

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

THE

MONTREAL MEDICAL JOURNAL.

VOL. XXVIII.

FEBRUARY, 1899.

No. 2.

Original Communications.

DISCUSSION ON TYPHOID FEVER.

THE MEDICAL TREATMENT OF TYPHOID FEVER.*

BY

JAMES STEWART, M.D., Professor of Medicine and Clinical Medicine, McGill University; Physician to the Royal Victoria Hospital.

As yet we are not able to speak of a specific treatment of typhoid. We are unable to destroy or counteract the typhoid bacilli, or prevent or even limit the effect of their toxins in the human subject. The results obtained by immunizing and curative inoculations in hydrophobia, tetanus, and diphtheria, have naturally led to a search for similar antitoxic principles in typhoid. Hammerschlag and v. Jaksch have reported a number of cases treated by serum taken from convalescent typhoid patients. Beuner, Peiper, Klemperer, and Levy have obtained a serum by treating dogs with gradually increasing doses of bouillon cultures of typhoid bacilli, which was found sufficient to immunize susceptible animals, such as mice and guinea-pigs. With these measures they were also able to effect a cure some time after infection had been induced. They tried the serum in a few cases of typhoid in the human subject, but with no definite result, except perhaps, to show that it could be used without inducing any unpleasant or dangerous symptoms. Other interesting work of this character has been carried out with the serum of convalescents and immunized animals, but the result, although apparently effective in the disease as it is met with in susceptible animals, still has been disappointing when applied to counteract the disease in the human subject.

In this connection I will refer to a form of treatment which is very old, but has lately been revived by a few physicians in the United States

* Read before the Montreal Medico-Chirurgical Society, January 23, 1899.

and in Canada. I refer to the use of purgatives and intestinal antiseptics. W. B. Thistle, of Toronto, who read a paper on this subject at the meeting of the Canadian Medical Association in this city two years ago, is a strong advocate of this method of dealing with typhoid fever. He highly recommends calomel and salines. He appears to believe that the intestines are, by these measures, swept clear of bacilli, and the further production of toxins prevented. It is claimed for this method that the disease is aborted. Another so-called abortive method of treating typhoid is known as the Woodbridge method. It appears to be a favorite way of dealing with typhoid fever in the Southern and Western States, especially in the country districts. It consists in the administration of podophyllum, calomel, guaiacol, eucalyptol, and menthol, according to some definite formulæ. Many physicians have written claiming abortive power over the disease by this method, but all the reports that I have examined bear the evident stamp of inaccuracy in observation, and are, in consequence, of little or no value. To claim for any drug, either antiseptic or cathartic, that it is capable of destroying or removing all noxious micro-organisms from the gastro-intestinal tract, is simply absurd. As the typhoid bacilli are not present in the intestinal tract prior to the breaking down of the lymph tissues, it is impossible for antiseptics to reach them, except through the blood, and it is, of course, vain to expect that any medicinal agent that we know of can exert a germicidal action on the organism collected in the lymph tissues. Dr. Woodbridge proves too much. He claims, for instance, that in upwards of 8,000 cases of typhoid treated after his method, the average duration of the disease was only twelve and a-half days. Now, as the infiltrated tissue does not commonly break down before the end of the second week, it follows that his remedies have no exposed surface to work their antiseptic action on, hence the action must be through the tissues, a claim which is utterly unworthy of anyone possessing even an elementary knowledge of pathology.

The number of different antiseptics that have been used in typhoid is numerous. The old iodine and carbolic acid combination was for a long time a favorite; at present it is rarely heard of. Calomel, naphthalin, naphthol, iodoform, salol, salicylate of bismuth, boracic acid, chlorine, turpentine, have all been used at one time or another with the idea of producing a specific effect, but there is no evidence to show that any of them, or any combination of them, has any effect in lessening the duration, or to any appreciable degree modifying the severity of the disease.

Of all these agents, calomel is the one that has been the longest and probably the most favourably known. Many physicians believe that

the early employment of a few small doses of calomel have a favorable influence over the course of typhoid. It is not unlikely that after the breaking-down of the lymph structures, its action may help in preventing the development of a secondary infection, but more than this. I think few would claim for it.

THE ANTIPYRETIC TREATMENT.

