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ON THE IMPORTANCE OF EARLY OPERATION ON THE GALL BLADDER.*

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IT would be easy to decide upon the method of procedure in treating diseased conditions of the upper abdominal cavity were the diagnosis clear. Unfortunately the diagnosis often is extremely difficult and doubtful. If the difficulty in diagnosis leads to delay in the employment of proper methods of relief, and this delay results in complications which render the delayed methods more dangerous and less effective, there are certainly urgent reasons for us to seek early methods of diagnosis and treatment.

I think I shall best show my appreciation of the courteous invitation of your President to speak to you to-day by condensing what I have to say into a few words. I shall not, therefore, enter upon an exhaustive discussion of my theme, but shall confine what I have to say to a short statement of conclusions based upon my own clinical experience. In doing this I shall cite a few cases selected from many, simply as illustrations. The difficulties of diagnosis pertain chiefly, in the first place, to uncertainty as to the presence or absence of malignant disease, whether of stomach, gall bladder or liver: second, to uncertainty as to the presence or absence of gall stones or inflammatory conditions of the biliary tract; and third, to the association of inflammatory adhesions which may result from certain of the foregoing diseased conditions. I shall not consider acute inflammation of the pancreas nor cysts of that viscus or of the lesser omental bursa, interesting as these may be. I shall omit also a consideration of diseased conditions of the stomach associated with gasterectasis, whether resulting from carcinoma, non-malignant stricture of the pylorus or other causes whatsoever. If these cases are malignant, diagnosis is usually too late to make operation of benefit, and if non-malignant I am of the positive opinion that such cases should be referred to our medical confréres, who now accomplish so much by lavage, proper diet, medication, rest and recreation. It is time

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enough to consider operation for gastro-intestinal anastomosis after properly directed treatment has proved ineffectual. To return then to the limited theme which is proposed for consideration, what are the difficulties of diagnosis in conditions suggesting the presence of malignant disease of the pylorus, biliary tract, or liver? Repeatedly, cases have been brought me with a diagnosis of carcinoma of the stomach, abandoned as hopeless, upon which I have operated with complete recovery.

An interesting case was one upon which I operated in 1893. The patient had suffered from indigestion and from epigastric pain for a number of years. The case was abandoned as one of carcinoma and was brought to me only for the satisfaction of the family. A positive diagnosis was impossible, but it seemed to me desirable that an exploration should be made. Upon opening the abdomen I found a gall bladder distended and from it removed a large number of small and three very large calculi. I saw the patient recently and since the time of the operation she has enjoyed good health aside from the fact that she still has some digestive disturbance. One of the most interesting cases in this connection which I have met was that of a woman upon whom I operated in 1900 for carcinoma mammæ. I was called to see her again in May of this year. At that time she was complaining of pain in the abdomen, there was slight jaundice and although the conditions were such as to render a diagnosis uncertain, I suggested the propriety of an exploration, since I was suspicious that a gall stone might be present. The factor of uncertainty in this case was that having been operated upon for an unquestioned carcinoma mammæ one would have naturally suspected the presence of a secondary malignant growth of the liver. The patient did not accept my advice and died about two months later.

At the *post mortem* examination it was found that the patient had a large gall stone which by pressure had ulcerated through the gall bladder and had thus caused death. There are other cases in my experience in which diagnosis has often proven more difficult than in the one just mentioned.

A patient was brought to me having a mass in the epigastrium, markedly jaundiced, and presenting conditions which pointed strongly toward carcinoma. There were certain features in the case, however, which led me to think an exploratory incision wise. This was made and, upon opening the abdomen, a large mass was encountered and the adhesions were so dense that it was impossible to separate them. The patient's condition was extremely feeble, so that I felt any more extended examination of the mass than that which was made would in itself be more than the patient could endure. The operation was,

therefore, abandoned, the diagnosis being carcinoma. The original operation was made on November 16, 1898. Contrary to all expectation the patient gradually improved and the jaundice disappeared and she was restored to health. A few months ago she again felt a little pain in the epigastrium with some recurrence of jaundice. The lapse of time had been sufficient to negative the diagnosis of carcinoma and I consequently decided to open the abdomen again. I did so on August 12, 1902, and again encountered adhesions. The adherent mass was smaller, however, than at the first operation. The patient being in vigorous health at this time I separated the adhesions, forced my way down to the gall bladder which I found much contracted, with thickened walls and on opening it I removed from its cavity ten small gall stones. I was able to separate the adhesions so as at length to get my finger into the Foraman of Winslow and explored the whole of the biliary tract, and was thus able to exclude other diseased conditions. This case had been to me one of the most interesting in my experience. Had the first operation for exploration been undertaken earlier when the patient's condition was such as to have rendered a more prolonged operation possible, of course she would have been relieved at that time, but it is not infrequent that one is forced to undertake operations in which the only hope depends upon the rapidity with which it is performed.

Explorations under such circumstances, if too prolonged, or severe, usually result in death and consequently are not permissible. These illustrations seem to me sufficient to demonstrate the desirability of early exploration. The interesting fact is that in all the cases mentioned the complex of symptoms has not been those supposed to be characteristic of gall stones. Unquestionably, explorations under the conditions described will result in demonstrating the presence of malignant disease in a certain proportion of cases, but in as much as the exploration can be of little detriment to such patients, little can be said against the procedure.

The second proposition pertains to the presence or absence of gall stones in cases in which malignant disease may be excluded with fair certainty. Patients may have for years complained of discomfort in the epigastrium. There may have been at no time colic, suggesting gall stones, and jaundice if present may have been so slight as not to have attracted the patient's notice. The most striking case of the sort which has come under my notice is that of a patient on whom I operated a number of years ago for urinary calculus. Three months later I was called to his house to find the patient in collapse from which he died in

a few hours. Three days previously he had been seized with severe pain in the epigastrium, which was so severe that he fainted away. Physicians in attendance had been unable to make a diagnosis. At the *post mortem* I found an enormously distended gall bladder containing several hundred small stones, while in the cystic duct there was a small impacted stone. The hepatic and common ducts were free. The case is of interest in several ways. Having operated upon the patient for stone in the bladder not long before, and having inquired carefully into his symptoms, it seems impossible that he could have suffered seriously at least from the gall stones which already must have existed in large numbers. Had he done so I certainly should have elicited the fact. Another factor of interest is the sudden onset of pain and the extreme severity of it in a patient who had not previously suffered from biliary colic, even though there were hundreds of stones in the gall bladder. The gall bladder was also distended and was the most tense of any which I have ever encountered. I might mention many other cases in which gall stones have been found at operation, in none of which cases were there present characteristic symptoms of gall stones such as marked jaundice, clay colored stools, spasmodic pains, or vomiting. At most there was a long continued sense of discomfort in the epigastrium, perhaps the faintest discoloration of the sclera, and urine a little more highly colored than normal, which on examination was found to contain traces of bile.

On the other hand, I have operated repeatedly upon cases having all the characteristic symptoms of gall stone in which none have been found. Exactly the origin of these cases is difficult to determine. A distention of the common duct, acting much as a diverticulum of the oesophagus, suggests itself as a possible cause of the symptoms. At any rate, such cases are relieved by drainage of the gall bladder with traction upon its walls, the gall bladder being fixed by sutures to the incision in the adbominial wall. Following this procedure there is the re-establishment of the flow of bile into the intestines,and I have had the good furtune repeatedly to have such patients entirely recover. Whether stones be present, or whether the symptoms be due to the obstruction to the flow of bile without the presence of stones, is immaterial since the condition is equally serious in the latter and is equally benefitted by operation.

The third consideration is the most important, viz., what complications may arise from delayed operation? The most important of these are inflammatory adhesions. The extent of these may be extreme and may bear no proportion to the number or size of the biliary calculi or to the length of time that symptoms have existed. The most striking case

of this sort I have ever seen was that of a man upon whom I operated in October of 1892.

Fifteen years before while engaged in excavations in Georgia he had a severe attack of malaria, and while there passed a gall stone. The patient returned from the South after three years and did not pass another stone for three years. He then commenced passing stones at intervals of from every few months to a year. He was a man over six feet in height of powerful physique and normally weighed over 200 pounds. When I saw the patient in Oct. 1892 he had lost greatly in weight, was markedly jaundiced and very feeble. I suspected gall stones were the cause of the difficulty and told him that his condition was so far advanced that an operation seemed to me to be well nigh hopeless. He decided, however, upon operation. I will not describe this case in detail, but use it as an illustration which has come in my experience. The adhesions were the most dense I have ever met, the most determined efforts to reach the biliary passages meeting with failure. I tore the adhesions until I feared I should tear into the portal vessels but could find nothing in the biliary tract, the only thing which guided me being a small nodule which I thought was a stone. In manipulation this disappeared and I could find it no more and finally abandoned the operation. To my surprise the patient not only recovered from the operation but recovered absolutely from all symptoms of the disease and has remained in absolute health from that time until the present. The dislodging of the gall stone was doubtless the cause of the improvment.

The occurrence of dense adhesions is a complication which I have met very frequently. They occur with stones in the gall bladder, the cystic, and also the common duct. They add enormously to the difficulties and dangers of operation, and render what is under other circumstances a relatively safe operation, one of extreme risk. I should say, therefore, that the most common complication in inflammatory conditions of the biliary tract is the occurrence of adhesions. It is impossible, however, to tell in advance whether adhesions may be present or not. In several cases of long standing disease, with evidence of stone in the common duct, I have been able to reach the common duct without great difficulty, have opened it, removed a stone, sutured the incision and drained the gall bladder, and under these circumstances have seen the opening in the duct heal per primum. Unfortunately, when adhesions exist in connection with a stone in the common duct, they render operation extremely difficult. I have been forced to open the common duct upon its posterior aspect with a bistory, guided by my finger, after I have been compelled to abandon every other method of reaching the

stone. One of the gravest complications which is associated with inflammatory conditions of the biliary tract and with gall stones, is that of suppuration. Usually, the symptoms of suppuration are such as not to be mistaken, but at times suppuration may occur in some insidious way. A few years ago, I published a paper giving an account of five cases of suppuration of the gall bladder occurring during about five weeks of practice. Of course this was an unusual series, but the condition is one which I have encountered many times, and it is one of extreme gravity. The patients are usually in a condition most unfavorable for operation. I have found the condition associated with multiple points of gangrene of a gall bladder which was just on the verge of perforation; I have found the stones after rupture when they had escaped together with the pus into the abdominal cavity; I have found gangrene of the gall bladder from the pressure of the stone upon its walls; and I have encountered cases of suppuration with great thickening of the gall bladder without the presence of stone. Usually, the symptoms of rupture are associated with so grave a degree of collapse and symptoms of peritonitis as to render the diagnosis positive. There are cases, however, in which the gall bladder is perforated without the evidences of perforation becoming apparent. I recently cared for a case which had shown repeated evidence of gall stones. When I saw him, he had just returned from a journey to Kansas, and had there been told that he had gall stones, and had had an operation urged upon him. He was markedly jaundiced, had suffered from a marked collapse, with high pulse, cold extremities, etc., an hour or two before I saw him. There was, however, but slight local tenderness over the gall bladder, no dullness, and no evidence of peritonitis. The patient's condition was clearly one which did not permit of operation, and I advised delay. Fourteen days afterwards, I was called to see the patient again, having previously advised operation as soon as he recovered from shock. He had been up and about, and had decided to undergo an operation. On making an incision, I encountered adhesions immediately under the abdominal wall. With my first attempt to free these, there was an abundant flow of thick yellow pus. This was walled off as carefully as possible by gauze, the stomach and colon were pushed to one side, and the gall bladder was found enlarged, lying posteriorly and well to the right side, markedly distended, and adherent to the under surface of the liver. In tearing it free, there was a considerable rent made in the liver itself. Not to detail the case, which was one of unusual interest, it will suffice to say, that in spite of the extremely desperate character of the operation and the marked collapse which followed, the patient's condition began to improve after twenty-four hours, the

temperature returned to normal, and at the end of nine days the patient seemed to be out of danger. That day a fecal discharge appeared and the patient's condition rapidly grew worse from symptoms of infection, and he died about twenty-four hours later. At the autopsy it was found that the abscess which had been encountered on opening the abdominal wall had rested upon the transverse colon and had so damaged it that later perforation through this portion of the damaged gut had taken place. The point of perforation showed that the gut had been thinned by the abscess at one point until its integrity had been destroyed, and the giving way of this point nine days after operation had resulted in the fistula and death. An interesting fact discovered at the post mortem in this case was, that the dome of the liver reached up to the second intercostal space. Another case somewhat similar and of great interest in this connection, was that of a patient who returned from a distant city suffering from an attack of pain in the epigastrium similar to those from which he had suffered on several previous occasions. His physician, who is an extremely skillful diagnostician, on examination found dullness and seeming consolidation over the right side of the chest, and thought the case was complicated by pneumonia. When I saw the patient he was in collapse, his condition being so grave as to warrant no operation, and in fact he died a few hours later. The physician had told me his diagnosis of consolidation of the base of the right lung, and was surprised when I said that on examination I could not find the condition mentioned, telling him that I found no such consolidation and that I thought the patient was dying from a ruptured gall bladder. I took it that the conditions in this case were similar to those in the case which I have just described, in which the inflammatory conditions about the gall bladder had caused adhesions which resulted in forcing the dome of the liver far up into the thoracic cavity on the right side.

It is scarcely necessary to detail more cases or to discuss the topic further, since it is evident that there are many diseased conditions in the epigastrium which can be benefitted by operation and in which operation offers the only fair opportunity of recovery, so that it is the only procedure worthy of much consideration. Diseases of the pelvis are as a rule much more easily diagnosticated than those of the epigastrium and the diseased conditions of the epigastrium in which the diagnosis is uncertain are of a sort which if they cannot be helped by operation usually cannot be helped at all. This being true, since delayed operations are beset by vastly increased risk, and since early operations belong to those which are as a rule safe and successful, it seems to me that we are warranted in urging operation as a wise and conservative

procedure. A paper of this sort would scarcely seem to be complete without the mention of what has been called the ball-valve stone of the common duct. The symptoms of this are supposed to be quite characteristic. They are recurring chills, followed by fever, jaundice, clay colored stools, and bile in the urine. The recurring chills and fever are supposed to be markedly characteristic. Repeatedly I have found these symptoms to be most reliable. In one case, however, in which the symptoms were seemingly most characteristic, the patient when I saw her was too feeble for operation. At the post mortem, at which unfortunately I was not present, I was told that no stone was found in the common duct. In a considerable number of cases this is the only exception I have met, and I regret extremely that I cannot speak of the case from having been personally present at the post mortem.

During the course of typhoid fever there may come increased temperature with pain in the epigastric region and on examination a distinct tumor may easily be palpated and percussed. As is well known this may arise from acute infection of the gall bladder. Of course under such conditions there can be no question if the condition permits, as to the advisability of incising and draining the gall bladder. This is an operation which may be done under cocaine if the patient's condition is very feeble and certainly is by no means so dangerous as operation for perforation of the intestine by typhoid ulcer.

The conclusions reached from the considerations which have been placed thus briefly before you are as follows: Omitting those conditions which have purposely been excluded from this discussion and also the cases in which the diagnosis is positive and in which primary medical treatment has strongly been advised, it is my judgment that in other cases in which the diagnosis is uncertain, whether it be a question of malignancy, stone, or inflammation, it is wise to advise early exploration. If malignancy is encountered little damage has been done. Often exploration will result in the discovery of conditions which can be helped by operation, and by operation alone. The earlier the exploration is undertaken the greater is the safety to the patient, and the fewer the complications which will be encountered.

VIRCHOW.*

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HE, who is chosen by his colleagues to deliver the opening lecture of the session, is apt to view the situation with mixed feelings. At first with pride at being so selected, but as time passes, with growing uneasiness and doubt as to his ability to carry out the task assigned; and he ultimately reaches a point at which he wonders whether they wished to spoil his holidays or only hoped to make their own more pleasant. It is not an easy task to choose a subject for an opening lecture. There is an *embarras des riches* which makes selection difficult. Medicine, with its fascinating past, linked at every point with the history of the development of human knowledge, and its glorious future so full of promise for the human race, is not wanting in many and varied themes for such a lecture.

The lecturer is peculiarly fortunate when the date of his address falls with an epoch in the history of the institution; and in that fortunate position I find myself to-night.

Since the opening of the Biological Department of the University in 1890, each succeeding autumn has seen this theatre filled with ever increasing crowds of students, gathered upon the first day of the session, to hear the opening lecture. And since that date, the Biological Department has filled a peculiar place in the history of the Medical Faculty and of its students. Here, the students begin their work and within its walls the Faculty meets each month during the session.

To-day forms an epoch in the history of this institution in that this is probably the last opening lecture of the Medical Faculty to be delivered in this hall. Before the session is finished, we will have moved into the building which is now being erected to the north of this one and by transferring the work of the third and fourth years to it, the last step will have been taken to bring the whole body of medical students thoroughly in touch with University life. It is a step to which the friends of the Faculty and the University have long looked forward; for although the University has no more loyal alumni than those in medicine, yet the separation of the final years has, to a certain extent, tended to cut them off from the University and its life, and has certainly tended to produce a separation between the men of the first and second and those of the third and fourth years.

* An address delivered at the opening of the Sixteenth Session of the Medical Faculty of the University of Toronto.

At the very outset the founders of the Medical Faculty committed themselves to the position that the study of medicine required a thorough general scientific groundwork, especially in Biology, and the erection of this building in 1890 was the first step towards properly providing for this: although for the three years prior to that date good work was done even with the insufficient equipment and cramped accommodation then available. It is peculiarly fitting therefore, that the biological building should be closely associated with the development of the Faculty.

The effect of this care for the groundwork of medicine by the University authorities, is shown in the standing which its graduates have taken wherever they have gone; and the University herself has profited not only on the prosaic side of increased fees but also on the much more important one of a rapidly growing body of loyal graduates, scattered from one end of the province to the other, graduates as loyal and perhaps more influential than any other body of her alumni.

