. A. Fletcher, T. A. Manes. *Class III*.—H. H. Sinclair, Miss J. S. Shirra, G. M. Ferris, W. B. Boyd, Miss N. Rodger, D. Thomson, R. R. Macfarlane, W. H. Alexander, S. N. Insley, Miss G. W. Hulet, T. Wickett, T. W. H. Young, F. S. Nicholson, W. J. Bray, Miss E. A. A. Burt, W. A. Ball, W. W. Bredin (M.B., 1873).

M'GILL UNIVERSITY.

Final Examination for M.D., C.M.—A. T. Bazin, W. G. M. Byers, A. R. Colvin, A. Davidson, R. E. Davis, W. F. Drysdale, A. S. Estey, J. W. Evans, W. Ferguson, E. S. Fowler, F. M. Fry, B.A., J. A. Fulton, C. W. F. Gorrell, G. Hamilton, J. P. Hanington, E. C. Hart, W. Henderson, W. G. Hepworth, P. A. Holahan, B.A., H. M. Jacques, J. F. Kearns, H. McL. Kinghorn, B.A., W. O. Lamly, J. F. Lewis, G. S. MacCarthy, J. McCrae, J. T. McLaren, J. A. McLaughlin, C. M. McLean, L. Y. McIntosh, L. F. McKenzie, G. H. Manchester, G. H. Mathewson, B.A., W. Mitchell, A. C. Nicholls, M.A., E. J. O'Connor, C. L. Ogden, B.A., J. Pritchard, B.A., J. Reeves, A. Richardson, H. J. Richardson, F. E. Rimer, A. A. Robertson, B.A., D. W. Ross, H. Ross, J. J. Ross, J. H. Scammell, W. H. Scott, E. M. Sharpe, H. S. Shaw, A. T. Shillington, W. A. Stenning, R. D. Wilson, G. G. L. Wolf, B.A., H. E. York.

Honors, Medals, and Prizes.—The Holmes Medal, Andrew Armour Robertson. The Final Prize, Albert George Nicholls, M.A. The Primary Prize, William Nassau Kendrick. The Sutherland Medal, Dougall Robins, B.A. The Clemesha Prize, Allan Davidson.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO—PRIMARY PASSED.

Following is a list of candidates who have passed the primary examination of the College of Physicians and Surgeons of Ontario :

Passed with honors.—E. L. Roberts, Lynedoch, Ont.

Passed.—W. L. Addison, Toronto; W. H. Alexander, Bolton; E. H. Arkell, St. Thomas; D. Buchanan, Galt; G. S. Burt, Hillsburg; J. F. Boyle, Toronto; T. H. Bier, Brantford; T. C. Bedell, Hillier; G. W. Brown, Aylmer West; W. J. Beasley, Weston; W. G. N. Byers, Gananoque; B. G. Connolly, Trenton; G. E. Cook, Morrisburg; D. T. Crawford, Thedford; H. Clare, Chapman; Jennie Drennan, Kingston; W. F. Drysdale, Perth; J. J. Elliott, Brantford; J. H. Ferguson, Toronto; T. H. Farrell, Kingston; W. Goldie, Ayr; J. S. Goodfellow, Bradford; C. Graef, Clifford; F. W. Hodgins, Lucan; L. Hogg, London; W. Hird, Uxbridge; G. V. Harcourt, Port Hope; E. S. Hicks, Port Dover; W. J. Henderson, Little Britain; C. G. Johnson, Athens; W. W. Jones, Mount Forest; W. D. Keith, Toronto; L. Lawrason, Dundas; J. S. Morris, Oshawa; J. D. MacLean, Meaford; H. G. S. Murray, Kingston; R. Moore, Maple; G. Musson, Toronto; Maggie MacCallum, Toronto; A. H. Macklin, Stratford; George More, Kirkton; G. E. Millichamp, Toronto; W. J. Malloch, Meaford; H. W. Miller, Orillia; W. McDonald, Galt; A. S. McCaig, Collingwood; J. R. McRae, Lochalsh; H. S. McDonald, Kingston; W. B. McKechnie, Aberdour; P. S. McLaren, Tiverton; N. W. McInnes, Vittoria; J. M. McCarter, Almonte; D. W. McPherson, Toronto; C. S. McKee, Peterborough; W. H. Nichol, Brantford; J. H. Oliver, Sunderland; J. I. Pratt, Heathcote; A. W. Partridge, Crown Hill; H. G. Pickard, Glammis; A. B. Parlow, Iroquois; J. Pritchard, North Wakefield, Quebec; E. K. Richardson, Flesherton; H. H. Ross, Brucefield; F. S. Roundthwaite, Collingwood; E. L. Robinson, Toronto; J. W. Routledge, Lambeth; J. A. Rannie, Chatham; A. Rupert, New Hamburg; J. P. Russell, Toronto; J. Reeves, Eganville; A. A. Small, Toronto; Emma Skinner, Davisville; Maggie Symington, Brighton; I. G. Smith, Belleville; C. R. Sneath, Toronto; D. W. Shier, Cannington; Christian Sinclair, Ottawa; R. W. Shaw, Lotus; W. J. Stevenson, London; F. W. Smith, Sheffield; J. S. Thorne, Belleville; J. E. Tyndall, Richmond Hill; W. M. Teetzel, St. Thomas; H. E. Tremayne, Mimico; Adelaide Turner, Gananoque; Annie Verth, York; H. E. Wallace, Port Elgin; E. B. White, Chatham; S. H. Westman, Toronto; W. H. Weir, Brantford; E. C. Weekes, Glencoe; B. E. Webster, Kingston; F. G. Wallbridge, Belleville.