One of the most noticeable changes in the method of treating typhoid during the past few years is the constantly lessening use made of antipyretic drugs. Ten or fifteen years ago it was the rule, even in hospitals, to use these drugs very freely. Many here may remember the time when it was a common practice to give quinine in very large doses—20 to 10 grains. Following this we have the slavish employment of the synthetic alkaloids, from antipyrine down to the most recent new antipyretic advertised by the manufacturing chemist. Antipyrine, phenacetine and lactophenine are the drugs of this class that are the most frequently employed at present, but they are rarely resorted to in the very full doses that was formerly the practice. To give large doses of any of these to reduce the fever of typhoid is a practice which is fraught with danger, without any compensating advantage whatever. Guaiacol applied externally quickly reduces temperature, but it is open to the same objection as the synthetic alkaloids, inducing, when effective as an antipyretic, marked nervous disturbance, and so, consequently, lessening the resisting powers of the patient.

I will now refer to the treatment of typhoid by systematic cold bathing according to the method of Brand. This method has now been extensively employed for many years in Germany, France, Australia, and on this continent, and with such universally favorable results that it is generally allowed, even by those who do not carry it out in practice, to be the most effective method at present known.

The great superiority of the Brand over other methods of treating typhoid has been so conclusively proven that it seems almost unnecessary to add anything further to the long list of series of cases that have been treated in this way. What is particularly conclusive about the evidence of the value of this treatment is the uniformly favorable results obtained in different parts of the world. "The mortality at the Red Cross Hospital at Lyons amounted to 7.3 per cent., that of Dr. Hare, in the Brisbane Hospital, in Queensland, 7.84 per cent.; that of Osler, in the Johns Hopkins Hospital, to 7.8 per cent.; that at the German Hospital in Philadelphia, under Wilson and his colleagues, to 7.8 per cent. These results are most impressive; they show that in the method of Brand, systematically carried out and applied to successive cases, as they present themselves, we have the means of saving, out of every hundred cases of

the great endemic disease of the present epoch of our civilization, at least seven more lives than by any other plan." (J. C. Wilson, American Text-Book of Applied Therapeutics.) Since the opening of the Royal Victoria Hospital on the 2nd of January, 1894, this method has been the routine treatment of typhoid fever. In the following table the number of cases admitted each year, with the number of deaths and the percentage mortality are recorded.

TABLE I.

CASES OF TYPHOID FEVER ADMITTED INTO THE ROYAL VICTORIA HOSPITAL DURING THE FIVE YEARS ENDING DEC. 31st, 1898.

Year.	Number of cases.	Number of deaths.	Percentage Mortality.
1894.. .. .	84	3	3.5
1895.. .. .	84	4	4.7
1896.. .. .	72	0	0.0
1897.. .. .	75	7	9.3
1898.. .. .	93	4	4.3
Totals.. .. .	408	18	4.4

The bath treatment was carried out in every case where the temperature rose above 102.2° F., except where there was some especial complication, as hæmorrhage, or symptoms pointing to perforation.

The following table shows the cause of death in the eighteen fatal cases, with the percentage mortality from each cause:—

TABLE II.

CAUSES OF DEATH IN EIGHTEEN CASES.

	1894.	1895.	1896.	1897.	1898.	Percentage Mortality.
Perforation.. .. .	..	3	..	2	1	1.47
Intoxication.....	1	..	..	2	2	1.22
Hæmorrhage.....	1	..	..	1	1	.73
Septico-Pyæmia.. .. .	..	1	..	..	..	.24
Suppurative Cholecystitis....	..	..	..	1	..	.24
Broncho-Pneumonia... .. .	1	..	..	..	..	.24
Abdominal Distension.. .. .	..	..	..	1	..	.24

In our 408 cases we have nine deaths from perforation and hæmorrhage, being exactly one-half.

If a large series of cases of typhoid fever treated by measures other than by bath treatment are taken, it is found that perforation and hæmorrhage taken together cause only about one-fourth of the total deaths, while under the bath treatment the mortality from these two causes amounts to one-half of the total mortality.