For still another reason it is fitting that the opening lecture in the Faculty of Medicine should be given in this building, because the fact that should be deeply impressed on you students who are entering for the first time the study of medicine and upon you older men who have been engaged at it for a longer period is that at bottom medicine is a biological science and that so long as during your student days, or in later life, in active practice you pursue a biological method, in the study of the problems which you may have to face, so long will you be pursuing the study of scientific medicine; but when you drift away from that method, you are drifting towards a false empiricism and quackery. Perhaps too, now that the Faculty of Medicine is to a certain extent passing from under the protecting wings of the Biological Department, it may be permitted to refer to one, who more than any other member of the university has directed the development of medical teaching in this country along true biological lines. I refer to the Vice-President, Professor Ramsay Wright, and I believe that all members of the Faculty will agree with me when I say, that we owe to him a very great debt, for the influence which his teaching has exerted upon the breadth of outlook, which our students have developed. The students of to-day will hardly realize that the point which was most severely attacked by the enemies of the University Medical Faculty in 1887 was the introduction of general biology, and the prominence given to that subject in the course, and now, when entering the sixteenth session, that we may look upon that subject and its influence upon the rest of the curriculum, as one of the glories of the Faculty, we must acknowledge that this is owing to the catholicity of spirit of the head of that department.

It is not my intention, however, to address you on the necessity of a proper biological training as a foundation for medicine; that has been done by other and abler hands than mine; and although it is ever an interesting subject to discuss, the fact is now everywhere admitted and needs no discussion.

To-day, another epoch in the history of medicine has been reached, an epoch which we must all regard with sadness, although it is an epoch which we have all known must soon come. We are to-day, students of Modern Medicine mourning the Father of Modern Medicine, Virchow. Virchow is dead and with his passing, is broken the last link between scientific medicine, which he did so much to establish and those older ideas of the first half of the nineteenth century, which he did so much to overthrow. For over fifty years Virchow's mind has dominated our science and for all time his influence will be felt; it is fitting that on such an occasion we should devote more than a passing notice to the life and works of our great master. I wish this evening, therefore, for a short time to direct your attention to the life of Virchow, and to attempt in some measure to give you an idea of what his life work has meant for medicine, and, what a loss medicine suffers by his death.

In order to properly appreciate his influence, we must first consider, for a moment, the condition in which he found the science when he graduated from the University of Berlin in 1843.

During the first forty years of the nineteenth century great advances had been made, especially in gross anatomy both normal and pathological; in England the teaching of Hunter had done much to emancipate medicine from the errors of the eighteenth century; in France great progress had been made under Bichat, Laënnec, Andral and Cruveilhier, while in Austria, Rokitansky, one of the greatest, perhaps *the* greatest gross pathologist of all time, had added immensely to the accurate knowledge of the gross appearance of disease as seen in the autopsy room; but everywhere we find, that the mysticism of the eighteenth century dominated ideas and metaphysical speculations still took the place of careful observation and experiment. In fact the history of medicine during the first fifty years of the past century was still the history of the rise and fall of systems and schools. So little did scientific methods affect the interpretation of the phenomena of disease, that Rokitansky, himself the most painstaking and exact of gross pathologists, was the Father of that system which was the first to be attacked and overthrown by Virchow, namely the humoral pathology. It would indeed take too much time to attempt to fully describe the state of medical thought at this period; it would perhaps be difficult for us to appreciate it properly;

we have gone so far forward that to day it is almost impossible for us to go back to the point of view of the physician of 1840, and appreciate the arguments which appeared to him so cogent. The tendencies were all trancendental, there was continually introduced into the arguments the action of a something which might be called the 'nervous principle,' the 'life principle' or the 'formative principle' or something else of the kind, to which all kinds of activities were ascribed; indeed Virchow, in the first volume of his *Archiv*, quaintly scoffs at the powers of this formative principle, as described in Lobstein's Pathological Anatomy, in the following words "Does it not seem as if this Bildungskraft were a free burger from 'the bloody land of Kentucky, half horse and half alligator' or a small demon from the days of the Rosicrucians."

In Germany the system which perhaps had the strongest hold on the medical mind was that form of humoral pathology which had been promulgated by Rokitansky; a modification of the pathological views of Andral, the French pathologist. According to this view, the primary seat of all disease was in the blood and, as Rokitansky thought, disease consisted in false mixture of the elements of the blood, chiefly the fibrin and the albumen; to designate this abnormal condition he made use of the old Hippocratic term *crasis* and classified all diseases into various *crases*. One of his most important crases, for instance, was that in which he conceived there was an excess of albumen and a difficiency of fibrin; here he placed such widely different diseases as gout, rachitis, typhoid, acute tuberculosis, Bright's disease, cancer and others equally varied. How strong a hold the humoral pathology had on the minds of men is shown by many terms, still used and believed in, at the present day, by the laity, such as pure and impure blood and even the terms hot blood and cold blood and, although no one will gainsay the therapeutic value of brimstone and molasses, yet doubtless, in the minds of the common people, the humoral pathology is responsible for the vigor of its application.

The grave objection to these views and to others of the same period was that they were almost entirely speculative hypotheses with but the slenderest foundation in the way of observed fact or experiment.

These were the doctrines and theories of disease which Virchow was taught when a student in Berlin and we doubt not that throughout those years he must have struggled vigorously against them.

We have very few details about his early years of life and study; born in Schivelbein, in 1821, a little village in the flat sandy plains of Pomerania about forty miles from the Baltic, he attended the village school and afterwards the gymnasium at Cöslin. In an anecdote by

his friend Schliemann, we see that even at the gymnasium his future originality of mind was foreshadowed in his attitude towards the study of languages, in which he was very proficient; in his home, he had begun the study of the classics, under an enlightened teacher, who did not think it necessary, that he should memorize grammatical rules, so long as he could translate correctly and write correct exercises; on going to the gymnasium he was under a Greek master who thought that since he could not repeat the rules in Buttmann's grammar, his expertness must be due to deceit and so positive was he of this, that he opposed him in his final examination as not possessing sufficient maturity of morals to proceed to the University. However, the opposition availed nothing, and he passed to the University in his eighteenth year in 1839.

During his medical education, Virchow so attracted the attention of his teachers that on graduation in 1843, instead of entering the army medical service for which he was preparing he was retained in Berlin as prosector under Froriep at the Charité Hospital; very shortly after this he was made lecturer in pathology. This was in the year 1847; and a few months later in conjunction with his colleague Reinhardt he began the publication of the *Archiv für pathologische Anatomie und Physiologie und klinische Medicin*, the journal which was to bear the banner of the revolutionary party in medicine. Reinhardt died in 1852, and since that year Virchow remained sole Editor until the day of his death, when the *Archiv* had reached its one hundred and sixty-ninth volume. At first the *Archiv* labored under serious difficulties, the second volume was not complete till 1849, the third not until 1851, from 1852 until 1856 one volume per year was produced and with the latter year began the regular appearance of two volumes, in 1861 it was again increased to three and in 1879 to four volumes per annum. The *Archiv* practically represents Virchow's life on the side of pathology; in it we see the gradual development of all those ideas which did so much to clear away the debris of past systems and schools. To the early volumes he contributed enormously, of the fourteen articles in the first volume eight are from his pen, in the next three out of ten, and so on. It was with no uncertain sound that he sketched the needs of medicine in those early articles, and it was with heavy blows that he drove home the lessons he had to teach, throughout what might be called the Sturm und Drang period of the *Archiv*.

In his leading article to the fiftieth volume, he indicates what the Editors had to face and how they were received; I will quote a portion of it.

" It is difficult at present to realize the boldness with which two young and almost unknown men undertook by the publication of this journal to give a new direction to the Science of Medicine. The market was apparently glutted with medical journals, and in Prussia especially a certain number of these bore an entirely official character. These journals appeared under the aegis of high state officials ; they received official news and were subvented in all sorts of ways. It was very far from the minds of the official world of that day to think scientific requirements necessary to ensure the circulation of the periodical press. The Editors received so little support, they had so few contributors and these so weak that they were compelled to print the feeblest and most tedious articles, indeed articles that had no other merit than that they called the attention of the reader to the writer.

" The one requirement alone that contributions to the medical press should be original (Arbeiten) gave rise at that time to great astonishment. This was the day of so-called practical observation. The busy practical physician believed he had satisfied all claims if from time to time he cast a glance backward over his professional career so rich in experiences and from it produced for the use and comfort of his colleagues and suffering humanity, a general abstract, in which he ordered and explained his so-called facts according to his favorite system. Autopsy reports were almost as great rareties as in the days of Schenk von Gravenberg (fifteenth century). Microscopic investigation there was none ; even clinical histories were only written down from memory, or if they were drawn from the daily journal, it was apparent that apart from the examination of the pulse, it was rarely a question of the systematic examination of the patient. Therapy moved in its old accustomed channels ; venesection stood in the first place ; the activity of drugs was esteemed as high as their classification into distinct groups was hard and fast ; and people were so much the more contented with their successes, since the humoral pathology, believed in and preached by laity and profession alike in most beautiful harmony, easily explained failures and offered convenient excuses.

" It would certainly be interesting to picture the condition of official medicine as it existed scarcely 25 years ago (Virchow writes in 1870) for the instruction and warning of the medicine of the future. What I have said however will show, that it seemed rather bold to declare war not only on the existing press but also on the whole official medicine, in order to bring about what both held to be useless and impossible, namely, the study of pathological physiology. In the minds of the reigning circles, Hartmann's Theoria Morbi rendered all that was necessary to the

clinician and practitioner for the interpretation of symptoms and of the healing process. More than this was evil; unfruitful learning they called it. And when I published an article in my second volume upon the reform of pathological and therapeutic views through microscopic investigation, when I desired that the whole of medicine should move at least three hundred times closer to natural processes, then I appeared to these gentlemen as an out and out unpractical, and, possibly even dangerous, doctrinaire and adventurer."

It was natural that the earliest researches of Virchow should have been directed towards the study of the cells of the body, since less than ten years earlier Schwann and Schleiden had announced the discovery, the one of the animal, the other of the vegetable cell. It was natural also that a mind so critical should at once attempt to test the pathology of the humoralists from this standpoint. We find therefore that his early contributions to science are largely upon the microscopic characters of the blood both normal and pathological. From these investigations resulted his papers on pigmentation, in which he demonstrates so clearly the two forms of blood pigment which are produced by hæmorrhage into the tissues; a chapter upon minute pathological change so complete, as practically to close the subject. At this time also appeared the results of his work on that peculiar disease of the blood, leucæmia, a name which he himself suggested. The curious gross appearance of the blood in advanced cases of this disease led to a confusion with purulent conditions, and superficial examination under the microscope seemed to confirm this. To Virchow we owe the recognition of it as a disease *sui generis*, associated with enlargement of the spleen and other symptoms, and entirely distinct from pyaemia with which it had been confused.

From these studies he was naturally lead to a study of inflammation of the vessels, the results of such inflammatory changes, the formation of thrombi or clots, and the conditions which governed the clotting of blood in the living body. Indeed the clotting of the blood in the living body had, by a series of false hypotheses, been brought by Cruveilhier, to explain the whole question of inflammation. This French pathologist had noted that the first evidence of the inflammation of the veins consisted in a clotting of the blood; and as in inflammations of the organs the presence of clots could not be demonstrated in the larger vessels, he introduced the hypothetical condition of capillary phlebitis, that is to say, an inflammation and clotting of the blood in the smallest vessels. It was to be expected that such an hypothesis unsupported by facts would attract Virchow's attention, and in his study of

thromboses he directed special attention to the question of the occurrence of clots in the vessels of the lungs; in studying these, in order to determine whether they had arisen primarily in that situation, he was struck by the fact that when found in the lung there was almost always to be found a similar condition in some other part of the body; and finally he was able to demonstrate that a plug resting in one of the vessels of a lung fitted exactly on to a thrombus in a systemic vein, and in fact, that this plug had broken away from the thrombus and had been carried by the blood current through the right chambers of the heart into the pulmonary vessels, passing from the larger to the smaller until ultimately it was stopped by plugging a vessel too small for its further progress. This condition of secondary plugging he called 'embolism' and the plug of coagulated blood he called an 'embolus'; the condition of the lung tissue consequent upon this cutting off of the local blood supply by the embolus we call an infarct or a condition of infarction. Now as this formation of infarcts of the lung had been one of the strong arguments of the believers in the theory of capillary phlebitis, the whole groundwork of a false hypothesis was cut away at one blow. But Virchow was not satisfied with the simple observation of conditions as found at autopsy; he followed the question up by experiment, and by introducing foreign bodies such as rubber into the circulation of dogs so as to produce artificial emboli, he was able to more fully explain the condition and effects of embolism; but especially these experiments entitle him to be considered one of the pioneers of that experimental pathology which was to do so much for the advance of our knowledge. Although much valuable work was done subsequently upon the subject of thrombosis and embolism by other men, and especially by Virchow's most celebrated pupil Cohnheim yet it is marvellous how complete was this first demonstration of the facts.

It is said that during the revolutionary year of 1848 when no doubt Virchow's democratic ideas were as well known and as vigorously pushed by him as his notions upon embolism, he was making an autopsy upon a patient of Schönlein's who was supposed to have died of cerebral haemorrhage; upon opening up the brain he demonstrated to the latter an embolus plugging the middle cerebral artery, Schönlein turned away with the remark "O! you see barricades everywhere."

But Virchow's study of emboli lead him still further. Noting that sometimes the embolus gave rise to a local abscess and that this depended upon the condition of the clot from which it had originated he gained an insight into the whole question of metastasis which became immensely important when he came to study the develop-

ment of malignant tumors; at the same time he got a conception of the condition called infection which had immediate bearing on the disease pyaemia or blood poisoning.

His investigations into the subject of inflammations turned his attention to the question of the reaction of ordinary tissue cells whence there resulted a valuable contribution upon the subject of parenchymatous inflammation opening up a new standpoint which was most important in the development of his ideas on cellular pathology. In this piece of work he pointed out that the changes which one sees in the parenchymatous cells, that is the swelling and increase in numbers of the cells, were simply indications of an abnormal activity of all or certain of the processes of nutrition, which ended in degeneration of the cell. In this research, the author's attention was especially directed towards the connective tissues, and there resulted the discovery of the connective tissue cell, and of the cells of the bone and cartilage and the demonstration that the cells were all of the same nature and that the tissues were related tissues. These observations on connective tissue were of the highest importance for Virchow's own development, because they enabled him to clear his mind from the last remaining taint of humoralists and to understand properly the whole question of cell formation.

Schwann, the discoverer of the animal cell had propounded a theory for the explanation of the origin of the cell which was entirely based on humoralistic ideas. This was the theory of the blastema; he conceived that the cell originated by a kind of organic crystallization from a plastic material which he named the blastema, a fluid in fact, and that the particles in this fluid became massed together to form the nucleus and around this the cell protoplasm was deposited by a process essentially similar to crystallization. This blastema theory of Schwann was, as Virchow himself says, the obstacle over which he stumbled.

Not only Virchow, but most of the other younger investigators of that day accepted the blastema theory and were looking for facts to support it, and were endeavoring upon this hypothesis to account for the formation of all the different cells of the body. One of the strongest arguments for this view was the occurrence of certain granular cells in those areas, especially inflammatory, where new cells were being formed; besides these granular cells there were found pigment cells, blood-corpuscle holding cells and others which were taken to be proofs of the origin of these structures from a granular blastema. Virchow was able to show that these cells had acquired the granular character, or had become secondarily loaded with the pigment masses or the blood

corpuscles. Especially the correct interpretation of the granular cells, the fact that they were degenerating cells, was of the greatest importance. As he says in an article in the hundredth volume of the *Archiv* "these investigations have a very great value for the history of a human error; these granular cells were regarded as individual steps in a developmental series and they had been carefully and accurately placed in their correct order; no objection could be raised against the order, only unfortunate chance had willed that the series had been begun at the wrong end and that what were, really, cells in course of degeneration were thought to be cells in the course of development. The arrangement was right the chronology was wrong. The opponents of experimental methods, the anti-vivisectionists, should learn from this what difficulties are presented by purely anatomical investigation; and to what gross and long persisting fundamental errors they may lead."

These researches upon the development of the cells of the body and especially the study of the connective tissue cell in health and disease and its embryological history, finally lead Virchow to see that, nowhere do cells originate from a formless blastema, but that they always result from the division of previously existing cells and he finally announced the fundamental truth of the cellular pathology in his famous modification of Harvey's dictum *Omnis cellula e cellula.* It is difficult indeed to overestimate the far reaching influence of this doctrine, not only for pathology but for the whole of biology. With its recognition was swept away the whole system of the humoral pathologists and with it a crowd of other speculative hypotheses and the investigation of disease was able to proceed upon a rational scientific path. By it was settled or rather should have been settled the question of spontaneous generation.

During all these years of work Virchow's position as a University teacher was undergoing considerable change; in 1848 he was sent by the Prussian Government to investigate the outbreak of typhus in Upper Silesia and on his return he published a report, such as few governments have ever received from one of their own officials. After a masterly discussion of the history and course of the disease, with its symptoms, pathologicals findings and its treatment, he proceeds to discuss the cause of such an outbreak and the remedies to be used to prevent a recurrence.

And he does not in the slightest mince his words; he shows that the conditions which gave rise to the famine. and following it the fever were, first the stupidity of the whole group of Prussian Officials in their bureaucratic methods of dealing, with, what was an alien Polish population, then the heartlessness of both the aristocracy of birth and of money in their treatment of their tenants and their workpeople, and lastly in the

attitude of the Roman Catholic Hierarchy which had kept the peasants in the deepest ignorance. His remedy was characteristic "Democracy pure and unalloyed." His suggestion that the education of these people should be begun by giving them Polish schools and that they should not attempt to germanize them by insisting on German schools, is of interest at the present day, in view of the troubles that the Government of Germany is still having in this very district. His return from Silesia was just at the time of the revolution of 1848 and he at once threw himself into the midst of the political struggle over the election of delegates to the German national assembly for which he was a candidate. His language in his political speeches at this time must have been most uncompromising and did not tend to conciliate a government still smarting under the lash of his report upon the typhus epidemic. It is said that on one occasion in referring to the question of heredity, he said that he knew of one exalted family in which the grandfather had softening of the brain, the father hardening of the brain and the son no brains at all. And this was known to be a reference to the royal family of Prussia. It was natural then, that he should have been very much a *persona non grata* in official circles, and, as a result, his lecturership in the University was taken from him; this however caused such an uproar in University circles and drew such protests not only from his colleagues but also from all the medical societies that the government speedily reinstated him, with, however, greatly restricted powers. Conditions were however unsatisfactory so that when he was offered the newly established chair in Pathology in the University of Würzburg he accepted and in 1849 left Prussia for Würzburg. As Professor of Pathology he remained at Würzburg until 1856; throughout this period he contributed extensively not only to his own *Archiv* but also to other journals and about this time edited a text book on Special Pathology, and collaborated with Vogel in one on General Pathology in which appeared in concrete form the elements of those doctrines which were more fully embodied in his Cellular Pathology.