ENTITLED TO LICENSE.

The following candidates have passed the final examination, and are therefore entitled to the license in Ontario :

Passed with honors.—W. T. Cornell, Spencerville.

Passed.—W. H. Alexander, Bolton; H. E. Armstrong, Orono; T. Agnew, Belgrave; W. J. Anderson, Shanley; J. R. Allen, Napanee; D. J. Armour, Cobourg; W. B. Boyd, Uxbridge; J. H. Bull, Weston; J. L. Bradley, Airlie; H. A. Cuthbertson, Wyoming; W. E. Crain, Brockville; J. Crawford, Toronto; B. Campbell, Parkhill; J. D. Curtis, Middlemarch; Frank Coleman, Hamilton; A. L. Danard, Allenford; T. G. Devitt, Bobcaygeon; T. S. Farncomb, Newcastle; J. W. Ford, Woodham; F. J. Farley, Smithfield; A. K. Ferguson, Kirkton; G. H. Field, Cobourg; C. C. Field, Cobourg; H. R. Frank, Brantford; A. G. A. Fletcher, Toronto; A. B. Greenwood, Newmarket; E. D. Graham, Sutton West; G. B. Gray, Elora; A. Galloway, Beaverton; R. J. Hastings, Guelph; D. H. Hogg, London; N. W. Harris, Toronto; T. C. Hodgson, Beaverton; Gertrude Hulet, Norwich; F. W. Hughes, London; W. A. Hackett, Belfast; C. M. Kingston, West Huntingdon; J. A. Lawson, Brampton; R. M. Lipsey, St. Thomas; J. D. Leith, Dromore; H. D. Livingstone, Georgetown; W. H. Miller, Cottam; F. W. Morden, Picton; S. H. Murphy, Renfrew; J. R. Mencke, Toronto; C. S. MacCarthy, Ottawa; D. A. McClenahan, Tansley; J. McMaster, Toronto; J. W. McIntosh, Toronto; L. Y. McIntosh, Strathmore; W. J. McCollum, Toronto; J. F. McKee, Aurora; A. A. McCrimmon, St. Thomas; C. F. New, London; E. L. Procter, Toronto; G. D. Porter, Brantford; J. Park, Feversham; C. D. Parfitt, London; J. Pritchard, North Wakefield, Quebec; A. B. Parlow, Iroquois; H. N. Rutledge, Streetsville; J. P. Russell, Toronto; J. Reeves, Eganville; C. E. Smyth, Toronto; W. Stephen, Anderson; F. W. Smith, Sheffield; C. B. Shuttleworth, Toronto; J. Seager, Ottawa; J. P. Sinclair, Toronto; R. B. Wells, Toronto; T. H. Whitelaw, Guelph; N. C. Wallace, Alma; J. D. Windell, Pontypool; J. A. White, Oakwood; P. D. White, Glencoe; T. Wickett, Belleville.