The following table, prepared by Dr. F. E. Hare, late resident Medical Officer of the Brisbane Hospital, shows the modification which has been

imprinted upon the constitution of the typhoid mortality list by the introduction of the bath treatment:—

Causes of death in typhoid.	According to Murchison.	Brisbane	
		Hospital before bath treatment.	Hospital after introduction of bath treatment.
Perforation....	3.0	3.0	2.9
Hæmorrhage ..	1.4	1.88	1.2
Other causes..	12.8	9.73	3.4
Total mortality, per cent.	17.2	14.5	7.5

There is no doubt great difficulty to be encountered in the endeavor to carry out the bath treatment in private practice, but that it is possible to do so, even in remote country districts, the letter of Dr. Gordon, of Alywin, in the November number of the Montreal Medical Journal, will, I think, prove convincingly. A good deal has been written about the harshness of the treatment, and, no doubt, many patients complain of it at first, but as a rule, they soon find out that they are much more comfortable after it, and are usually glad to bear with patience the immediate disagreeable effects. It is, of course, impossible to carry out this treatment in private without the assistance of one or two skilled nurses. Portable baths can now be obtained, and, provided the practitioner can obtain the assistance of one skilled nurse, there is no valid excuse for its non-employment.

It is said by some observers that relapses are more frequent after the bath, than after other methods of treating the disease. There is however, no proof of this. It is strange what confusion exists as to the real meaning of relapse in typhoid: and this is the reason for the great discrepancy of opinion as to their frequency, ranging between two and four per cent.

Many include all after-febrile attacks, no matter what their duration may be, under the head of relapses, while others call relapses those exacerbations of pyrexia which occur during the course of the disease. Taking a large series of cases, relapses may, in a rough way, be set down as occurring in from about 3 to 12 per cent. of all. In 325 of the 408 Royal Victoria Hospital cases, where particular pains were taken to closely investigate this point, it was found that relapses occurred in about eight per cent. of the cases. This proportion is exactly the same as in Osler's and Liebermeister's series, and is not any larger than that given by observers in different countries where other plans of treating the disease have been followed.

The reduction of temperature effected by the cold bath although an important factor, is not the chief one in its beneficial effects. The most obvious effects are seen in the nervous, respiratory, and vascular systems.

The marked stimulating effect of the cold on the peripheral nervous system, and reflexly on the nerve centres, is undoubtedly a powerful means in preventing the supervention of a low typhoidal state, which is so common a feature of severe cases treated on the expectant plan. Robin has shown that the processes of oxidation are decidedly reduced during the course of this disease. He has further pointed out that the cold bath increases oxidation, there being a distinct increase in the exchange of gases and in the whole process. He considers that the beneficial effects of cold bathing are due to this increase of oxidation, whereby the toxic products of the tissue destruction are reduced to less harmless excretory bodies. Whether the leucocytosis observed after bathing has any influence, has not yet been determined.

THE TREATMENT OF INTESTINAL HAEMORRHAGE.

Intestinal haemorrhage is, next to perforation, the most common alarming symptom in typhoid fever. In our eighteen fatal cases it was the cause of death in three instances (1.6 per cent.) We had in all 13 cases of haemorrhage in the 408 cases (3.18 per cent.) It is not infrequent to meet with concealed haemorrhage. This occurred in a good many cases. A sudden fall in temperature should always be looked upon as suspicious of the occurrence of a haemorrhage, even if no blood appears externally, if there is no other likely cause for the sudden lowering of the temperature, the condition should be treated as one of haemorrhage. Haemorrhage in typhoid fever is frequent enough to constitute it a symptom, rather than a complication. No doubt one frequently sees cases where a slight haemorrhage appears to be beneficial, convalescence setting in apparently soon after its appearance, still it is always wise to take a serious view of even a trifling haemorrhage and to place the patient at once under such measures as are suitable.

In a few cases, haemorrhage from the bowels appears to be a simple oozing from the blood vessels. In cases of profound toxic poisoning, the blood breaks down and finds its way out of the vessels without any special lesion of continuity of the vessel walls. Even severe losses of blood may not be attended by fall of temperature, as much as 80 ounces in three days having been lost without affecting the temperature. In dealing with haemorrhage it is important to lessen the amount of nourishment given by the stomach, or wholly stop feeding except by the rectum. The foot of the bed should be elevated and a Leiter's metallic coil applied to the abdomen. There is no remedy to be compared with opium. It should be given in doses sufficient to cause either slight drowsiness or contraction of the pupils. It is often a difficult point to decide how far it is advisable to push opium in these cases.