In the year 1856, Virchow was recalled to Berlin to fill the new Chair of Pathology, his recall being practically forced upon the Government by the medical public opinion of the Capital. He returned, but only upon conditions, one of which being, that there should be erected an institute for practical research. On his return he found the museum of Morbid Anatomy possessing only about 1500 specimens; at his eightieth birthday celebration he was able to state that the new museum recently erected by the Prussian Government at a cost of over 500,000 marks contained over 23,000 specimens; a very pregnant example of his activity along only one line of pathological work.

In the year 1858 appeared his great work upon Cellular Pathology. This was a course of lectures delivered in the early part of the year chiefly to his colleagues and medical men in the city of Berlin the full title of the work being *Cellular Pathology as based upon Physiological and Pathological Histology.* I have outlined to you already the investigations which led up to the conceptions embodied in this book. Its success was immediate and it was at once translated into all the European languages.

The position reached in these lectures is broadly this, that the cell is the unit of the body, in health and disease, that disease of an organ is disease of the cells of that organ, disease of the body, disease of the cells of the body. And that those manifestations which we call pathological are simply abnormal manifestations of otherwise normal processes. In fact that pathology is simply a branch of the science of biology.

The test of the value of this conception of Virchow's is, that, year by year as new facts were discovered they fell naturally into place and I can recall no better example of this than the way in which the neuron concept and all our later knowledge of the pathology of the central nervous system has naturally fallen into line with the cellular pathology.

From 1863 to 1867 appeared his work upon maligant tumors under the title "*Die krankhafte Geschwülste.*" This was an embodiment of all those studies on tumors and their development, which had appeared at different times in the *Archiv.* His studies upon the origin of the tissue cell had directed him to the proper explanation of the question of histogenesis; his work upon emboli had cleared up the whole subject of the spread of these tumors in the body that is the subject of metastases; and his investigations into the subject of the connective tissue cell, enabled him to separate clearly the carcinomata or epithelial tumors from sarcomata or connective tissue tumors. This great work was unfortunately never completed and although it contained errors it still remains one of the most exact pieces of investigation which we have upon the subject.

Succeeding years produced longer works upon chlorosis, syphilis, trichinosis and other subjects, but as time passed his activities on the side of pathology became more critical than productive, owing largely to the fact, that his interests had become so extended that he was unable to devote as much time to the exacting work of experimental pathological investigation. His duties as a teacher however were ever his first thought and his museum was watched over and developed with zeal to the very last; in fact during the last few years of his life, he was accustomed to spend an hour every Sunday in explaining to the public who

were admitted to certain rooms, the meaning and significance of the specimens. Indeed in his interest in the scientific education of the public especially of the working classes he was singularly like Huxley, and, like Huxley, he devoted not a small portion of his time to this object.

In spite of his separation from the active work of pathological investigation in later years, one sees how closely in touch he remained with it all, when one reads his public addresses, such as the Croonian lecture of 1893 and the Huxley lecture of 1898.

Virchow's mind seems to have been of such a character that he was compelled to follow out with the same faithfulness the side lines that opened up before him as he did his special work of pathology. And thus we find that his experiences in the Silesian Typhus epidemic not only threw him into the whirlpool of politics but probably also was responsible for that interest in public sanitation which in after years proved of such immense importance to the City of Berlin. In the same way his study of cretinism gradually turned his attention to Anthropology to which science he was so devoted in after life.

I have alluded to his political activities, and certainly these deserve more than a passing notice. In 1862 he was elected as a radical member to the Prussian Diet and he remained in that chamber until his death, as leader of the radical party and Bismarck's most redoubtable opponent; it is said, that when in 1865, he defeated the Government upon a motion to create a navy, Bismarck was so incensed as to challenge him to a duel, an honor, however, which he declined His political work took not a small portion of his time and for many years he was chairman of the finance committee of the house. That he did not find his political activities interfering in his regular scientific work shows what immense powers of concentration he had. However, when remonstrated with once, upon wasting his time in politics he said; "The dates of many of my lectures will prove that even on these days on which important matters claimed the attention of parliament I have attended to my duties as a teacher. To set at rest the anxiety of my friends I will add that the silent and often unnoticed labor of the scientist requires more energy and greater effort than the activity of the politician, which is both noisier and more speedily appreciated. The latter avocation has appeared often to be rather a recreation." In 1880 he was elected to the Reichstag and remained a member of that body for some years, until in fact he was defeated by a socialist candidate; a commentary upon the fickleness of the electors of Berlin. As a municipal politician he occupied the position of a member of the Berlin Municipal Council for forty years and during that period he initiated and carried out the whole

system of public sanitation which has made Berlin one of the healthiest cities of the world. The system of sewage disposal by filtration upon the beds of the sewage farm to the north of the city was the scheme to which he devoted his greatest energies and which he carried through in the teeth of strong opposition; and from the time of its inception until his final illness he made his own special care the health of the work people upon the filter beds. It was with considerable pride, therefore, that he could point to them as as healthy as any other class in the whole population of Berlin. The housing of the working classes, the system of city hospitals, and many other sanitary improvements which have made Berlin so celebrated are due also to his personal interest.

There is yet another side to Virchow's life to which reference must be made. That is to the work which he did in the science of Anthropology. He was apparently led into this by his interest in the pathology of the skull and especially by his studies on cretinism. But once his attention was attracted to it, he made the subject his own and his investigations in that science alone, would have sufficed to make him famous. As Professor Franz Boas points out, in a recent number of *Science*, the beginnings of his work coincide with the beginnings of modern physical Anthropology in Germany, and no man has done more to shape, guide and foster this science than Virchow. He took a leading part in the formation of the German Anthropological Society, the Berlin Society, and in the establishment of the *Archiv für Anthropologie*. In connection with the German Society, he initiated the collection of statistics as to the distribution of the color of the skin, eyes and hair in Germany. The results of this enquiry, with an extended discussion of the distribution of the different types, was embodied in a report by himself. In the allied subject of Archaeology, he also took great interest and in the year 1879 he accompanied his friend Schliemann to Asia Minor partly to assist him in his excavations at Hissarlik on the site of ancient Troy, but partly also for the sake of the holiday which he needed badly. His interest in the Trojan remains was very great, but it was characteristic of him that he should show even greater interest in the living inhabitants "upon the plains of windy Troy". He found them without medical attendance and with but the crudest notions in regard to the treatment of the prevalent diseases and he began to prescribe, first for Schliemann's workpeople upon the excavations and then for the villagers around, until at last his practice became so large that twice a day, he had to examine long lines of waiting sick, so that he had little time for Archaeology or rest. In order to enable them to obtain the necessary medicines he taught them the uses of the various medicinal plants that grew in abundance ab-

them. The only reward was the deep gratitude, even veneration of the people. Schliemann relates that a spring of water which broke out from an excavation which Virchow was superintending was afterwards regarded as of almost miraculous value; it was carefully surrounded by stones and named the Physician's well.

In connection with Virchow's anthropological work, it is important to touch for a moment upon his supposed attitude towards Darwinism, an attitude which was persistently misrepresented by the opponents of the doctrine of evolution. In 1877, at a meeting of the German Naturalists and Physicians he took occasion to refer to the doctrine of evolution, chiefly from the standpoint of Anthropology. The address was at once taken to be an out and out attack upon the whole doctrine and was considered of so much importance that the Times published it almost in full. As a matter of fact, the address was directed against the too hasty acceptance of unproved hypotheses; and by any one who knew the history of his early struggles with the older ideas in pathology Virchow's attitude is easily understood: he was in fact ever afterwards extremely conservative towards all hypotheses, and his warning on this occasion was this, against teaching that the doctrine of descent should be taken as a proved fact whilst it was still an hypothesis; what he most feared was, that the doctrine of evolution would lead to the spread of socialism among the masses with the same consequences which the doctrine of the equality of man had in the days of the French Revolution. His language was in places most sarcastic and the address drew from Haeckel, who was specially attacked, a bitter reply. His strong conservativeness in Anthropology is shown also in his attitude towards the interpretation of the significance of the Neanderthal skull; this famous relic of primitive man presents certain characters which were taken by most anthropologists to indicate a lower mental development than that seen in the later prehistoric crania. Virchow's position was one of reserve: the peculiarities were so strikingly like certain pathological conditions that he thought that judgment should be withheld until other examples were obtained for comparison.

Perhaps more than any other character was the breadth of view which Virchow maintained until the very last. Professor Osler of Johns Hopkins University, in his address in Medicine at the meeting of the Canadian Medical Association, a few weeks ago, took as his text Chauvinism in Medicine; perhaps there has never lived a better example of absence of Chauvinism than Virchow. He was truly a cosmopolitan and when one reads for instance, his tribute to Glisson in the Croonian lecture of 1893 or remembers his reference to Lister in the Huxley

lecture of 1898, when in the midst of the lecture he turned to grasp the hand of Lister as he sat on the platform beside him, one sees that for English medicine at least he had a very great appreciation ; but the same was true also in regard to French and Italian medicine : he first taught the Italians to appreciate Morgagni as he taught the English to appreciate Glisson. And he ever taught that medicine knows no national boundaries.

In 1891, his seventieth birthday was celebrated ; it was a triumph which few men have experienced ; but it sank into insignificance before the much greater celebration of his eightieth birthday last October. On this occasion delegates appeared at Berlin from the whole civilized world to congratulate the master. On account of his age, he was not allowed to know anything of the extent of the fete, before hand but was carefully watched and guarded from all fatigue by his friend Waldeyer. The celebration lasted a week and in spite of his age everyone was struck by his activity and the keenness of his mind.

In a very characteristic article in the December number of the *Archiv* of last year, he returns thanks for the honors and congratulations that were showered upon him on that occasion. He says in one place, " For the quite extraordinary honors that have been conferred on me, I can do nothing more than repeat my warmest and heartiest thanks The sense of obligation is too great to permit me to express in words my feelings. And I am now too old to begin new work which could be considered a fit return. I shall not tire in working as long as my powers hold out. But I can promise no more, than that I will endeavor to bring to a conclusion, useful for the world at large a series of more extensive investigations which I began in my youth." Are we not reminded of Tennyson's Ulysses,—

" How dull it is to pause, to make an end,
To rust unburnished, not to shine in use !
As tho' to breathe were Life. Life piled on life
Were all too little, and of one to me
Little remains : but every hour is saved
From that eternal silence, something more,
A bringer of new things ; and vile it were
For some three suns to store and hoard myself,
And this gray spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought."

Perhaps the most touching incident in the whole celebration is given in the following words from his own article : " One night as I returned late from one of the fetes, I found to my surprise my little street, the Schelling Strasse, illuminated from end to end. I had not had the slightest idea that my neighbors felt so kindly towards me. But the

street was filled with children also, many of them quite small; and I had to make my way to my house door through a regular lane of children, and the cries of jubilation of the little ones only ceased when I had disappeared into my house. And now as often as I show myself in the street, the little ones run towards me stretching out their hands and saying, 'Good morning, Herr Virchow.'"

If, in closing, we attempt to sum up what Virchow's influence in medicine has been, we see that it has been far more than the clearing up of our views upon individual pathological conditions, such as thrombosis and embolism, or the histogenesis of tumors, or even the pathology of the cell. It is something very much greater and broader. It was, first of all, the overthrow of the authority of dogma and the establishment of the authority of observed fact. It was the transplantation of medicine from the barren fields of metaphysical speculation to the fruitful soil of experimental investigation. It was indeed the establishment of a new point of view in medicine, the point of view of medicine as a biological science.

And, if in an earlier paragraph I stated that I did not propose this evening to address you upon the need of a biological training in medicine, perhaps I was in error, for what more concrete example could be given than a study of the life of Virchow?

TREATMENT OF HYPOPYON KERATO-IRITIS.

DR. BURNHAM read a paper, "A new departure in the treatment of hypopyon kerato-iritis," at the Montreal meeting of the Canadian Medical Association. His remarks were confined to the most severe type of the disease. The treatment advocated was purely constitutional save Atripine used locally once daily. The combined treatment, which is the form used, consists in the internal use of mercury and the iodide of potassium and pilocarpine given hypodemially. The usual treatment which is almost altogether local, he considers inferior. As to any further information regarding this treatment and its results he referred to his papers in *The Archives of Ophthalmology*, *The Ophthalmic Review*, *The Lancet* (London). He also considers that these results ought to engage the attention of the physician as other organs and tissues of the body ought to be as susceptible to its influences.

THE SURGEON ON HORSEBACK.*

By S. M. HAY, M.D.,

Surgeon to Toronto Western Hospital; Consulting Surgeon, Toronto Orthopædic Hospital.

MEMBERS and Friends of the Toronto Medical Society:—

On rising to address you on this occasion, let me thank you for the honor you have conferred upon me in electing me to be your President. Perhaps I may be pardoned for looking at this honor in the ordinary way, and for feeling a certain personal satisfaction at being chosen to preside over this important and intelligent organization of our city medical men. I feel this the more when I remember our ranks contain many older and more experienced men, who have won for themselves not only a continental but an international reputation. As I recall this, my momentary access of vanity gives place to humility, recognizing that I must accept the responsibility and toil along with the honor. Without further delay I shall announce my subject—"The Surgeon on Horseback."

The fascination, as well as the benefits of horseback riding, is as old as history. It was indulged in by both sexes and by those in every social position. The charm that a beautiful horse has, and always has had, for mankind, is well known. In reference to this method of exercise, someone has said: "There is nothing better for the inside of a man than the outside of a horse." The late Dr. Talmage said: "A man who does not like a horse ought to be kicked by a jackass."

While all this is true in a general way, it is specially true of the surgeon of all ages. Just run over in your mind the surgeons of your acquaintance, and note how many of them are graceful devotees of this delightful ancient and modern custom. What is more beautiful to behold than a well-bred steed, with his glossy, dappled coat, his proudly arched neck, and pointed ears, and eyes of fire and affection combined, with nostrils distended and head tossing in his anxiety to be off? Such an animal, mounted by a well-trained, accomplished rider, who sits so gracefully and securely that both move together like a magnificent piece of living machinery. Such an animal, with such a rider, is surely a "thing of beauty and a joy forever." The surgeon invariably rides a good horse. He always selects one peculiarly adapted to his own ideas. It is well that this is so, because in that case he can perhaps bring more out of that partiular mount than any other rider possibly could. The surgeon can always mount his own horse with more ease than anyone else can, and he usually mounts with grace, ease and confidence, but frequently dismounts with difficulty and discredit. Great interest is taken in selecting a name for his favorite. It may be a Ruskin, a Maud S., a Jenny Lind, or an Ivanhoe, but the horse which surgeons most frequently

* Presidential Address delivered before the Toronto Medical Society, October 2nd, 1902.

ride, is named by the laity, as well as by the profession generally, "Hobby." Now, we wish to consider to night some of these hobby-horses, and some of their riders.

What is a hobby? A hobby is that which a person pursues with zeal or delight. Buckley, of New York, was once visiting an insane asylum, and, observing an inmate seated on an upturned chair with strings for reins, said to him, "Oh, riding a horse?" "No: this is a hobby." Well," asked the doctor, "what is the difference between a hobby and a horse?" "You can get off a horse," was the reply. How true that is. We can get off a horse, but how difficult to dismount a hobby.

What is a surgeon? Greig Smith says "The surgical type of a man is both born and made". Someone has said he should have "the head of an Apollo, the eye of an eagle, the heart of a lion, and the hand of a woman". Like a great general on the battle field, he must know what is going on at every point of the struggle, and at the same time be master of the details immediately in hand. He should have the head to plan and to meet the surprises of an operation, the eye to see quickly the exact constriction of every ligature, and the adjustment of every suture; the thinking brain and witty fingers cooperating and a determined will to quickly and skilfully adjust the last suture with the same care and precision as the first. There is surely a difference between a surgeon and an operator. The former is the great pathfinder, the latter walks in the road made for him, and frequently copies and imitates well the work of the surgeon.

Regarding those who are galloping hard after the butterflies of surgical fashion, who have never placed a pillar in the temple of art or science, who have only attained a mushroom popularity which is won without a merit and lost without a crime, I have nothing to say. But we will take a retrospective glance at the lives of some of the leaders and masters of our art, who, during their striving, struggling days after truth, were considered hobbiests by their associates; but who eventually received the highest compliments from our ablest men for "Imitation is the sincerest flattery". Labor has a sure reward, achievement being its pay. Great men make their opportunities, they do not wait for them, and progress is not by accident. It is the result of persistent toil. All true progress is in direction from the complex to the simple, from the crooked to the straight, from wrong to right, from error to truth.

We read in holy writ, "Your old men shall dream dreams, your young men shall see visions". Achievement is born of vision. Vision is born of the Spirit, and the Spirit is the gift of God, or in other words the natural endowment of the individual. Who ever achieved, or ac-

complished anything great, who had not first an ideal, a plan, a mental picture, or a vision of his cherished aim? And, again, the vision is as fruitless as the desert if not followed by the spirit of persistent determination. This is equally true in every walk of life. Columbus, from the saddle of his hobby horse, had a vision of something beyond, or he never would have discovered America. Watt, as he gazed through the cloud of steam that made the lid of mother's tea-kettle dance and rattle, saw far into the future of that wonderful power. Stevenson, when he built his first locomotive, saw something of the future; and, as a result of his hobby, we have to-day that magnificent monster rushing through our land on its glittering lines of steel! Our great Lord Lister had a vision. I quote from July's Practitioner—"Lister created anew the art of healing; he made a reality of the hope which had for all time sustained the surgeon's endeavor; he removed the impenetrable cloud which had stood for centuries between great principles and successful practice, and he rendered possible a treatment which had hitherto been but the vision of the dreamer". The spray was unduly exalted to such an extent that its use was considered by many to be Listerism, while it was in reality only one and the least important feature of his treatment.