The reaction following the effect of large doses, given for some days,

may be very considerable. In one case it looked as if such a deleterious after effect of opium were manifest. A man, aged 31, was admitted in October, 1897, on the ninth day of the disease, in a very apathetic state. Between the 27th and 28th of October, he had repeated hæmorrhages, the loss it was computed, being upwards of 83 ounces, but after the 28th there was no further bleeding. On the 28th the abdomen was distended, and the distension continued to slowly but gradually increase, day by day, up to November 4th, when he succumbed, death apparently being due to the very great distension. After death, numerous ulcers were discovered in the lower ileum, cæcum, and ascending colon, but in no instance had perforation occurred. The source of the previous bleeding could not be traced.

The practice of giving astringent drugs, like iron, tannic acid, turpentine, etc., is, fortunately for the patient, becoming less and less frequent. Whether ergotine, hypodermically, has any influence in checking intestinal bleeding, I am unable to say.

THE TREATMENT OF PERFORATION.

When perforation occurs, the sooner the case is transferred to the surgeon the better. It is no doubt possible for spontaneous recovery to take place, but it is too rare an event as compared with the result following early operation, to be for a moment considered. The result of operation, considering the gravity of the condition for which it is performed, must be looked upon as most gratifying. Keen has collected 83 cases with 18 recoveries, a result which justifies interference in every case where the condition is recognized. Here, however, we meet with great practical difficulties. The so-called typical symptoms of perforation, were, in most of our cases, conspicuous by their absence. Perforation may occur in persons extremely ill, without any pain, tenderness, distension, rigidity, or vomiting, and it may be found at the post mortem without having been suspected during life. Again, the symptoms may be developed very slowly, where a patient is stuporose from the intoxication of the disease, deep-seated tenderness and a gradually increasing abdominal distension may be the only signs. In several cases I have noticed symptoms of the same character without any perforation, recovery having taken place afterwards.

Peritonitis may be set up in typhoid from other causes than from perforation, and I believe this to be a more common event than is generally believed. I believe I have met with several instances of a more or less generalized peritonitis where recovery took place.

THE DIET.

There is an almost universal agreement as to the best way of feeding typhoid patients, but now and then one reads in medical journals about

pleas for a more liberal feeding than is usually the custom, some going so far as to advocate the administration of solid food, not alone in early convalescence, but even during the active course of the disease. Barr, of Liverpool, and Fred Shattuck, of Boston, have recently urged very cogently for a more liberal feeding of typhoid patients. Dr. Shattuck, for upwards of five years, has been allowing his typhoid patients a more liberal diet, and with, as he says, satisfactory results. The tendency to relapses, to perforation, and to haemorrhage, he finds not increased. He does not advocate an indiscriminate diet, but feeds his patient with reference to his digestive power, rather than solely or mainly with reference to his fever. In addition to the ordinary diet he often allows either soft-boiled or raw eggs, finely minced or lean meat, scraped beef, the soft part of raw oysters, soft crackers with milk or broth, soft puddings without raisins, soft toast without crust, wine jelly, apple sauce, etc. Cases are not infrequent where fever persists for some days after convalescence has been established, the temperature keeping up from weakness and impoverished blood, rather than from the persistence of local lesions. In such cases, appropriately called "starvation fever," a more liberal diet is soon followed by the establishment of health.

DISCUSSION ON TYPHOID FEVER.

THE SURGICAL TREATMENT OF TYPHOID FEVER.*

BY

G. E. ARMSTRONG, M.D.

Associate Professor of Clinical Surgery, McGill University; Surgeon to the Montreal General Hospital, and Attending Surgeon to the Western Hospital; Consulting Surgeon to the Protestant Hospital for the Insane, Verdun.

I think that the committee that arranged this discussion would have done wisely to have indicated certain features of typhoid for consideration, rather than the whole subject. To do justice at all to the surgical complications and sequelae of typhoid alone would require many meetings, and in the time allotted I can only most briefly refer to some of the most important ones. What I say can only be suggestive, to deal at all fully with any one, this evening, is hopeless.

The bacilli of typhoid can live in the living human body for such a long period of time, and are so widely distributed through the different tissues of the body that evidence of their work is widespread and in many tissues long delayed. Professor Keen has lately published a most valuable work on the surgical complications and sequels of typhoid fever, and from it much that I have to say is taken.