A great German surgeon, in an association meeting, said to the consternation of Lister and his friends, "Away with the spray," and it has come to pass. Even our loved Lister went too far, and was termed a faddest or hobbiest; but it is necessary to go too far in order to find just how far you can go. You must search and investigate on both sides of the safety line in order to locate that line. If you wade into the sea to fix the safety limit, going till the water reaches your chin, and then putting down your stake, how do you know but that the water is no deeper for a rod farther out? It is just so in all branches of science and art. The investigator must search beyond necessity and prudence, and be termed a hobbiest for doing so, in order that he may establish the boundary of right and truth. What a debt of gratitude we owe Lister, when we remember that it is by his successful efforts antiseptics have come through a sea of confusion and complexity, and are now becoming beautiul in their simplicity! A surgeon friend of mine has said, "The nearer we stick to the religion and soap of our grandmothers the nearer we will approach moral and physical cleanliness of body and mind."

There are three great methods of sterilzation —thermal, mechanical, and chemical. Thermal is at once the most efficient method, any dressing or instrument that is given a temperature of 212° in water for a reasonable time is perfectly safe, and fortunately this can be obtained alike in the castle or cabin. For the hands and the site of operation, the mechanical is the most important method. Chemical sterilization is becoming

very narrow in its field of usefulness. Trusting to the chemical to the neglect of thermal and mechanical is almost criminal.

James Marion Sims was another great leader who rode his hobbies well. He graduated in arts, 1832, and, a few years later, in medicine from Jefferson Medical College, Philadelphia. In early professional life, he practised in Alabama where his health failed. After wandering around for some years, he observed that his health was better in New York than elsewhere, and so decided to locate permanently there, about 1853. Here he met T. Addis Emmet and many other prominent doctors. In 1857, Dr. Sims delivered an address on "Silver sutures in Surgery," and told of his first cure of vesico-vaginal fistula done in 1849, by silver wire after thirty failures in this same individual by the silk suture. I quote from Emmet "Soon after his arrival in New York he formed the acquaintance of Drs. Baker, Mott, Francis, Stevens, and others, and it was thought advisable that Dr. Sims should deliver an address to the profession, setting forth the necessity of a woman's hospital, where vesico-vaginal fistula and a few of the injuries of childbirth might be treated. Little thought was given at the time to the need for any special place, or treatment, for the diseases of women. I well recollect a statement made by Dr. David M. Reese, now many years dead, but at that time a prominent general practitioner and a fair surgeon, that it was easy to apply the nitrate of silver through a sylindrical speculum to any case of ulceration; an infusion of red oak bark could be given for leucorrhœa, and if a prolapse existed any one could put in a Meig's ring or Physick's spherical pessary. He laughed at the idea of the necessity for a woman's hospital, and thought it impossible to find a sufficient number of women sick enough to fill it. What a contrast between such a statement and our knowledge of to-day? This gentleman felt satisfied that he had mastered the whole subject in treating these three conditions, which, as symptoms of different pathological changes would not to-day convey alone, to any one a knowledge of the true lesion." This is only another example of how our great men are misunderstood even while they are seeing open visions; and their rapt absorption of them bringing them but derision and an unpleasant notoriety.

And such was the origin of the Great Women's Hospital at New York. On one occasion, Dr. Sims proposed to open the abdomen for the removal of a long pedunculated fibroid. Dr. Francis and Dr. Mott were at first disposed to yield to Dr. Sims until Dr. Stevens entered a protest. He had no opinion to express, he said in regard to Dr. Sims views; they might be all right, but he felt, if Dr. Sims should succeed by chance, that every young surgeon in the land would be ripping open the bellies of the young women to ascertain if they had such growths to be removed, and

and he would oppose such an operation simply on the ground of humanity. Dr. Sims was not able to carry out his wishes in regard to several cases of ovarian tumor, and it was not until about 1860, fifty years after Ephraim McDowell had let the light of day into the abdominal cavity, that he felt his position sufficiently established to perform on his own responsibility, his first ovariotomy.

So we see the surgeons and the consulting surgeons of no less an institution than the Woman's Hospital of New York have, unitedly by their actions, termed one of our great pioneer heroes a hobbiest and deliberately placed their shoulders in front of the wheels of surgical progress. How careful we should be. We must not fix a limit to the resources of any man. The process is slow that grafts most of what is best into every science and art. We put to the severest tests of science and experience every product or result of the highest genius. Our real reliable advancement is due to this severe testing. Invention and innovation is reserved for the few, while most of us should seek wisdom to use well what we have at hand, varied according to the requirements that exist. Most people require the roads made for them before they travel. All this need not hamper originality of thought and method. Investigation and research must have a free course, and it does have a more successful and beneficial course when the methods and knowledge bequeathed by others are first mastered. The old is good. By it we are enabled to evolve something better. Conservatism may be bad in business, but it is worse in surgery. It spends too much time living over yesterdays.

J. Marion Sims may justly be termed the father of Modern Gynaecology. He placed the cure of loathsome fistula among the precious gifts with which the surgery of his century has blessed woman kind. And very closely associated with him was, perhaps, the most original and greatest plastic surgeon the world has ever seen—Thos. Addis Emmet. He, too, came through, in his earlier life, many stormy seas of opposition and petty persecutions on account of his advanced ideas. I will not undertake to trace his career here, as many members of this society, as well as the writer, have very frequently seen him operate and listened with delight to his words of wisdom.

Ephraim McDowell was born Nov. 11th, 1771. At thirteen years of age, his parents moved to Danville, Kentucky After obtaining his literary education at Georgetown, Ky., he went as a student of medicine to Dr. Humphries, in Stanton, Va. In 1793-4, McDowell attended lectures at the University of Edinburgh. This great university could not satiate his thirst for knowledge, so he went outside and employed Dr. Jno. Bell, a great character, who was so enthusiastic in anatomy and surgery that he filled his pupil to overflowing with professional zeal.

Greig Smith tells us " Jno. Bell constantly dwelt in his lectures on the possibility and the advisability of removing such tumors, and his teachings bore fruit for Ephraim McDowell was the first ovariotomist." In 1795, our hero began the practice of medicine in Dansville, Ky., where he was literally a surgeon on horseback, often riding fifty and one hundred miles in the saddle. He braved storm and flood and darkness, and knew what it was to be lost in the dense forest. He was a noble character, and knew no fear, save the fear of doing wrong. I now quote from an address by my late personal friend, Prof. Jos. Eastman, to whom I am largely indebted for the history of Ephraim McDowell :—

" On Dec. 13th, 1809, he was called to see Mrs. Crawford, whose attending physician had thought her pregnant, though he knew she had gone beyond the usual time. Our hero, being a thorough master of all that was known of that highest department of our art, namely diagnosis, declared that she had an ovarian tumor, and at once suggested its removal, but he stated to her so far as he knew the operation had never been done, that it would be an experiment, therefore he could make no promise as to the outcome. He thus unlocked the bosom of confidence with the key of personal magnetism. By his manly presence and honest words, he planted a new hope in the heart of despair. This woman made the journey, sixty miles, on horseback on a bleak December day, in compliance with the wisdom of this great and good man, that she might be near him so that, in a critical moment, he could, with his own hand, ward off the approaching danger. When it became known what he was about to undertake, a mob gathered about his house. He learned that if the patient recovered it would be well with him ; but, if she died from the operation, he was to be at the mercy of a merciless mob. He offered a prayer and proceeded with his task. This prayer, in fervancy and literary merit, has rarely been equaled. Permit me to remark, greater heroism was never displayed by man or woman. Martyrs, burned at the stake, could not escape the death if they would. This personification and crystallization of heroism would not allow him to abandon his principles and escape the danger if he could. More than that, genuine heroism must be deliberate, must be premeditated, must be actuated by a pure, a high, a holy, and a beneficent motive. It was not a maddening, pseudo-heroism, stirred up by the rattle of drum and shriek of fife on battle fields, where man seeks to slay his fellow man, that actuated him.

I insist that the heroism of Napoleon, or Grant, can never be compared to that of this cool, calculating, thinking man. I repeat, the heroism that seeks to destroy human lives is not comparable with that which seeks to save a human life, and establish principles which shall

not only save one life, but which shall continue to save human lives throughout all coming ages. The operation was completed and during nearly a century has not been improved upon. His technique was almost identical with what we have to-day. The substitution of gauze for the drainage tube still more nearly approaches the ligatures which he allowed to hang out the lower angle of the wound, the best of capillary drainage. Mrs. Crawford lived thirty years. Our hero performed the operation thirteen times with eight recoveries, and at sixty years of age returned from visiting a patient, laid down his instruments for the last time, and secured that rest which he never could enjoy while a call to the bedside of a suffering patient was pending. Surely such a life of unselfish devotion to the cause of humanity would make him a fit companion for the gods.

"To such a life there is no death,
What seems so is transition."

I have read of the heroism of Napoleon and Wellington at Waterloo, of Nelson at Trafalgar, of White at Ladysmith, and, still more recently, of Roberts and Kitchner, and with the memory of these heroes fresh in my mind, I still wish to say in honor of the memory of Ephraim McDowell that a braver man never mounted steed or marshalled hosts upon a battlefield. A faddest in the eyes of the people who were about to mob him, a hobbiest in the eyes of the profession, not one of whom would share with him in the responsibility of his operation, a hero to-day.

It was after the great work begun by McDowell was made practicable by the antiseptic contributions of Lister and others, that abdominal surgery began its rapid march towards its present proud, yea well nigh defying position. But this knowledge and possibility was soon abused, for the tyro surgeon sprang up everywhere, and a crusade was made against the innocent ovaries which were falsely charged with almost every symptom and pain of womankind, and consequently sacrificed in abundance. The result was many sad, melancholy, hysterical woman, with nervous systems shattered beyond hope of recovery. Of this Eastman has said :—"Oh the pitiful mental and physical wrecks wafted to the gynaecological shores from the great ocean of life, wrecks which have gone down beneath the surging waves of unsubdued passion and unrequitted love. Shall love be more or less requited when the wife has no passion to subdue ? What wrecks are being wafted from the ocean of surgical aggression to the tender mercies of the family physician let him answer for our instruction." I wonder if we are not even now going to the other extreme in our conservative surgery on uterine appendages.

If time would permit, I would like to line up a string of hobby-horses before the grand stand of this society to-night, and ring the bell

and start them around the course and watch with you the effect of the spavin on this one, the ringbone on that one, and the curb on the other, and I would watch the disposition, temper, and tricks of them all, especially in relation to the safety or danger of the rider, and I would wish with you to freely and frankly, for our mutual benefit, extoll their virtues and expose their vices.

Here is a tony little Cob. Let us examine him. His name is McBurney's point. He was bred in the stables of the metropolis of this continent. He is badly bitted, said to be unsafe, very hard to catch, you think you know just where he is and you open the gate and enter to find that he is away over at the other side of the field. He has a bad reputation, too. He has been known on more than one occasion to throw his rider without the slightest warning, headlong into a belly full of pus.

See this stylish little Filly, named "Vaginal section." She looks like a winner. Oh what a pity, she is blind, and do you know her rider is blind too. But it makes very little difference, they both do their work in the dark. They are accustomed to move in darkness and through tunnels over hanging with weeping willow-boughs growing from luxuriant pubic planes. This animal has accomplished some good work in her benighted course,but the same, and much more has many times been done by the upper road, in broad day light, and with greater certainty.

A well kept fine looker is "Alexander's operation." Sound in wind and limb and guaranteed kind in harness. He has only one fault, that is, he is no good. Who has not seen one of New York's best jockeys mount this steed and hunt around for an hour in search of the reins, and, when he did find them, was only as sure of it as he was of anything else he wasn't sure of. However, he starts off and for every leap the animal made forward, it made two half-leaps backward. He seems to be running on a treadmill. When, finally, the rider tries to tighten his elastic reins and take his bearings, he discovers he is just where he started from, nothing accomplished.

This is the kindest little horse of all, "Batty's operation." His great qualification is that he is easy to ride. He is the choice of the young, the feeble, or the infirm rider. A jockey who would not venture to mount and guide Hysterectomy, or Myomectomy, will ride with confidence and control with skill this little Batty Oophorectomy. But oh! the unscientific procedure—removing histology, leaving pathology, and trusting to fates for a cure. And we might review other horses, viz., "Ventral fixation," "Vaginal fixation," "Electricity," "Educated touch," etc., but I hasten on.

How apt we are to think that all the great things in our profession have been accomplished, and that there is nothing left for us to do. Far

from it. When Columbus discovered America the work was not done. There were forests to remove, acres to till, rivers to bridge, cities to build, and rail-roads to construct. And there are surgical continents to-day, awaiting their Columbus and awaiting developement. What about that Northern continent the brain, with its complex hidden centres and their association with function, or disease? What about the contents of that Rocky mountain ridge from brain to sacrum, the spinal cord? The surgery of the entire genito-urinary system requires cultivation and elabortion. Surgery is an art and art means the best of its kind.

We must be thorough in our work. Abdominal Surgery seems to have made more advancement of late than other branches, and that in the face of great difficulty in accurately diagnosing abdominal disorders. Perhaps the language in which the abdominal viscera express their trouble, is less definite and clear than that of the other great cavities of the body, the thorax and cranial cavity. Tate said; "Absolute accuracy of diagnosis is far from being possible, only the ignorant assert that it is and only the fools wait for it." Notwithstanding this the abdominal surgeon is expected to expect the unexpected, and we know that the unexpected frequently dashes upon us in an unguarded moment.

I wish I could say something that would set this whole society on fire and stimulate every member to persistant effort, for I am personally convinced that it is not extraordinary ability that succeeds so much as ordinary ability with extraordinary perseverance. No one requires to be a genius to achieve grand results. Some one has well said that genius is nothing more, nor less than a capacity for labor. Edison says of his success. "It is 98% hard work and 2% genius. Many failures are the result of two great a capacity for absorbing rest. Too much rest is rust. We hear a lot about the profession being full. I have strained my eyes to see what is the condition on the upper rungs of the professional ladder, and have come to the conclusion that it must be very lonesome up there. Yes, there is room where stood the McDowells, the Jenners, and the Listers. This should stimulate us. What men have done men can do again. "Lives of great men all remind us, we may make our lives sublime."

Our profession should welcome to her ranks any one who is bold enough to mount a hobby, or specialty, in any branch, and ride as fearlessly as did Jenner, McDowell, or Lister. It becomes us to have our criticsm of these advanced men tempered with charity, for we know that frequently the hobbiest of to-day is the hero of to-morrow. I would say to all original thinkers and earnest searchers after truth.

"Ride on—nor fear to breast the sea,
Our hearts, our hopes are all with thee."

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKenzie, B.A., M.B.

THE INFLUENCE OF INTELLECTUAL WORK ON THE TEMPERATURE OF THE BODY.

THE *Gazette des Hopitaux* Aug. 23rd, has a general review of the literature of this subject by Vaschide and Piéron. There has always been a wide spread belief that intellectual work augments bodily temperature, and this has received support from the results of various investigations. Three methods of estimation have been used (1) Estimation of cerebral temperature (2) estimation of general temperature (3) calorimetry.

For the first form of estimation an appliance has been used which translates thermal variations into galvanometric indications. The instrument is of the utmost delicacy, but this fact, to some extent, defeats its own end, as there is an inherent difficulty in avoiding external influences. Lombard, using this method, found an increase of cerebral temperature accompanying intellectual activity which was constant but did not exceed one-twentieth of a degree centigrade. The form of mental activity adopted was reading aloud—an exercise, as our writer remarks, associated with much muscular activity and therefore subject to error.

The cases in which by cranial lesions a thermometer could be placed in contact with the deeper parts of the brain are so rare and the conditions so abnormal, that the results cannot be considered scientific evidence. On the whole they seem to be interpreted to support a foregone conclusion.

Experiments on general temperature, either buccal, axillary, rectal, or manual, have been pursued with greater exactitude, but in many cases with a disregard for circumstances that are able to vitiate results. Thus, no account has been taken of them of the time of day and the variations of temperature that may be normal in any given case, Reading has been prescribed as the form of mental activity to be used, a form associated with considerable muscular activity, while adventitious muscular movements, often involuntary, have been disregarded. Pidancet has an extended series of observations which show how true this is, as in some cases, work, and in others repose, is followed by an increase in temperature.

Pidancet has also made use of calorimetry and carefully avoided sources of error. He requires mental calculation, instead of reading,

warns against involuntry movements of the limbs, or thinking when supposed to be in mental repose. On the whole he concludes:

(1) Intellectual work does not modify the emission of heat to the surface of the body.

(2) Intellectual work does not modify the central temperature.

(3) Intellectual work does not affect the production of heat in any manner appreciable at present.

EXTIRPATION OF THE EXTERNAL CAROTIDS.

THE September number of the Brooklyn *Medical Journal* contains in the report of the Brooklyn Surgical Society the description by Dr. A. T. Bristow of operations for the removal of the external carotid arteries for inoperable cancer. The first case was in a laborer, aet. 35; adeno carcinoma on the right side of the face, occluding the nasal passage and pushing down the hard palate, and filling the antrum Nothing could be hoped from removal of the superior maxilla, so it was decided to extirpate the external carotids in the hope of starving the growth.

November 16th operation as described by Dr. Dawbarn done on patient, and found to be relatively easy, being completed in sixty-five minutes. The patient had a long, thin neck, and the bifurcation was low down. The superior thyroid was given off the common carotid just at the bulb. It was, however, tied. When the external carotid had been dissected above the giving off of the posterior auricular, a cannula was introduced into the stump and two and one-half dr. of gelatine injected for the purpose of shutting off the internal maxillary branches. After operation the temperature reached one hundred but once, and the patient made a rapid convalescence. On December 18th, the external carotid of the other side was extirpated; and, owing to a higher bifurcation, the operation was more difficult, but, owing to the experience gained, was completed in fifty minutes. This side received no injection, as it was resolved to take no risks with the anastomosis between the infraorbital of the internal maxillary and the ophthalmic branches, lest the arteria centralis retinæ might receive a charge of vaseline and instant blindness result. The pallor of the face was noticeable after both operations. After the second, the swelling of the face diminished very rapidly; and, at the time that the patient left the hospital, it was but one-third of its former dimension and the discharge from the sinus had ceased.

In the discussion some important points were brought out. Tying off alone is no use, the anastomosis is too free. Both sides must be

extirpated. There should be a fortnight's interval for recuperation, and the operation should be performed on the well side first, as otherwise the patient, finding some improvement, may refuse to submit to a second operation. The healthy tissues seem to be able to survive on much less blood than the new growth. Care must be taken to avoid tying off veins, as the production of a venous stasis would affect the result. To more completely prevent re-establishment by anastomosis the injection of vaseline is done, but it is an admittedly dangerous procedure, and still only in the experimental stage. If the ophthalmic artery is plugged, blindness will result; if further back, you cut off the vessels at the base of the brain. One and a half drams of a mixture of melted vaseline and paraffine, with melting point of 108° F., injected at 120°, has been used, but one dram is safer. The operation offers in inoperable carcinomia the chance of a few more months of life, and a possibility of recovery in sarcoma.

TOXICITY OF METHYL ALCOHOL.

IN the Johns Hopkins *Bulletin* for August, Hunt analyzes a number of experiments made upon animals to determine the relative and actual toxicity of wood spirits, and concludes that the physiological action of methyl alcohol and its fate in the body show conclusively, that however pure the preparation may be, it is totally unfit for use as a substitute for grain alcohol in any preparation which is to be taken internally, and especially in preparations to be taken for any length of time.

ETIOLOGY AND PROPHYLAXIS OF EPILEPSY.

PEDIATRICS, September, has an article by Hanson, of Cleveland, on this subject. The pathological condition is primarily a functional disease of the grey cells of the cortex of the brain, with later organic changes in the neuroglia; when these are established it is incurable The disturbances of these cells are due to two classes of causes the immediately exciting and the predisposing or permanent.

The exciting cause is generally some form of irritation *e.g.*, teething, intestinal or vesical disturbance, the exanthemata, nasal obstruction, fright, etc.

The principal permanent causes are: heredity, rickets, lymphatic constitution, puberty, and trauma of the brain. Recent investigations show that among hereditary influences, alcoholism is one of the most potent, syphilis, impaired mentality, etc. Rickets is so important that Ohlmacher says the problem of dealing with idiopathic epilepsy is that of combating

infantile rickets. Bra claims to have found in 70 cases a parasite in the blood, before an epileptic seizure that was not present afterwards but the subject demands further investigation.

The lymphatic constitution is understood to be a general lymphatic hyperplasia, thickening of the aorta and sometimes hypertrophy of the heart, retarded development of the internal organs, persistent hyperplastic thymus and enlarged thyroid with neurotic tendencies.

The grand mal type of the disease is the most common in this diathesis. Children of this constitution take chloroform badly, and are especially liable to sudden death.

Before puberty the proportion of male children is greatest while from 12 to 20 females preponderate. The more frequent injuries to males at birth, and the greater strain on females at puberty probably account for this fact.

ON THE USE OF BLOOD-LETTING IN GYNAECOLOGICAL CASES.

IN the *Medical Times and Hospital Gazette* for August 23rd, this subject is discussed by Dr. Bedford Fenwick of the Soho Square Hospital for Women. He believes that in many cases, the rational and most effective treatment is local depletion and this may be accomplished—1. By scarification of the cervix where that part presents a deep red-bluish or purple appearance, evidencing much or long-continued congestion of the uterus, always remembering, of course, to make sure that the condition is not due to pregnancy. 2. By cupping or leeches over the ovaries where throbbing burning pain in those regions is the chief or only symptom. 3. By leeches around the anus in cases where the *fons et origo mali* evidently is the presence of inflamed hæmorrhoids, prolapsus recti, inflamed carunculæ myrtiformes, and such like congestive conditions. Leeches are not suitable for treatment of the cervix, owing to the difficulty of controlling them, but scarification is not difficult. The writer uses a Ferguson speculum and a long-handled knife, making enough punctures each 1/8 to 1/6 inch deep to secure the amount of bleeding wished. There are several practical points to be well remembered in the procedure. When there has been a long-standing congestion, the mucous membrane and its subjacent tissue are almost always hardened and thickened in consequence, and the punctures therefore have to be made more deeply and more freely than usual, to make blood flow. Next, the knife-edge should be very sharp; if not, the pressure necessarily used may send the knife much deeper than wished, and the wounding of deep vessels produces profuse bleeding. Again, it is always well to warn the patient not

to move, and what is going to be done, otherwise a sudden frightened jerk on her part may drive the blade even up to the hilt. The punctures should be confined strictly to the cervix, and in every case that part should be well in view and well cleaned before the knife is applied.

The writer describes a number of cases of dysmenorrhœa, dyspareunia, subinvolution, ovaritis, etc., treated successfully in this way and concludes:—

1. That where the cervix uteri is rendered by disease congested, deep-red, bluish, or purple in colour, local depletion by scarification generally gives immediate relief.

2. That where this congestion is caused and kept up by flexion of the uterus obstructing the return of the venus blood back from the cervix, and causing chronic enlargement of the uterine veins generally, local depletion allows a pessary to be inserted with safety and comfort to replace the organ, which almost certainly could not otherwise be tolerated.

3. That in every case, of course, the possibility of the patient being pregnant would be investigated before scarification were attempted.

4. In cases of subacute ovaritis or obscure throbbing pain in the pelvis, cupping or leeching externally frequently relieves the patient immediately.

5. In cases of vaginismus from inflated hæmorrhoids, or other rectal congestive conditions, leeches round the anus give rapid relief or cure.

6. That scarification is the simplest and safest method of abstracting blood from the cervix with the precautions which have been enumerated; leeches or cupping being kept for external use only.

CHONDRODYSTROPHY FOETALIS.

IN the *Archives of Pediatrics* for August, Morse reports a case in which this condition was present. The child, a male, born of Italian parents, healthy, was first seen when two months old. The abnormalities consisted in the small size, the weight being six pounds, two ounces, and the limbs were very short, the legs being only 6½ cm. in length. There was a slight general enlargement of the lymph nodes. He died at four months. No autopsy.

The condition is due to a disturbance of the normal process of ossification of the primary cartilage taking place early in foetal life, between the third and sixth months. As only endochondral ossification is affected, and periosteal development goes on as usual, the character of the deformity is accounted for; this, too, marks the distinction between

this condition and foetal rickets, a name sometimes wrongly applied. A similarity in the cranial appearance has suggested a relation to cretinism, but there is no evidence to support this.

Many causes have been suggested, but the history of reported cases gives no clue to the etiology. Most cases die either before or shortly after birth, but some have lived, and are seen as typical dwarfs with large bodies and very short limbs. The mental development is often normal, the reproductive functions fully developed, and children have been born from them of normal development.

THE PASSIVE CARRYING FUNCTION OF THE ARM.

HUFFMAN, in the *New York Medical Journal*, Aug. 30th, discusses the importance of this function, allowing, as it does, weights to be carried beside the thigh without further muscular exertion than that of keeping the fingers closed. It is often destroyed in children by fractures about the humeral condyles, rachitis, &c., making the arm either straight or reversing the angle, which is normally 17° outwards. Correction of the deformity is effected by an osteotomy above the condyles, from within outward, and keeping the limb in a splint till new bone is formed.

THE NEW YORK MILK COMMISSION.

THIS commission of the New York County Medical Society has been in existence for two years, and has gradually broadened the scope of its work until from attempting to improve the quality of some of the better supplies of milk, it is now controlling a considerable amount of bottled milk sold in New York, and is moreover supported entirely by the dairymen who benefit by its labors.

There are two grades of milk—'inspected' and 'certified'—the former to be produced in a cleanly and sanitary way without imposing on the producer any expensive care which was not considered absolutely necessary. There are requirements as to barnyard, stables, water-supply, grooming and milking cows, and cleanliness of milkers and utensils. Four per cent. butter-fat is required and the milk must not average over 100,000 bacteria per c. c. m., in summer or 60,000 in winter. This milk sells at 5 cents a quart wholesale or 8 cents bottled retail.

The 'certified' grade must not average over 30,000 colonies per c. c. m.; the tuberclin test is required, the rules as to conditions utensils etc., are more stringent. This milk sells from 10 to 12 cents a quart. The dealers are well pleased with the increase in price and business from the certification.

SUTURE OF DOUBLE WOUND OF THE HEART.

IN the *Gazette des Hopitaux* Aug. 21st, Launay describes an operation for repair of a double wound of the heart. The patient was accidently shot by a revolver in the left breast about 3½ hours before. There were the diagnostic signs of pneumothorax and excitation of the heart. The 4th, 5th, and 6th costal cartilages were raised, the pericardium opened and found full of blood. There was slow trickling of blood from a wound on the anterior face of the left ventricle. This was closed with catgut and the heart being turned forward to the right, the wound of exit was found and closed with some difficulty. The clots were removed and wounds closed with drainage. The patient made a rapid and uneventful recovery. Radiography showed the bullet in the muscles of the back.

LACTATION ATROPHY OF THE UTERUS.

IN *American Gynaecology* August, Vineberg, discusses the physiologic hyperinvolution of the uterus that accompanies lactation. This must be distinguished from the permanent atrophy that accompany too prolonged lactation. The condition is found at various times after confinement. The writer believes that it is established by the 8th to the 12th week and may persist for weeks. It is perhaps more constant in those cases in which there is lactation amenorrhoea. In the majority of cases it remains for some time after the cessation of lactation, though in some cases the uterus regains its normal size during lactation as seen in cases becoming pregnant at this time.

The condition has been found in a few cases which were not nursing, but is constant and much more marked in those who are, and the writer suggests that it may be due to the constant reflex irritation from the mammary glands. Sub-involution is the cause of many forms of pelvic trouble, and the writer finds in this an argument in favor of the mother nursing her child, and a suggestion that the infrequency of cancer uteri in dispensary patients is due to the fact that this class of women invariably nurse their children.

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

EAR DISEASES AND LIFE INSURANCE.

THE importance of ear disease in connection with life insurance examination is insisted on by Hammond, who maintains (*Jour. A. M. A.*) that we should not consider the patient's statements or recollections, because it may happen that suppuration has occurred in early infancy and has been forgotten, or the patient may have become so accustomed to it as not to consider it a diseased condition or inconvenience. The examiner should always be on the alert. He points out that consumption may sometimes be detected by the clinical appearances in the ear, and he insists on the importance of not considering merely the chronic cases. Among the things we may put on our dangerous list are suspicious nodules or tumors of the auricle in elderly persons and ulcerated areas, which may be due to breaking down of an epithelioma.

Another point which seldom receives attention is the liability of persons suffering from partial deafness to accident. Vertigo may depend on various conditions, but it may favor accidents, and should be a cause for careful examination. Many cases of otorrhœa are easily cured, and this fact should be considered. The prognosis is improved in late years. We should consider the rights of the applicants as well as those of the company we are safeguarding.

OPTIC NEURITIS WITH PARALYSIS OF BOTH EXTERNAL RECTI FOLLOWING MIDDLE EAR DISEASE.

MAYO COLLIER in the *Medical Press and Circular* cites an interesting case of this nature. A girl eighteen years of age was seen with symptoms of acute suppuration of the right tympanum following the removal of a small polypus from the ear. There was a history of otorrhœa since childhood following measles. Patient complained of being ill, occasional vomiting and pain in the same ear and side of the face for three weeks. Temperature was 97.4° and pulse 60. The pupils reacted normally, with a slight internal strabismus of the left eye. The optic discs were swollen. Nine days later there was paralysis of both external recti, iridoplegia with early neuro-retinitis in both eyes. The patient was drowsy, disinclined to take food, and was evidently losing ground.

The mastoid antrum was opened, and was found full of granulations, stinking steatomatous concretions, and offensive pus. No opening was found leading to the cerebral cavity. During the next few days patient was somewhat improved, but the ocular paralysis and vomiting continued. Eventually, however, patient entirely recovered.

The lesson to be learned from this case is a valuable one. Nausea, vomiting, pain in the head and subnormal temperature may certainly be symptoms pointing to cerebral complications. Optic neuritis with implication of cranial nerves would undoubtedly be so. These in conjunction with a stinking discharge from the ear would naturally point to cerebral infection. Yet apparently this was not so, or if so, to such limited extent as not to warrant interference with the cerebral contents.

THE IMPORTANCE OF AN EXAMINATION OF THE LARNYX IN CASES OF ANEURISM OF THE AORTA.

JOHN SENZIAK in the *Journal of Laryngology, Rhinology and Otology* from seven cases of his own and seventy-four collected from literature maintains as follows :—(1) That the paralysis, partial or complete, of the enurrent laryngeal nerve is a very frequent, and, what is more important, in many cases one of the earliest signs of aneurism of the aorta; (2) that the Roentgen rays in these cases, where there are no distinct symptoms of aneurism of the aorta (the so-called latent forms), generally confirm the diagnosis of this disease made on the basis of laryngosopic examination. A cure showing the importance of both the laryngeal examination and Roentgen ray picture is cited. A patient suffering from slight hoarseness of three weeks duration showed to the surprise of the examiner complete paralysis of the left crico—arytenoid muscle (paralysis postici). There was nothing to be found to account for the laryngeal paralysis nor was there to be detected any signs that pointed to an aneurism. By means of the Röntgen rays the dark shadow representing the contour of the heart and aorta showed the latter to be considerably dilated into a saccular form, with weak but distinct pulsation. The writer concludes by stating that both of these methods of examination should be combined, and resorted to in the diagnosis and prognosis of aneurism of the aorta especially in its latent forms.

IN the July No. of the CANADA LANCET a review of *Cheatle's* paper on the examination of the nose, throat and ears of 1,000 school children was given. A committee was appointed by the Otological Society of the United Kingdom to report on the advisability of a compulsory examination of the hearing powers of school children. Their report was made

at the meeting of the society in Dublin. It was as follows. *Journal of Laryngology*, Aug., 1902.

(1) That there exists among the children of the poorer classes a very large amount of ear disease which is preventable and curable.

(2) That it is not sufficiently recognized that ear disease in childhood tends to considerable loss of hearing, health, and life; that it militates against a child's education, and that later on its subjects are seriously hampered in their life's work, and often incapacitated for the services of the State.

(3) That ear disease in children is often not treated, partly owing to neglect, and partly to ignorance and to the belief in popular fallacies, and more especially to an inability on the part of parents and teachers to detect it.

(4) That any scheme, having for its object the security of children against the consequences of ear disease to be efficient, must provide for through and systematic examination and treatment.

5. And lastly, having regard to the national importance of the subject, we recommend that a memorial embodying this report be submitted to the president of the committee of the council on education.

PERMANGANATE OF POTASSIUM IN PURULENT OPHTHALIMA.

HANSELL in the *Therapeutic Gazette* for May has an interesting paper on the use of potassium permanganate in the treatment of purulent ophthalmia. The author believes it the best and most beneficial antiseptic in use for these cases. Solutions having a strength of 1-2000 were used and gradually increased up to 1-600. In severe and recent cases a strength of 1-600 is used to begin the treatment. The eye is irrigated with a rubber nozzle attached to a douche bag for five minutes at a time and the solution guided into all portions of the subjunctival sac and allowed to discharge over the side of the face on a rubber sheet and thence into a receptable. The solutions are used every twenty minutes in severe cases for the first twenty-four hours and gradually lessened both in time and amount according to the progress of the case. The staining of the face is of little account and is easily removed with oxalic acid. Moreover the solution stains any abrasion of the cornea just as fluorescine does.

TEMPORO-SPHENOIDAL ABSCESS

DR. PERCY JAKINS of the Central London Throat and Ear Hospital (Medical Press and Circular) operated on a girl, aet 3½, who had been admitted into the hospital for an offensive discharge from

the right ear of three years' duration; the child had on and off complained of headache, and at times seemed stupid. However, for the first few days after admittance the headache dissappeared, and she seemed brighter, but on the sixth day she became drowsy, with constant yawning and shrieking, the pupils being widely dilated; an erythematous rash appeared over the chest, right knee, and ankle. The child was immediately put under chloroform, and a semi-lunar incision was made over the right mastoid, the skin was reflected with the periosteum; the antrum was exposed, together with the mastoid cells, which only contained a little recent lymph. The lateral sinus was next exposed, it was found patent and perfectly healthy. The skull was trephined over the temporo-sphenoidal region, the dura mater was slightly bulging, this was divided, and a long, thin knife carefully passed into the brain; pus immediately escaped. The wound was enlarged with a brain pus seeker, when a fair amount of pus welled up; a drainage tube was then inserted, and the patient removed to bed. Dr. Jakins said this was evidently a case of a temporo-sphenoidal abscess, and remarked that this was another sad instance which showed the danger that parents run in not having ear disease attended to at once, without waiting until serious cerebral symptoms manifest themselves; any patient he thought, who had an offensive discharge from one or both ears, which does not improve on treatment, and is accompanied by headache, nausea, and vertigo, ought to be operated on without delay. With regard to the operation itself, he drew attention to the fact that, considering that the discharge had lasted for three years, there was so little disease found in the antrum and in the mastoid cells; the disease, he considered, must have attacked the roof of the petrous bone and so infected the temporo-sphenoidal lobe.

LATERAL SINUS THROMBOSIS.