Gangrene.—Under this head I do not include bed-sores, although these sometimes are very much of the nature of gangrene. Typhoid gangrene is rare. Neither Murchison nor Flint met with a case in their large hospital experience. It may occur in mild forms of the fever, and generally late in the course of the disease, or early in the stage of convalescence. It may be due to an embolus from the heart, but more frequently to an autochthonous thrombus. In these cases a pure culture of the typhoid bacillus has been found in the walls of the artery and vein, and in the thrombus. The distribution in the cases collected by Keen is as follows: Ears, 6 cases; nose, 10 cases; face, neck and trunk, 47 cases; anus, 5 cases; genitals, 20 cases; legs, 126 cases.

The veins are affected by thrombosis more frequently than the arteries, but the results are, as might be expected, less disastrous.

The preventive treatment consists in the attainment of good hygienic surroundings, the sustaining of the heart by cardiac tonics and stimulants, and the careful avoidance of injuries or any undue pressure upon any part. When gangrene has already occurred it is considered wise

(*Read before the Montreal Medico-Chirurgical Society, Jan. 23rd, 1899.)

to wait for a line of demarkation, and then to amputate. One case of amputation of the legs is reported followed by recovery.

Affections of the Joints.—During the course of typhoid there may occur a rheumatic, septic, or pure typhoid, arthritis. As a rule more than one joint is affected, but in the monarticular variety, the hip is most frequently and seriously involved. While the rheumatic and septic forms of arthritis not infrequently terminate fatally, the pure typhoid joints practically always recover, and ankylosis is very rare.

The distension and destruction of the joint may end in dislocation. I have recently had under my care in the Montreal General Hospital, a young girl, brought in from the country, in whom this serious complication had occurred. The physician who brought her, a most able and careful man, told me that she had lived in a poor, damp house, many miles from his residence, and that he had not been able to secure any nursing other than that supplied by kindly-disposed neighbours. On admission to the hospital she was thoroughly crippled, both hips and both knees had been involved, and the right hip was dislocated on to the dorsum ilii. Most extensive bed-sores, laying bare each hip, and nearly the whole of the sacrum, were almost healed over. The right knee lay fixed across the lower end of the left thigh, and the two legs were flexed upon the thighs. By means of apparatus of one kind or another, the legs were straightened, and when she left the hospital she could stand and walk a little. She was advised to spend some months in the country to recuperate, and then to return to the hospital. I have not seen her since. In this case it seems reasonable to suppose the arthritis to have been partly septic, although perhaps purely typhoid at the onset. The contraction deformities are probably reflex. A knowledge of the occasional occurrence of arthritis in typhoid, should lead the physician to examine from time to time the joints of the body, and particularly the hip joint, to take heed to complaints of pain in the neighborhood of joints, and to carefully relieve painful joints by position, the use of sandbags, and where indicated, to apply moderate extension. If effusion threatens to produce dislocation, the joint should be aspirated under the strictest antiseptic precautions, and if pus is found, which is seldom the case, the joint should be opened and treated according to the indications.

Affections of the Bones.—Keen has collected 205 cases of typhoid bone disease. Bone disease is a late sequel of typhoid, often appearing weeks or even months after the patient has left the hospital. The pain is not generally acute and patients frequently return to the hospital with a discharging bone sinus. These sinuses may have been discharging for months with every opportunity and probability of ordinary pyogenic infection, and yet the pus yields a pure culture of the typhoid bacillus.

It would appear that, while no bone is exempt, yet some are more frequently involved than others. For instance, the ribs were affected in 40 cases; the humerus, in 11 cases; the ulna in 15 cases; the pelvis in 8 cases; the femur, in 22 cases; the tibia in 91 cases; the fibula in 3 cases; and the foot in 8 cases. The extraordinary frequency of bone disease in the lower extremities is noticeable. This may be due to the frequency of injuries, or, as Keen thinks, to their being more distant from the centre of the circulation and where nutrition is more sluggish and its activities most easily disturbed and impaired. The date of onset has been ascertained in 186 cases, and is as follows:—

In the first two weeks, 16.

From the third to the sixth week, 66.

From months to years after the fever, 104.

So that bone disease is more frequently a sequel than a complication of typhoid.

Usually the first symptoms are local pain, tenderness, and swelling. Frequently there is a slow subsidence of the symptoms. Recovery may follow, or the parts may become red and soon after may fluctuate. In other cases, after a slow subsidence, the pain and swelling may reappear. Osler and Parsons refer to excellent examples of such oscillating cases.