DENCH, (jour, A.M.A.) has operated on 22 cases of sinus thrombosis with 2 deaths, one from septic pneumonia and the other from nephritis apparently induced by the anesthetic. In 4 of the cases only was it found necessary to ligate the internal jugular vein, and all of these cases recovered. He believes that prompt surgical interference of the most radical kind is the only safe course, and he details his method and reports cases. He thinks it wise in all doubtful cases to resect the internal jugular vein to eliminate the possibility of infection, though he does not prescribe this in all cases. Where the patient has been under observation for a few days and we have a fairly complete temperature record of 24 to 48 hours showing no marked evidence of systemic infection, the surgeon may rely upon simply clearing out the clot in the sinus

if it is to be found. This same method should be followed in cases which first come under observation at the time of operation. The sinus can be fairly well cleared out by the curette. On the other hand, in those cases which are first seen at the time of operation and in which the sinus can not be thoroughly cleared, and in which also the surgeon is confident that a certain amount of infected material is left in the venous canal, he thinks immediate excision of the jugular vein is demanded. The operation is not a serious one, takes little time, does not endanger the patient by prolonged anesthesia and prevents further systemic infection. The temperature is the only real guide.

SANITARY MEASURES FOR REDUCING THE AMOUNT OF BLINDNESS.

E. W. TREACHER COLLINS, F.R.C.S. (Practitioner), concludes a paper on infantile ophthalmia with the following suggested measures calculated to reduce the amount of blindness in the world: 1. Compulsory notification of cases of ophthalmia neonatorum by all persons, other than medical men, attending women in labor. 2. Instruction as to the importance of the universal adoption of prophylactic measures (preferably Crede's method, or the use of a sublimate solution, 1 in 2,000, or protargol 20 per cent.) by all lecturers and writers of text-books on mid-wifery. 3. The appointment of ophthalmic surgeons to maternity institutions, more especially those which provide for attendance of women at their own homes. 4. The provision in all midwifery bags, of a drop bottle labeled "drops for the eyes." 5. The better training of monthly nurses in the methods of aseptic cleanliness.

SOME CONSIDERATIONS ON THE HYGIENIC AND PROPHYLACTIC TREATMENT OF MYOPIA.

DUANE, in the *New York Medical Journal* for June, writes a very instructive article on the management of Myopic patients. Myopes are divided into three classes:—

(1) Myopia developed in late youth or adult life, and never rising much above 2°.

This class of myopia can usually be traced either to use of the eyes in excess or under unfavorable conditions, or to the wearing of improper glasses. It is usually associated with astigmatism, which may even be the cause of the myopia. Patients with this degree of myopia should restrict the excessive use of their eyes to reasonable limits, to use their

eyes for near work only with proper illumination, and to occasionally rest their eyes while at their books by looking into vacancy with head erect.

The full correcting glasses, *as found under a cycloplegic*, and, with these, hygienic precautions complete the entire treatment, as this form does not tend to increase.

(2) This form is one in which the myopia develops in childhood and progresses steadily, or, more often, discontinuously, up to the age of twenty-one or twenty-two, when it comes practically to a stand-still. Its maximum amount varies from 2° to 10°, rarely exceeding this, and it is not accompanied by the choroidal stretching and atrophy that we group under the name of sclero-choroiditis posterior. This is frequently called the "School Myopia" of the Germans. Duane believes children with this form should have their full correction given at once, and for constant use. Additional care of the general health and hygienic precautions are necessary. Particular attention should be paid to the *illumination*. The patient should not depend on a single light over his head, but the intensity of the shadows should be modified by having another light, so as to illuminate the books from the side. The size and legibility of the print, the height of school desks, quality and tint of the paper, and the character of the handwriting (vertical script being preferred), are all essential points to consider. These patients should be seen at intervals, and any changes in the glasses necessary made at once.

(3) This class comprises those of pernicious progressive myopia, and is accompanied by stretching and degenerating changes in the fundus of the eyes. The myopia begins in early life and rapidly increases. Treatment: (1) full correction to be worn constantly; (2) restrict *very greatly* the use of the eyes for near work, and have the patient lead an out-door life and take up some out-door occupation; (3) improve by every means the general health; (4) re-examine the patient at intervals of six months and change the correcting glasses if required. Duane holds that in myopia of 18° or less (and in selected cases of even higher degree), should be ultimately given their full correction for distance and near work, and to require it to be employed steadily—it being understood that this is done not merely because it gives the patient good sight, but because it affords the best prophylaxis against the further development of the myopia.

Now-a-days, when most myopes are sold glasses by the *graduate* optician, the public should be warned that the treatment of their defective vision demands something more than gold-rimmed eye-glasses sold by the "*eyes-examined-free*" man.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.
Assistant to the Professor of Neuro-pathology, McGill Medical College.

THE medical colleges have commenced their regular session. Laval and Bishop's College opened their classes on the first of October, but McGill men were hard at work somewhat sooner. Over 400 men were registered at the time of writing in the latter faculty, more than 100 of these being freshmen. On September 23rd, instead of the opening lecture with which the session usually begins, Dean Roddick gave the students an informal talk upon the work of the coming year. He stated that his first duty, after welcoming the men, was to introduce the new registrar, Dr. Von Eberts. He felt sure that the position, so long and so successfully occupied by Dr. Ruttan, had again fallen into good hands. His second duty was to hand over to their care the new buildings, which were now completely furnished and ready for occupation in every department. He contrasted them with the former building on Cote Street, which he attended when a student, and spoke of the unsanitary condition of affairs at the time, warning the students against unecessary contact with virulent infection when feeling run down. In speaking thus, he referred to the untimely death of Wyatt Johnson, stricken down in the performance of his duty He then went on to point out the changes in the calendar which enable third year men to devote more time to the clinical study of disease at the hospitals. In speaking to the fourth year men be recommended a study of the common and every-day diseases, and cautioned them against looking out continually for the unusual, to the exclusion of the average and ordinary. To this end he advised more study in the out-door departments, where this class of cases is treated. Another thing to be avoided was the tendency to specialize before graduation. A man required all the grounding possible, in as wide a field as can be covered, before specializing.

He closed by explaining the present condition of the Dominion Registration Bill, namely it has to pass each Provincial Legislature before it becomes law, and he hoped that this would occur in time for the students present to take advantage of it.

There is promise of serious trouble among the medical men of the province in consequence of the action taken at the semi-annual meeting of the Provincial Medical Board, with respect to the literary examination necessary for admission to the study of medicine. All students wishing to enter medicine with a view to securing a license to practise in this

province, are obliged first to pass the literary examination prescribed by the board, which appoints a sub-committee of examiners to deal with the subject. A majority of these gentlemen have received their preliminary training in the Catholic colleges of Quebec, and they conduct the examination along the lines to which they are accustomed. In order to approximate to this the Protestant students have been compelled to take an extra course in philosophy, before presenting themselves for examination. The faults of this style of examination have been apparent to all, but it has been accepted as the best that could be done under the circumstances. Harmony has therefore existed in the past, but it has been somewhat disturbed by the action of the Provincial Board in passing a resolution to the effect that only those who have taken the "Cours Classique Complet," which is the regular course of study in the French Colleges, may present themselves for the preliminary examination. This regulation practically prevents every Protestant student who has not a B.A. degree from presenting himself for examination next July. The physicians, representing the minority, will meet shortly to see what can be done and an effort will probably be made to have the resolution rescinded at the next semi-annual meeting ; but, failing this, there is some talk of the Legislature being asked to divide medical education into two sections, as general education is now divided. Of course, this new regulation must pass the Legislature before it becomes law.

In regard to those possessing B.A. degrees, the requirment is that they must register their degrees before beginning the study of medicine. This requirement has not been strictly enforced, the registration of the degree being accepted whenever convenient. McGill University, a few years ago, arranged that B.A. and M.D. degrees might be obtained after six year's study. Three new doctors graduated on this system last year, and their degrees were accepted and licenses granted, it is said however that the majority of the board did not understand the situation and that they do not intend to be so lenient in the future. They propose to fall back on the rules, and to enforce the regulation requiring the B.A. degree to be registered before the study of medicine is commenced. As the medical course is four years, the board can, if it so desires, prevent McGill from continuing the plan of six years study, as far as Quebec Board men are concerned. Dr. Lachapelle states that they who consider that the resolution is aimed againest any branch of the community are in error, for when the "Cours Classique Complet" was mentioned it was intended that an equivalent course in English would also be accepted. If this is the case it is to be hoped that some changes will be made in the resolution before it is passed by the Legislature.

E.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

VICTORIA ORDER OF NURSES.

A Few years ago, the Countess of Aberdeen visited Halifax and organized a branch of the above named order. Nurses were engaged, and the work was carried on for some time. The Countess, however, had hardly left the shores of Canada, when, for some reason or other, the work was abandoned and the nurses dismissed. Not until we were without them apparently was the value of their services recognized. The physicians doing work among the poorer classes found them most helpful. Visiting the patients once or twice a day, making or assisting in the making up of the bed,—changing the bed linen etc., in a way that only one, who has had training in such matters can do, add to the comfort of the sick one, and in many cases must add materially to his welfare. The nurse can instruct the friends about keeping the bed in a proper condition and the proper care of the patient.

A number of the benevolent ladies of Halifax, realizing the need of better nursing among the poor, have determined to start the order afresh. They have organized and are now making a thorough house to house canvass of the city to get the where-with-all to carry it on.

We are informed that their efforts are meeting with success, that the poor themselves are contributing to it, and expressing keen interest in its welfare. The prospects are that the order will in a very short time be in full swing in Halifax. It has the full sympathy of the medical profession here.

THE NOVA SCOTIA SANATORIUM FOR CONSUMPTION.

THE Provincial Government is asking for tenders for the erection of a building to be used for the above named purpose. The building is to be located near Kentville, in Kings county, and, from what we can learn, the situation is a most suitable one for the treatment of pulmonary tuberculosis. The district about Kentville offers as near an approach to an ideal climate for phthisical patients as can be obtained anywhere in Nova Scotia. It is hilly, and the building, being placed on one of these lesser elevations, will be well protected from strong winds. There is an abundance of fresh air and sunshine, with freedom from dust, and comparative freedom from fog. The atmosphere is dry, and, consequently,

a much lower temperature can be endured than would be possible near the coast, where the air is always moist. These are all essential points in the selection of a site.

The building is to be of two stories, with a pitched roof. It will occupy a frontage of 115 feet, and is to be built of wood. Each story will be surrounded by a balcony onto which the windows will open, so that the patients will have easy access to the open air. A semicircular tower, from the ground to the roof, will occupy each end of the building. This will permit the placing of more windows in the front than would be the case if the corners were square. Numerous windows will be placed all over the building, thus giving free entrance to light and sun. On the ground floor, opening into a large corridor, will be the offices, laboratory, supply room, physicians' apartments, and several bed rooms. The second floor will be taken up with bed rooms, parlor, nurses' quarters, bath rooms, and a small kitchen for night use. Opening off this floor will be a specially constructed sun house. The kitchen for general use will be in an extension at the back. A conservatory, with sides and roof of glass, will occupy a portion of this extension.

The building is to be fitted up with all modern improvements, and will, when completed, afford accommodation for some fifty patients. Should it be necessary, it can be enlarged at any time.

The grounds are to be made attractive by walks, trees, etc.

There is to be a resident medical officer in charge, and the treatment is to be that carried out in other sanatoria of the same kind, namely, plenty of good food, together with an abundance of fresh air and sunshine. The patients are to be kept in the open air as much as possible.

HALIFAX MEDICAL COLLEGE.

THE session of 1902-03 opened on September 2nd. The number of students enrolled is larger than that of any preceding year. The building has recently been remodeled, class rooms added, and a wing containing a well equipped laboratory has been built on to the main building. These changes will be a great improvement as hitherto the work was considerably hampered by inefficient accommodation. The calander for the present session includes a photograph of the building as it now is, together with one of the interior of the new laboratory. Along with these, and several others, are ones of the operating room and wards of the Victoria General Hospital, where the students get their clinical instruction. There have been no changes on the teaching staff of the college since the last session.

Unfortunately Dr. Halliday, the Professor of Pathology, was, at the very commencement of the session, compelled, owing to ill health, to give up his work. Dr. Halliday will winter in Colorado. It is hoped he will be fully restored to health, and able to resume his work next session. Dr. Campbell will attend to the Pathological department during his absence.

HALIFAX BRANCH, BRITISH MEDICAL ASSOCIATION.

THIS branch was organized in 1887, chiefly through the instrumentality of Surgeon-General McDowell, A.M.S., who was then stationed at Halifax. Since then it has steadily grown until now its membership numbers sixty-six, together with some twenty unattached. Many of these belong to different parts of the province, and, consequently, are unable to attend regularly. Meetings are held every two weeks during the winter months, when papers of general interest to the profession are read and discussed. There are always several clinical meetings, held at the Victoria General and Nova Scotia Hospitals, when cases of unusual interest are exhibited, one or two evenings are usually devoted to the study of pathological specimens in the laboratory of the college.

The first meeting of the present session was held in the Halifax Hotel, on the evening of October 15th. The President of the Branch, Dr. Thos. Walsh, occupied the chair.

The meeting proceeded to elect officers for the ensuing year. The ballots cast resulted in the election of the following gentlemen. President, Dr. Geo. Campbell; Vice-President, Dr. F. W, Goodwin; Secretary, Dr. C. D. Murray ; (re-elected). Treasurer, Dr. A. J. Mader ; The following were then elected members of the Branch Council :—Drs. Ross, Trenamau, Kirkpatrick, Hattie, Murphy, Jones and Peeke.

Surgeon-General O'Dwyer, A.M.S., was appointed representative on the Council and Parliamentary Bills committee. Dr. O'Dwyer was, until quite recently, the Principal medical officer on this station. He now resides at Ramsgate, England. While in Halifax, Dr. O'Dwyer took an active part in the meetings of the branch. One evening is to be devoted to military surgery, when Dr. Jones, late of the South Africa Field Hospital Corps, will read a paper on the work done by that branch of the Canadian Contingent, during the latter part of the late war. It is expected several members of the Army Medical Service will also take part.

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EDITORIAL.

QUEBEC AND THE DOMINION REGISTRATION BILL.

OUR excuse for saying a word or two upon this subject is the recent action of the Board of Governors of the College of Physicians and Surgeons of the Province of Quebec. At the semi-annual meeting of the Board, held a few weeks ago, it was decided that the medical course in all the Colleges should be one of five years, each year to consist of a nine months' session. It was also decided that the standard matriculation be raised by compelling all presenting themselves for the study of medicine to have taken the "Complete or Classical Course of Study," or, in other words, to be a graduate in arts prior to entering upon the study of medicine. These regulations require the approval of the Legislature of the Province before coming into operation.

With regard to the Roddick Bill, providing for Dominion Registration, the Medical Board for Quebec adopted the following resolution:

"That while recognizing as desirable reciprocity in diplomas and licenses in medicine between the different provinces of Canada under certain conditions to be set forth in the course of study, as well as the free access for the purposes of practice between these same provinces by all regular holders of these diplomas or licenses, the governors of the College of Physicians and Surgeons of the province of Quebec believe it their duty to oppose any intervention or organization made to the end above enumerated, which has for its effect the curtailment of the privileges or acquired rights of this board, of compromising its autonomy, or of relieving it of a part of its control of medical studies guaranteeing actual conditions, and for all these reasons the governors believe it to be their duty to refuse their approval of the Roddick Bill as passed by the Federal Parliament; but they are prepared to suggest and to accept a system of reciprocity of diplomas and licenses in medicine between the provinces of this Confederation, provided that this reciprocity shall be put into effect under the direct control of the provincial boards, or of a medical council deriving its initiative from these boards and sanctioned by the Provincial Legislatures."

We regret this action of the Board of Governors of the College of Physicians and Surgeons for Quebec. As it is the intention of the Medical Board to adopt a five years' course of Medical study, the students of Quebec would hold as high a standard of qualification, as those of any other Province in the Dominion. They would not stand to lose by having the wider field of the Dominion opened to them. When the terms of the Roddick Bill are properly examined they take no privileges away from any Province; but, on the contrary, give some that are not now enjoyed. We are glad to learn that Dr. Roddick intends to stick to his guns, and make an effort to have the following adopted by the various Provincial Legislatures:—

"'When there shall have been established under the authority of the Parliament of Canada a medical register for Canada under the control of a Medical Council for Canada.

"'Then, notwithstanding anything contained in any of the acts hereby amended any person duly registered in the said register as a medical and surgical practitioner or as a student of medicine and surgery, shall without any further evidence of qualification, be entitled to be registered in the medical register of this province as a duly qualified medical and surgical practitioner or as a duly qualified student of medicine and surgery, as the case may be. upon production of a certificate under the hand of the registrar of the said Medical Council of Canada certifying that such person is so duly registered, upon satisfactory proof of the identity of such person, and upon payment of such fee as may be prescribed by the Medical Council of this Province in that behalf.'

If the above, or a similar amendment, is adopted by all the Provincial Legislatures, the Dominion Registration Bill will become law, and pass into active operation, as it provides for a medical register for Canada under the control of a medical Council for Canada. Dr. Roddick intimates that if any of the Provincial Legislatures refuse to sanction the Dominion Registration Bill, he will again approach the Dominion Parliament and ask that the bill be amended so as to make the formation of a Dominion Medical Board contingent upon the acceptance of the bill by five or more of the Provincial Legislatures. One would think that the Quebec Legislature would be the first to approve of the Roddick Bill, as by it the other Provinces, where 300,000 to 400,000 French Canadians reside, would be opened up to the French Canadian practitioners We desire to encourage Dr. Roddick, and to express the hope that the Legislature of Quebec will be one of the first to approve of the Dominion Registration Bill.

In the resolution of the Quebec Medical Board it is agreed to accept a system of reciprocity of diplomas and licenses between the Provinces,

provided this shall be put into effect under the control of the Provincial Board, or a Medical Council deriving its initiative from these boards. Here is the principle of the Roddick Bill granted. When the Quebec Medical Board is willing to go so far in the direction of medical reciprocity, it would seem but a small step further to accept in its entirety the Roddick Bill for the establishment of a Dominion Register.

The Medical Board of Quebec seem to be opposed to any curtailment of its privileges or acquired rights, or of anything that would compromise its autonomy or relieve it of a part of its control over medical studies. But we might say that the profession of Quebec would be represented on the Dominion Medical Board. We would also say that the other Provinces are just as anxious to maintain a high Standard of Medical Education as is Quebec. On this score the profession in Quebec would have no cause for complaint. The other provinces would relinquish as much as Quebec; but Quebec would be an equal gainer with them by the change.