The surgical treatment of typhoid bone lesions although often tedious, operative measures being repeated in some cases more than once, is in the end almost always satisfactory. The surgical treatment is generally called for when the patients are fully recovered and their reparative power fairly good. When fluctuation can be perceived, unquestionably immediate operation should be done, and it is still better to operate before fluctuation appears, unless resolution is fairly certain to follow. I have had, in the Montreal General Hospital, some cases of very extensive necrosis of the long bones, which early operation would probably have limited.

In operating upon typhoid abscesses and bone lesions great thoroughness is requisite. The bacilli are found more in the abscess walls than in the pus. If the periosteum is involved, it must be removed and the bone beneath chiselled away. If indications are present that the medulla is involved, the trephine must be used and all the infected area gouged out. Repeated operations are sometimes needed because of the lack of thoroughness in the first instance. Chantemesse relates a case in which, for osteomyelitis, the tibia was trephined three times. No pus was found, but the disease persisted, and the patient was only cured a year later by opening the tibia by an extensive operation, forming a long gutter in the bone. In my own cases I have found at times a mixed infection, and in other cases a pure culture of the bacillus of Eberth. Recently I had to deal with an extensive abscess over the left

parietal, the pus from which gave a pure culture of the bacillus of typhoid. Recovery followed after a free incision with thorough scraping of the soft tissues and a superficial chiselling of the exposed bone.

Passing over, for want of time, typhoid abscesses, typhoid haematoma, the cerebral complications of typhoid, otitis media, and the typhoid affections of the larynx, pleurae, lungs and heart, the stomach and oesophagus, I will speak of intestinal perforation in typhoid.

Perforation of the Intestines.—In 4,680 cases tabulated by Fitz, the mortality from perforation was 6.58 per cent., which may be accepted, therefore, as fairly representing its frequency. It is certainly much more frequent in men than in women, for what reason we do not know. In children it is very rare. Fortunately for the surgeon and the patient, there is generally only one perforation, although two have been reported in 21 cases, and in 2 cases there were 25 to 30. In 81 per cent., the perforation was in the ileum, in 12 per cent. in the large intestine, and in a few instances in the vermiform appendix, Meckel's diverticulum, and jejunum. The greatest number of perforations have occurred during the second, third, or fourth weeks of the fever. The mortality has, up to the present, been very high. It is a debatable point whether perforation of the intestine in typhoid fever ever recovers without operation. Murchison placed the mortality at 90 per cent., and the mortality after general peritonitis had occurred at 95 per cent. With our present knowledge of the results of infection of the peritoneum by intestinal contents, and the experience gained by operators in the uncertainty of the diagnosis of perforation by the most careful and experienced clinicians, one may reasonably doubt the existence of perforation in any case when recovery follows.

There are 89 well-authenticated cases of operation for typhoid perforation recorded, with 17 recoveries, a mortality of 81 per cent., which when compared with Murchison's unchallenged figures of 90 or 95 per cent., may well give us hope for still better results in the future. Keen's analysis of Westcott's table of 83 cases shows some surprising results. Under fifteen years of age there were five cases and two recoveries, or 40 per cent. of recoveries. From fifteen to twenty-five years of age there were 23 cases and three recoveries, or 13 per cent. of recoveries. From twenty-six to thirty-five years of age there were 24 cases and 5 recoveries, or 20.8 per cent. of recoveries. Over thirty-five years of age there were 11 cases, with 5 recoveries, or 45.5 per cent. of recoveries.

These figures show that operation for typhoid perforation of the intestines are more fatal between sixteen and thirty-five than under sixteen and over thirty-five.

A critical enquiry into the cause of this tremendous mortality, which

is far and away beyond that attending perforation of the alimentary canal from other causes, as, for example, perforative appendicitis, perforating gastric ulcer, gunshot and other wounds of the intestine, leads one, in the first place, to consider and try to improve upon our present methods of diagnosing typhoid perforation.

The first and great step in advance is to be made just here. Operations undertaken after a general septic peritonitis has developed, will not be more successful in the presence of the other unfavorable conditions always present in the third and fourth week of typhoid, than elsewhere. To obtain better results in the future than have been attained in the past, operations must be performed earlier, they must be done as soon as perforation occurs, and before the infection has spread.

The signs of perforation are sudden onset of abdominal pain, accompanied by localized abdominal tenderness, and in some cases nausea and vomiting. The pulse may become altered in rate and quality, but not always at first, to a marked degree, and the temperature may suddenly lower. Each of these symptoms must be separately and carefully estimated and collectively considered. They may be masked by typhoid toxæmia and the most careful clinician may occasionally err.