If, however, the Province of Quebec decides to continue its opposition to the Dominion Registration Bill ; and the Dominion Parliament declines to so amend the Bill, as to make it operative as soon as five or more of the provinces approve of its terms, then it might be so amended that such provinces, as do approve of the Bill, could form a common registration board, leaving it open to the province or provinces at first objecting, to come in later. In this way a common standard could be established for nearly all of the provinces ; and, no doubt, in course of time for all. Let us have a national profession. *Speremus optima.*

THE PREVENTION OF SYPHILIS AND VENEREAL DISEASES.

IN the early part of September of this year, there was held in Brussels, Belgium, the Second International Conference for the above object.

The topics submitted for consideration were public prophylaxis as the regulation of prostitution, the protection of minors, places for treatment, and the punishment of those who transmit the disease ; and personal prophylaxis such as the means by which the people may be made aware of the dangers of these diseases, and how to avoid them.

A number of resolutions were considered to the following effect that the State should take advantage ofevery meansof contending against the spread of venereal diseases ; that the most efficient means is to familiarize the public with the dangers and importance of these diseases ; that arrangements should be made for the free treatment of these affections, without unnecessary publicity ; that there should be compulsory notifications, and those who neglected treatment should be looked after

by the police ; that there should be a law to prevent any one but a qualified practitioner attending these cases ; that prostitutes should be brought under the control of the law, being made to observe sanitary regulations for the safety of the community ; and that great attention should be paid to the instruction of the young.

Both those who favored " abolition " and " regulation " of these diseases alike admitted that the present laws were quite inadequate. The state or government should take cognizance of both contamination and prophylaxis. There ought to be a law to reach all contagion, and to protect those who were not infected, and for the redress of those who were infected by others. The system of control, such as it actually is, having been shown to be completely inefficacious, is condemned, and it is time to resort to the common law.

Some years ago, Sir W.R. Gowers, in his lettsomian lecture, pointed out that in London there was probably one in every ten males over 25 going about with syphilis in his system. What mischief such a vast stream of disease might work in the community was beyond human power to guess ! He spoke strongly against the sentimental morality that had led to the repeal of the contagious disease act in regard to venereal diseases.

In his presidential address before the Canadian Medical Association, Dr. F. J. Shepherd spoke with no uncertain sound. That his large and intelligent audience was with him was manifested by the hearty applause accorded his words. Would that he had power to legislate as well as to advise ! When the infection of the venereal diseases are regarded as a danger to the public, in the same way that the infections in diphtheria, and small-pox are now regarded, something will no doubt be done to control these affections.

Apart altogether from its propogation by prostitution, these diseases are sadly too common among the innocent, against whose lives no fault can be found. Many a person has contracted syphilis as a pure accident. Many a wife has had her health ruined by the disease given to her by her unsuspected husband. Many a child has had its future cursed by the sins of one or other of its parents. Many a one has died prematurely because of the ravages of syphilis in his system. And yet there is no regulation of these diseases ! The living embodiment of syphilis or gonorrhœa can go about giving the disease to his wife, or children, or others, either by sexual intercourse, or by accident, as the case may be.

It is sad to remember that syphilis, rivalled in its total capacity for wrecking happiness and health and life by no other disease, and

exceeded in apparent horror only by those whose effects are more sudden, is equally formidable by reason of our limited power over it. There are those who strongly oppose licensed places under proper inspection. Against the influence of this mistaken zeal for a nominal purity and a real disease we are powerless. But there is one preventive measure—a life of chastity ; and to the encouraging of young men to live such a life, let the medical profession give all its support.

PATHOLOGY AND TREATMENT OF SUMMER DIARRHOEA OF INFANTS.

IN the August *Practitioner*, Dr. W. Cecil Bosanquet, physician to the Victoria Hospital for Children, London, regards the pathology of the above disease in the following manner: A poison, such as tyrotoxicon, may produce vomiting, diarrhœa and collapse; and it is possible that some cases of summer diarrhœa may be due to poisons formed in the milk outside the body. The great majority of these cases are, however, due to the entrance into the body of pothogenic germs, and the toxins they produce. To these poisons are due the symptoms of toxæmia which characterize the disease. There may be a number of organisms responsible for these attacks; but, in the case of Asiatic cholera, a variety of morbid changes result from one and the same germ. It may be possible that the diverse morbid appearance in cholera infantum are caused by one form of germ. The nature of the toxin is not yet known. The blood is reduced in alkalinity, and it is thought that there is an "acid-intoxication." Hot weather favours the growth of the causal bacteria. The diarrhœa and vomiting are eliminative, and should not be checked. They may, however, require regulation.

In the first place, every effort should be made to prevent the disease. Food and milk must be in a sound condition. The intestinal canal must be cleared out as early as possible of all irritating matter. It would be as good treatment to seal up an abscess as to arrest the diarrhœa in these cases. In all severe cases, it is necessary to withhold milk for a time. It should be resumed with all due regard to its purity. Over-crowding should be guarded against, and fresh air is of the utmost importance. If the stools are watery, and contain little or no fæcal matter, it is well to omit milk, especially if the temperature rises. Meat juice and broths are not generally to be recommended. Albumen-water or barley-water may be the only diet permissible for several days. Cold water may be allowed freely to drink.

In the early stage of the disease when a purgative is required, none is equal to small doses of calomel. It is best given in small, frequent doses, gr. $\frac{1}{6}$ every hour, or $\frac{1}{3}$ or $\frac{1}{4}$ every three hours. This may be carried out for 24 hours. This may be followed by some soothing, antiseptic medicine, as bismuth. salicyl. gr. iii to gr. v, or sod. bicarb. gr. ii to gr. iii, or liq. hydrarg. perchlor. m. ii to m. iv, in mucilage and water. Resorcin in doses of gr. ii, every two hours has been found useful, so has B— napthol and salol. Some prefer small doses of castor oil to calomel as a purgative. Opium should not be given in the early stages, nor if there is any renal trouble. Its effects must be watched with great care.

Lavage has been highly praised by many. If there has been much vomiting and diarrhœa, it is difficult to see what further cleansing lavage can accomplish. Plain water, or normal saline solution, a drachm to the pint. A small rectal catheter is passed while the water is flowing. It is allowed to flow out beside the tube, when the gut is sufficiently distended, two or three pints being used. This treatment is only useful when the colon is affected.

For the high temperature, the best remedy is tepid to cold sponging, or the fluid used for the colon wash may be cool, but not quite cold. If the skin becomes dry and inelastic a wet pack may be employed, the child being left in the pack for several hours. The child may be enveloped in a towel wrung out of cold water and wrapped in a blanket. Some stimulant should be given before the pack.

REMOVAL OF THE BLADDER FOR CANCER.

A. LAPTHORN SMITH, M. D. Surgeon in Chief of the Samaritan Hospital for Women, Montreal, and Professor of Gynæcology in the University of Vermont, Burlington, etc., read a paper before the Canadian Medical Association at Montreal, 18 Sept, on the removal of the bladder for cancer with report of a case.

After reviewing the great advances which had been made in the surgery of the bladder in recent years, especially in the management of fistulae and injuries to the ureters. the author took up the subject of removal of the bladder. He gave a brief historical outline of one hundred published cases from which it appeared that when the operation of removal of the bladder was done for malignant disease the death rate was over 50 per cent., while in cases of exstrophy and other non-malignant conditions, the death rate was only 19 per cent. He was strongly of the opinion that, with greater experience in technique, the mortality of the non-malignant cases would fall much below nineteen, while in the malig-

nant ones, when the disease was recognized and removed much earlier, the high death rate of over fifty per cent. would be reduced to less than twenty-five, just as it had been in hysterectomy for cancer which was 75 per cent. twenty-five years ago but was now less than five. He therefore urged all practitioners to look out for this disease, cystitis and hemorrhages being among the early symptoms, and not to lose precious time in unavailing local and medicinal treatment. His own case was misleading because she had a fibroid tumor the size of an orange pressing on the bladder, for which the patient was taken into hospital and the tumor was easily removed by myomectomy. Her bladder symptoms not being relieved, a button hole was made and the bladder explored by the finger when the cancer was found occupying the trigone. Two weeks later the abdomen was opened, peritoneum pushed back, ureters cut off and attached to vagina, and bladder removed together with enlarged pelvic glands. Patient rallied well and was making good recovery until sixth day when she rapidly collapsed and died. She was 65 years of age, in poor condition and the disease was too far advanced.

EDITORIAL NOTES.

College of Physicians and Surgeons.

We have very much pleasure in directing the attention of our readers to the advertisement in this issue, regarding the election of members of the Council of the College of Physicians and Surgeons of Ontario.

West Toronto Representative.

We understand that Dr. A. A. Macdonald will again be a candidate for the Medical Council. Dr. Macdonald's past record has been so satisfactory that he is sure of re-election. Indeed, there ought to be no opposition to his return. The best way the profession of West Toronto, can take of expressing its appreciation of his valuable services in the Council is to elect him by acclamation.

So-Called Christian Science.

Some time ago Rev. Andrew F. Underhill, of Yonkers, N. Y., delivered a series of short addresses on Christian Science. The Arlington Chemical Company has published these in neat little pamphlet form, and sent copies to the Medical profession. These addresses are particularly pointed and able, and well worth reading. If any of our readers have not received a copy, a request to the company will secure one.

Sir Walter Scott's Sickness.

Prof. Roberts Bartholow, in the *New York Medical Journal*, a short time ago, points out that from a study of the life of Sir Walter Scott it is apparent he had an attack in childhood of anterior poliomyelitis affecting the right leg. When he was 45 he began to suffer from attacks of gall stones and jaundice or cholangitis, as he had repeated spasms of pain, followed by a yellow color of skin and emaciation. When in his 69th year he had some sort of a fit and fell to the floor, losing consciousness for a short time. He had, in all, four such attacks. He finally lost the power of his right side, but not his speech. There was found, after death, three clots on the choroid plexus, and a soft part in the corpus striatum. The brain was "wet." There was no doubt atheroma of the vessels, with rupture, or embolism, an apoplexy; perhaps also chronic kidney disease, and the usual diseased arteries.

Sir Dyce Duckworth on Christian Science.

In his address at the opening of the session of the Medical College, Manchester, Sir Dyce Duckworth made use of the following words: "In this age of monstrous and obtrusive advertisement we know that almost any figment can, with sufficient money and pertinacity behind it, be readily foisted upon a large section of any community. So with absurd projects of investment and with a multiplicity of schisms and cults in religion. Consider, for example, that wicked and blasphemous nonsense which is now enlisting the support of many people in America, and of not a few well-placed persons in this country, so improperly called Christian science or faith healing. How much wisdom, think you, is concerned in tenets of that kind? Surely, in all these indications of mental feebleness and instability we witness the results of scanty knowledge, unbalanced and unchastened by any control derived from wisdom. What are they but conceits and airy delusions which must inevitably go to their doom in the future?

OBITUARY.

BERTRAM SPENCER, M.D., M.R.C.S.

DEEP was the sorrow felt by many medical practitioners throughout the country, when it was learned that Dr. Bertram Spencer was dead. A few days before his death, he slipped in a street car, sustaining a slight cut on his head. A severe type of erysipelas resulted from the injury, and, after a few days' illness, he succumbed to the attack, on

28th September. He was in his 49th year. Prior to studying medicine, he served for seven years in the British navy.

He took his medical course in Trinity Medical College, Toronto, and graduated, as M.B., at the University of Toronto in 1879. He spent some time in London in the study of his profession, and passed for the M.R.C.S., Eng. He commenced practice in Toronto in 1880. Dr. Spencer held a number of appointments. He was a coroner for Toronto. For several years he held a teaching chair in his alma mater college—Trinity Medical College. In 1892, he was appointed to the chair of Medical Jurisprudence in the Medical Faculty of the University of Toronto; and in 1898 was made Associate Professor of Clinical Surgery. At the time of his death, he held both of these positions.

During the last two years of his life, Dr. Spencer was truly "a man of sorrow and acquainted with grief." In 1900, he lost his daughter, and only child, to whom he was deeply attached. He was very much depressed by the loss of his child, and all could see that he was a sadder man. Then came a severe sickness to himself, in the form of an attack of septicaemia. Later came a spell of illness to Mrs. Spencer that threatened her life. Early in the spring of this year, he showed symptoms of diabetes mallitus. In September came the apparently trivial, but fatal, accident.

All who knew Dr. Spencer—and they are many—mourn his loss and early death. He was a thorough scholar, and a wise practitioner. Few men possess a finer sense of humor than did he, which rendered his company always so acceptable. He upheld the dignity of his profession well, living up to a high ideal. It was a great pleasure to meet him, either socially or professionally. In his case, *virtus incendit vires* was true in a special sense.

PERSONAL.

Dr. Paul, of Sebringville, cut his hand severely a short time ago, accidentally.

Dr. Wesley Mills, of Montreal, returned from Europe in the part of October.

Dr. W. H. Alexander, of Toronto, was married recently to Miss Edith Laird, of Chicago.

Dr. W. G. Tallison, late House Surgeon in Toronto General Hospital, has decided to locate in Lindsay.

Dr. Gordon F. Jackson has been appointed House Surgeon of St. Luke's Hospital, Ottawa.

Dr. R. A. Pyne, local member for East Toronto, was banqueted, 9th October, by his political friends.

Dr. J. L. Turnbull, of Goderich and Miss Jean McNair, of Cranbrook, were married Sept 30th.

Dr. W. O. Stewart, of Guelph, returned in the early part of October, after spending a few months in Britain.

Dr. Barr. M.P.P., for Dufferin, was thrown from his rig Oct. 23, and sustained a compound fracture near the ankle.

Dr. O. M. Jones, Victoria, B.C., and Dr. Alex. Hutchison, Montreal, were the guests of Dr. Riordan, of Toronto.

Dr. Edward D. Farrell has been appointed surgeon to the Fifth Royal Garrison Regiment, now doing duty at Halifax.

Dr. W. P. Thomson, of Toronto, was married to Miss Janet Carruthers, of Crocketford, Scotland, in the latter part of September.

Dr. Jenkins, of St. John, N. B., died at the Victoria General Hospital, Halifax, last month. Dr. Jenkins had been ill for some time.

The marriage of Dr. John I. Ferguson, of Courtwright, son of Dr. R. Ferguson, of London, and Miss Ruby Josephine Smith took place a few weeks ago.

The many friends of Dr. L. L. Palmer, of Toronto, will be glad to learn that he is recovering from the severe attack of septicæmia which he contracted, while performing an operation.

Dr. G. Carlton Jones, of Halifax, who went to South Africa with the Field Hospital, has returned. Dr. Jones contracted typhoid fever while in Africa but has completely recovered.

Dr. Andrew Halliday—Provincial Bacteriologist and Professor of Pathology in the Halifax medical college—has been compelled owing to ill health to give up his work for the present session. He will winter in Colorado. A number of Dr. Halliday's medical friends called upon him on the evening of October 14th, presented him with a purse containing $250.00, and expressed the hope that he might be much benefited by the change and that he would return to Halifax fully restored to health. Dr. L. M. Murray will attend to the duties of Provincial Bacteriologist during Dr. Halliday's absence.

BOOK REVIEWS.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE FOR THE USE OF PHYSICIANS AND STUDENTS.

By James Tyson. M.D., Professor of Medicine in the University of Pennsylvania, and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia, etc., etc., etc., Tenth Edition, Revised and Corrected, with a Colored Plate and Wood Engravings. Philadelphia: P Blakiston's Son & Co., Toronto: Chandler and Massey. Price, $1.50 Net.

THIS excellent little book, of nearly 300 pages, has now reached its tenth edition. Already over 25,000 Copies of the work have been sold. The book needs no commendations, as it is so well and favorably known that practically all physicians are acquainted with it. The work is thoroughly reliably in its matter, tersely and clearly expressed, well arranged, illustrated, and contains everything that the general practitioner requires. It contains the best, and nothing but the best, information.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Professor of Materia and Therapeutics in Jefferson Medical College of Philadephia; and H. R. M. Landis, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Vol. III., September, 1902. Lea Brothers & Co., Philadelphia and New York, 1902. Per Volume, $2 50, per annum, $10.00.

THERE are very few medical men who are not familiar with "Progressive Medicine," and there are none who ought not to take it. These quarterly volumes, year after year, constitute a reference library of great value. The present volume possesses all the attractive features of the previous ones, and is got up in the careful style of the well-known publishers.

The present volume deals with diseases of the Thorax and its viscera, including the Heart, Lungs, and Bloodvessels, by William Ewart, M.D., F.R.C.P., Senior Physician to St. George's Hospital, London; Dermatology and Syphilis, by William S. Gottheil, M.D., professor of Dermatology and Syphilology in the New York School of Clinical medicine; Diseases of the Nervous System, by William G. Spiller, assistant clinical Professor of Nervous Diseases and Assistant Professor of Neuropathology in the University of Pennsylvania; and Obstetries, by Richard C. Norris, Lecturer on Clinical and Operative Obstetrics, University of Pennsylvania. These names may be taken as a guarantee of the Contents of the present volume.

As it is impossible to note all the good things, we will give only two formulae:

℞ Resorcin, 30 grammes
Zinci Oxidi
Amyli, āā 20 grammes
Vaselinae (Yellow) qs., 100 grammes.

This is very useful in Lupus, and Dr. Max Joseph has employed it for two years with excellent results.

For Psoriasis the following is highly recommended by Blaschko:

℞ Iodi (pure) 0.6
Hydrarg. chlorid, mit. 1.8
Vaselinae ad 10.0.

Rochard's salve as above made, may irritate some skins; but, as a rule, is very valuable, the plaques melting away.

SAUNDER'S QUESTION COMPENDS. ESSENTIALS OF DISEASES OF THE EAR.

Third Edition, Thoroughly Revised.

By E. B. Gleason, S. B., M. D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia; Surgeon in Charge of the Nose, Throat, and Ear, Department of the Northern Dispensary, Philadelphia, etc., Third Edition, Thoroughly Revised. 16 mo. volume of 214 pages, with 114 illustrations. Philadelphia and London; W. B. Saunders & Co., 1902. Cloth, $1.00 net. Toronto; J. A. Carveth & Co.