I have operated ten times for typhoid perforation, and in none of my cases was the occurrence of perforation marked by those well-marked, striking symptoms so generally mentioned in text-books. The symptoms often simulate very closely those of perforative appendicitis, even in the right-sided tenderness.

It would seem that the presence of leucocytosis may in the future prove to be a valuable sign of intestinal perforation in typhoid when considered together with the presence and absence of other symptoms. According to Thayer there is no increase in the proportion of white blood-corpuses during the fever, but rather a slight diminution in their number which gradually diminishes until convalescence. During the fever the number may fall even below 2,000, and sometimes below 1,000 per cubic centimeter. The lowest count seems to be about the end of the third week. Sometimes the white blood-cells increase markedly in number with the fever, even without any complication. Four cases were observed by Cabot in which the count was over 11,000, and ran as high as 17,000, without any other than the typical typhoid lesion. But the effect of complications is very marked and undoubted. Cabot mentions one case of perforation in which five days before perforation the number of white cells was 8,300, and at the time of perforation, 24,000. In another case at the time of perforation the number of white blood-cells was 18,500. The increase of white blood-cells may be almost, if not quite, as great upon the occurrence of phlebitis or otitis media, or the development of a typhoid abscess. General bronchitis and cystitis.

have usually no such effects. It seems clear then that it is correct to make an occasional count of the white blood-cells, as a routine practice in typhoid fever, and, if with the development of symptoms that lead to the suspicion of the occurrence of a perforation, the count should be repeated, and if leucocytosis is found present, and other typhoid complications can be excluded, this symptom would justify the assumption that a perforation has occurred. In some cases of profound typhoid toxæmia leucocytosis may not occur.

It would be well in suspected perforation to have a surgeon see the case with the attending physician, and it would be a good hospital practice to adopt Osler's suggestion that the house-surgeon should visit these cases in the wards with the house-physician.

The dangers of surgical interference are unquestionably very great. The following words of Wilson, written twelve years ago, state the question very clearly: "Granted that the chances of a successful issue are heavily against you, that the patient is in the midst or at the end of a long sickness, that his tissues are in the worst state to stand the injuries from the knife, that the lesions of the gut may be very extensive, that the vital forces are at the lowest ebb; no one has yet hesitated to perform a tracheotomy in the laryngeal complications of typhoid fever which requires it to save life, for these reasons. The operative treatment of purulent peritonitis has been performed many times successfully by the gynæcologist in conditions less promising. In point of fact, the objections that may be urged against laparotomy in intestinal perforation in enteric fever are no more forcible than those which would have been made use of at first against the same operation in gunshot wounds of the abdomen. The courage to perform it will come from the knowledge that the only alternative is the patient's death."

I am sorry that I can only count one recovery among my ten cases, and that one was not an ordinary perforation. I will allude to it again. Another of my cases lived over six weeks and ultimately died, subsequent to the occurrence of the third perforation. This young man did well for four weeks after I closed his first perforation. I regarded him as saved, when the second perforation occurred. The incision had not fully closed and the second perforation occurred *in situ*, and the contents of the intestines all escaped externally, and I think that had not a third perforation occurred within the abdomen on the forty-second day after operation, that he would have survived the first two. In one case I opened the abdomen and failed to find any evidence of perforation, only about two feet of completely collapsed bowel, from some cause undiscovered. This has occurred to other surgeons, and only recently a similar case occurred in the Johns Hopkins Hospital. My patient, as well as the one in Baltimore, recovered, the operation apparently having

had no retarding influence on the convalescence. Three points have been conspicuous in my cases:—

1. That in all of them the operation had been too long delayed. In all of them, on opening the abdomen, gas and faecal matter escaped and it was quite evident that a very considerable portion of the peritoneal cavity was already infected.

2. That notwithstanding the poor reparative power of the patient the closure of the perforation in the intestine healed readily, and shortly. At the autopsies performed on these patients, the portion of intestine involved was distended with water and air, and in every instance proved tight, and no leakage was possible.

3. The great lack of reparative power was manifest in the failure of union in the abdominal incision. In the man who lived forty-five days no union occurred, and when the stitches were removed the edges of the incision fell apart. About the twenty-first day after operation, the edges were scraped and brought together by sutures, but again union failed to occur. In the case of the man in whom no perforation was found, the union of the edges of the incision was very imperfect, although not a drop of pus formed. The man left the hospital with a ventral hernia and was directed to return in six months and have the edges again united.