THIS valuable little help, one of Saunders' Question-Compend Series, has reached its third edition. The book will be found of service, not alone as an aid to the student, but also to the physician who wishes to take a post-graduate course in Otology, enabling him, as it does, to acquire the rudimentary facts of the science with as little preliminary reading as possible.

The essentials of Otology have been stated concisely, without sacrificing accuracy to brevity. The diagnosis and treatment of diseases of the ear have been brought absolutely down to date by a thoroughly scrupulous revision; only such methods of treatment being included, however, that have personally proved efficacious in the majority of cases. Besides carefully revising the old text, many interpolations of new matter have been made, thus somewhat increasing the number of pages in the present edition.

The illustrations—many from original drawings—have been selected with the aims of the book constantly in view; and they form a very commendable feature of the work. Indeed, the little volume before us will unquestionably continue to be one of the most popular of Saunders' unequalled Question-Compend Series.

SAUNDERS' QUESTION COMPENDS, ESSENTIALS OF HISTOLOGY.

Second Edition, Revised and Enlarged.

By Lewis Leroy, B. S.,M. D.. Professor of Histology and Pathology, Vanderbilt University, Medical and Dental Departments; Pathologist to the Nashville City Hospital, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. 16 mo volume of 263 pages, 92 beautiful illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth $1.00 net. Toronto: J. A. Carveth & Co.

THIS valuable work has been designed not only as an aid to the beginner, but also to help the practitioner who, having graduated at a time when histology was not taught in all the colleges, desires to gain sufficient knowledge of the subject to facilitate his better understanding of pathology. Both these aims it admirably ulfils, as is evidenced by the demand for a second edition in so short a time.

In this edition a number of new original illustration, mostly photomicrographs, have been inserted to better elucidate the text. The chapter on Technic has been enlarged, a description of the appendix and rectal valves added,and the entire chapter,as,indeed, the entire book, thoroughly and carefully revised. As did the first edition, the work in its present form stands as a model of what a students aid should be; and we unhesitatingly say that the practitioner as well would find a glance through the book of lasting benefit

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A POCKET GUIDE TO ANAESTHETICS FOR THE STUDENT AND GENERAL PRACTITIONERS.

By Thomas D. Luke, M.B., F.R.C.S. Ed., Anaesthestist to the Deaconess Hospital, to the Dental Hospital, and Instructor in Anaesthetics to the University Surgical Classes, Royal Infirmary, Edinburgh. William Green and Sons, Edinburgh, 1902. Price 5s.

It is a genuine pleasure to review such a book as the one before us from the pen of Dr. Luke, and the publishing house of Messrs. Green & Son. The work is a neat crown 8vo. of 150 pages, bound in limp leather, printed on the very finest of heavy paper, well illustrated, gilt edges, and firmly stitched. So far as the publishers part is concerned, the little volume is perfect. The moderate price of 5s. net brings the book within the reach of all.

Turning to the author's share in the make-up of the little volume, we notice that he has illustrated the text with 43 very carefully selected cuts of apparatus and instruments, and the positions of the patient, for both local and general anaesthesia.

The author rightly contends that the administration of anaesthetics is a most important and responsible duty; and complains that sufficient

attention is not paid to the subject in most of the medical colleges. The practitioner has to acquire this knowledge usually after graduation. A short summary of the history of Anaesthetics is given from the year 1798, when Sir Humphrey Davey took nitrous oxide, down to the report of the British Medical Association committee in 1901.

In speaking on the choice of Anaesthetics, the remark is made that a person in reduced health is a safer subject than one in a healthy vigorous condition, as much less of the anaesthetic will suffice in the former, and there is less struggling. Anaemic persons usually take anaesthetics well, and there is not the need for such deep narcosis as in the strong and full blooded. Cases of valvular disease of the heart generally take chloroform well, but much care is required in producing perfect anaesthesia, and there is great tendency to syncope during recovery, or vomiting. In cardiac myasthenia, with fatty degeneration, or simple atrophy and dilatation, ether is strongly indicated, and nitrous oxide and chloroform as strongly contra-indicated. Insanity contra indicates nitrous oxide and ether.

Ether is objectional in renal disease, and chloroform in diabetes. Cases with dyspnoea, as in goitre and Angina Ludovici nitrous oxide is dangerous, and CE_2, or chloroform one part and ether two parts, is to be preferred. In cases of empyema, or troublesome cough, chloroform or CE_2 is better than ether alone.

With regard to the nature of the operation, the following general rules are laid down: Cases suitable for nitrous oxide are extraction of teeth, opening an abscess, tenotomies, aural polypi, movement of stiff joints, avulsion of nail, removal of external piles, scraping lupus, application of cautery, removal of drainage tube. Cases suitable for ether are amputations, osteotomies, reduction of dislocations, excision of joints, operations on the rectum, operations on genito-urinary organs, herniotomies and colostomies, removal of breast, most ovariotomies, in conditions of collapse or where the patient is much exhausted, in dental extractions of a prolonged kind. Cases suitable for chloroform are operations on head and neck, intracranial operations, excision of tongue or maxilla, abdominal operations where exaggerated Trendelenberg position is required, and cases of labor as a general rule. If the administrator has no experience with inhalers he had better use the open method, starting the anæsthesia, with chloroform and maintaining it with CE_2 other things being suitable as to the nature of the case and the operations. In feeble cases, an ounce of brandy with as much water may be given twenty minutes prior to the anæsthetic.

We pass over the excellent remarks on nitrous oxide and come to ether. It would be impossible to review fully what is said upon this

subject; but will mention the cases given as contra-indicating its use as protracted operations about the mouth, jaws, nose, or pharynx ; operations requiring the cautery, or candles, or lamps; cases with bronchitis; cases of renal disease ; where the arteries are brittle ; in very young infants, on account of the risk of pulmonary trouble; in cases where rapid breathing and coughing would interfere with the operation : and in cases of brain tumor and intestinal obstruction

In the chapter on chlorform there is much sound advice. Among the many statements we note a few. The administrator is warned against dashing on the inhaler a large quantity at one time. The patient may struggle and take in too much at once. It should be given for ordinary adults at the rate of minims XXX every minute. Chloroform as an anaesthetic and toxic agent is ten times as powerful as ether. With regard to the blistering of the face the author remarks that if the inhaler be kept half an inch from the skin to allow "air way" there will be no danger, nor any need for vaseline on the skin. Besides, it is dangerous to permit the mask to fit too closely to the face. Chloroform anaesthesia is described under four stages. In the third stage there is automatic respiration, loss of conjunctival reflex, a fixed and more or less contracted pupil, and muscular relaxation. Unless these are present in the very large majority of cases no operative procedure should be undertaken. The fourth stage is one of overdose, and shows complete cessation of respiration, very feeble pulse, dilated fixed pupils, complete absence of lid reflex, dusky pallor of complexion, and separation of eyelids. If the drug be given rapidly and recklessly death may be very sudden. Paralysis of the respiratory centre is the most usual cause of death during fatal cases, but is often accompanied or immediately followed by paralysis of the cardiac centre, while primary cardiac failure is not unknown. A bad pulse may be caused from too little chloroform and also from too much. One must judge of the condition of the patient from no single sign, but from the breathing, condition of pupil, colour of lips, amount of chloroform given, the type of the patient, and the nature of the operation.

Under chloroform the pupil at first dilates. As the patient becomes unconscious it contracts. If it again dilates and is fixed and non-responsive to light, the patient is in a dangerous condition. The pupils dilate from the following causes: vomiting, vaso motor depression, too much chloroform, and commencing asphyxia or CO_2 poisoning. The two latter conditions are dangerous. A dilating and mobile pupil indicates more chloroform; a dilated and fixed pupil means stop chloroform and resuscitate the patient.

The troubles that are apt to arise during chloroform anaesthesia, apart from poisoning by it, are cessation of respiration, cardiac failure, vomiting, and the passage of food or mucus into the air passages. Cardiac failure, indepently of overdose may be due do fright or shock before anaesthesia is induced; to actual or threatened vomiting; to asphyxia from respiratory obstruction; and the strain of operation, loss of blood, or removal of fluid from the abdomen or chest. Deaths may be due to overdose, upright position, reflex cardiac inhibition, and undetected asphyxia.

Cessation of respiration may take place during the second stage of chloroform narcosis, due to spasm of the abdominal, thoracic and jaw muscles, the tongue being pressed against the palate and pharynx, especially in nervous, muscular, or alcoholic subjects. When this spasm passes off, there are usually a few deep inspirations and there is great risk of an overdose unless care be taken, as in this condition the heart is easily overpowered, being dilated and asthenic. Approximation of the aryteno-epiglottidean folds causes loud crowing breathing, relieved by drawing the tongue forward and stopping the chloroform.

We cannot review the portion of the book dealing with local anaesthesia, as it would require too much space. The author also examines into the death rate under chloroform and ether.

We would close our review of this book by saying that it is *multum in parvo maxime eruditum.*

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA.

DIPHTHERIA, MEASLES, SCARLET FEVER AND GERMAN MEASLES.

Diphtheria. By Wm. P. Northrup, M.D., of New York. Measles, Scarlet fever, and German Measles. By Professor Dr. Th. von. Jurgensen, Professor of Medicine in the University of Tubingen. Edited, with additions, by William P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, 3 of them in colors, Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

THIS volume, the third in the series of the English translation of "Nothnagel's System of Practical Medicine," needs no recommendation Professor Jurgensen and Dr. Northrup are too well known for us to expect anything but the best. The article on Diptheria, entirely original with the editor, is fully in keeping with the high standard set by the other German articles which comprise the work. Dr. Northrup, having been associated with Dr. O'Dwyer at every step in the perfection of

intubation tubes, is particularly fitted to describe this aspect of the treatment of diphtheria.

Professor Jurgensen's monograph on Measles unquestionably is the most comprehensive contribution on that infection that has appeared, bringing out so fully the valuable Danish records of the Faroe Islands epidemic. His exposition of Scarlatina is unrivaled both for richness of clinical detail and exactness and clearness of statement. "Fourth Disease" and German Measles have been accorded spaces consistent with their importance. The editor has shown judicious decision in his extensive additions, making the work far and away the best and most up-to-date treatise of the subjects extant. The book is profusely illustrated, containing, besides a large number of text cuts, twenty-four full-page plates, three of which are in colors.

Dr. W. P. Northrup handles the subject of Diphtheria in a full and through manner. It is stated that in cities the disease is endemic, but the number of cases and their virulence vary from year to year. In country districts it occurs as a rule in epidemics. Diphtheria is always due to the germ from some previous case; and, as the germ may live for many months outside the body, it is not hard to account for the appearance of isolated cases. There are mild cases, cases of catarrhal diphtheria, and cases of diphtheria rhinitis, where a diagnosis is not made, and are very liable to spread the infection. The disease may be spread by means of utensils, towels, bedding, clothing, toys books. The statement that "the hands and clothing of physicians and nurses in attendance on diphtheria cases are undoubtedly a frequent source of infection" will, we think not meet with general endorsation. It would be one of the rarest of experiences to meet with a physician, however large his practice, or honest his intentions, who could say that he was ever aware of having carried the disease from one child to another, or from house to house. Milk is given as a rather common cause for the spread of the disease Kober is quoted to the effect that 13 out of 36 epidemics studied by him were due to infected milk. Defective drainage may be a cause for poor health and lowered resistance, nevertheless the Löffler bacillus must always be present to cause the disease.

Klebs discovered the bacillus in 1883. In 1884, Löffler obtained a pure culture and produced the disease in animals by inoculation; but he was not positive that this bacillus was the specific cause. In 1888, Roux and Yersin were able to establish this specificity beyond a doubt. The bacillus is non-motile, non-liquifying, grows readily in presence of oxygen, but also without it, does not form spores, is killed in ten minutes by a temperature of 136F., and lives for a long time in dried membrane, by one observer for 5 months.

The bacillus is pathogenic for guinea-pigs, rabbits, chickens, pigeons, small birds, and cats; and, in a lesser degree, for dogs, goats, cattle, and horses. Inoculation tests in animals have revealed the presence of the characteristic paralysis. When diphtheria is communicated to an animal by inoculation, unless the dose is very large, the germs remain at the seat of inoculation, and are very rarely found in the internal organs. But this does not correspond to what takes place in natural human diphtheria. In the human subject the best observers have found that the bacilli are found in the internal organs. This general infection occurred usually in cases of septic diphtheria. An interesting point in the work is the emphasis given to the fact that virulent Klebs-Löffler bacilli may be found in the throats and noses of persons who show no signs of the disease. This is specially true of those coming in contact with persons who have the disease. On the matter of mixed infection, it is stated that the condition is common; and the streptococcus, staphylococcus, and pneumococcus are most frequently found along with the diphtheria bacillus.

Much attention is given to those bacilli which closely resemble the Löffler, and are known as pseudo-diphtheria bacilli. He concludes: "It may be said in brief, that a given diphtheria like bacillus which produces little or no acid in bouillon cultures, that shows no or only atypical polar granules in a twelve to twenty-four hour-old blood-serum culture, and is never pathogenic to guinea pigs, may be safely classified as belonging to the great class of pseudo-diphtheria bacilli."

Passing over the remarks on the pathology of the various organs, we note that he divides the disease clinically into the following groups: Catarrhal Diphtheria, or those cases in which are found only redness and severe swelling of the pharynx and tonsils; Fibinous Diphtheria, or those cases of pure Löffler bacilli infection, local in nature, and the presence of false membrane; Mixed, Phlegmonous, or Strepto-diphtheria, or those cases due to the association of some other germ, usually the streptococcus, along with the Löffler bacillus; Septic, or Gangrenous Diphtheria, or those cases developing into a septicæmia, the reason for which is not well known, but thought to be due to a mixed infection invading the general system.

The author accords high value to the diphtheria anti-toxin. When used on the first day, the death rate is about 3 per cent.; when used on the second day, 8 per cent.; on the third day, 13 per cent.; on the fourth day, 23 per cent.; and on the fifth day, 35 per cent. The dosage recommended is: From 2,000 to 3,000 units for a child over one year in an ordinary case; from 3,000 to 5,000 units for a severe case; for a child under one year, 1,500 to 2,000 units. These doses are to be repeated in 12 hours,

or less, if the symptoms are increasing. He claims that immunity for about a month can be obtained by small doses of 100 to 500 units. It is of much value used in this way, in instances where children are exposed to contagion.

The second portion of the work is from the pen of Prof. Theodor Von Jürgensen, and takes up measles, scarlatina, and Rötheln.

The author discusses at considerable length the theory that the acute exanthemata are of common origin. He holds that vaccinia and smallpox are of common origin. With regard to the others he remarks that "measles, scarlatina, smallpox and varicella are distinct diseases; they cannot be traced to a common source, and do not represent merely offshoots, variously modified, from one and the same root." His reasons for setting aside the theory of common origin are: The period of incubation varies, the clinical features vary, these diseases do not protect against each other, and they may occur together in the same person.

Some pertinent remarks are offered on the "Fourth Disease." It is concluded that the evidence is not yet such as to justify us in admitting it as an independent disease. The leaning is in favour of the view that the "Fourth Disease" is a modified scarlatina, a Rubella scarlatinosa.

The work, as a whole, is a masterpiece, both as to publication and authorship.

TWENTY-FIFTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY AND REPORT OF THE BUREAU OF VITAL STATISTICS 1901.

Trenton, N. J. The John L. Murphy Publishing Co., Printers, 1902.

THIS volume contains much useful information on the topics of public health, infectious diseases, and isolation hospitals. Persons interested in such questions will find the volume very helpful. The report of the secretary is very full, and a number of special papers deal with such matters as smallpox, scarlet fever, diphtheria etc.

MISCELLANEOUS.

PEPTO-MANGAN FOR YOUNG GIRLS.

DR. E. C. HILL, Denver, praises Pepto-Mangan (Gude) very highly for delicate girls about the age of puberty, and after menstruation commences, when they become anæmic and chloratic. There is rapid increase in the blood.

THE TREATMENT OF GRANULAR PHARYNGITIS.

M. MOURE (*Presse médicale*; *Journal de Bruxelles*, June 19th) recommends painting the back of the throat twice weekly with the following:

℞ Iodine ..... 0.25 grammes (3¾ grains)
Potassium iodide ..... 0.30 grammes (4½ grains)
Laudanum ..... 3.00 grammes (45 minims)
Glycerin ..... 120.02 grammes (4 ounces)
M.

This may also be used as a gargle in a strength of a teaspoonful to half a tumblerful or a tumblerful of tepid water.

The author also recommends the use in similar proportions as a gargle, or pure as a local application, of the following:

℞ Sodium biborate..... ..... 6 grammes (90 grains)
Antipyrine..... .. 4 grammes (60 grains)
Tincture of guaiacum..... } aa 5 grammes (75 minims)
Spirit of peppermint..... }
Neutral glycerin ..... 140 grammes (4½ ounces)
M.

GLYCOZONE IN PTOMAINE POISONING.

DR. A. RIXA, in the Medical summary, writes as follows regarding some cases of poisoning by fish and oysters: "I prescribed an antespitic intestinal wash, Glycozone, two ounces, hot water, twenty-four ounces, for mornings and evenings. At my evening's call the temperature was 100; pulse 110; respiration, 28. Having had some favorable experience with the internal use of Glycozone in acute gastritis I then prescribed a teaspoonful to be given, diluted with water, every three hours. This treatment was kept up for a week, until all unfavorable symptoms disappeared"

SANMETTO IN PROSTATITIS, ENURESIS, CATARRH OF BLADDER.

In prostatitis, enuresis, catarrh of bladder and all diseases of the genito-urinary system, J. T. W. Kerns, M.D., Bellaire, Ohio, has found Sanmetto indispensable to him.

BOVININE IN ENDOMETRITIS.

In this condition much benefit has been derived from the topical and internal employment of bovinine. The uterus is washed out with bovinine two parts and salt solution one part, and the vagina tamponed with pure bovinine. Two teaspoonfuls were given internally every hour in peptonized milk. The local treatment was done twice daily.