The result of perforation is sometimes a localized abscess, similar to the localized abscess which sometimes follows a perforative appendicitis. My last case was of that character. The man was admitted to the Montreal General Hospital under the care of Dr. Finley. He had been treated in the country for typhoid, and during the course of the fever developed pain, tenderness, and, later, a tumour mass of very indistinct outline in the umbilical region. His condition was a very puzzling one, and it was thought at one time that it might possibly be tuberculous. About a week after his admission to the hospital he developed symptoms of intestinal obstruction, distress, pain and faecal vomiting. I opened the abdomen in the median line below the umbilicus, to relieve the obstruction. Upon opening the abdomen a large quantity of pus escaped, twenty ounces or more. It seemed to lie in a walled-off space in front of the intestines, which were pushed backward and upward. The space was irrigated and drainage provided. During his convalescence he passed some faeces and gas through the drainage tube, at different times. His blood gave the typical typhoid reaction. He has quite recovered and has gone home. He told us that his wife and daughter had enteric fever at the time that he was taken ill. I think there can be little doubt that this was a case of typhoid perforation, followed by localized abscess.

Liver and Gall-Bladder.—Typhoid affections of the liver and gall-bladder are extremely interesting and far-reaching, but the time limit set by the committee prevent me entering upon their discussion.

DR. F. G. FINLEY—I think the chief interest that typhoid fever has at present is as to its treatment, and the use of the cold water bath. The advocates of this method claim that it diminishes or alleviates certain nervous symptoms. This testimony is so universal, and everyone that carries it out must have observed it for himself, that it must be accepted. The second point is that it diminishes mortality. Different writers give different numbers, from 4 per cent. to 7 per cent. With a view to see what the results have been in the General Hospital here, I have looked over the reports for a number of years past, and compared the statistics of cases treated before the introduction of the bath, with those treated after. For this purpose I have used Dr. Bell's statistics from 1870 to 1879. He reports 600 cases, with a mortality of 10.4 per cent. In the period of 1892 to 1898, 600 cases were treated, of which 2-3 or 3-4 were submitted to the cold bath treatment, (three out of four physicians using this treatment in the General Hospital), and the mortality was 9.4 per cent, showing a diminution of 1 per cent. in the later series of 600 cases. This result does not seem encouraging, when we consider that the hygienic conditions are now better than they were formerly; and I am disappointed with the results in finding they have not improved more. I see in a number of statistics reported that the mortality rates are not given previous to the use of the cold bath; with the exception of Hare, who is one of the few who compares results before and after the use of the bath. Osler and Wilson do not mention the mortality before the cold bath. We know that the mortality differs very much in different localities; and it is necessary to have the mortality rate for each separate locality.

Our results do not show a great lowering; but I can testify that it mitigates the suffering of the patient, and certainly what Dr. Stewart says can be corroborated.

So far as perforation goes, I think the most prominent symptom is acute pain in the abdomen, which marks the onset of perforation in probably more than half the cases, and we now teach our house physicians to summon the surgeon or physician in attendance when this symptom arises, at once. In the next few hours it is followed by the other signs of this complication. Where we can get an absence or diminution of liver dulness early before distension has set in, it is a valuable sign. It is only valuable when distension is absent, as distended bowels may produce marked diminution or even absence of liver dulness. I think Dr. Armstrong's results disappointing; but we do not, however, know what the results are in such cases; most men do not publish their fatal cases, but only the successful ones, so that the mortality is, no doubt, higher than has been given in the tables. When we consider the almost uniformly bad results of operation, we can hardly expect any marked diminution of mortality by surgical interference.

Dr. J. B. McCONNELL—Not having been able to review the recent literature of the subject, I am afraid I shall not be able to add anything new to the discussion, in regard to diagnosis, which has been in the past one of the most important features in the consideration of typhoid fever, on account of its many difficulties. The modern method of serum diagnosis has removed many of these difficulties. The only new point I have taken note of is the palmo-plantar symptom, a yellow condition of the palmer and plantar surface of the hands and feet respectively, which Quintin claims is always present, and that this skin peels off at the end of the fever. This would help in some cases where the serum test could not be applied. With regard to treatment and statistics, I think we should not place too great reliance upon the percentages of recoveries under different methods. Epidemics vary much in the character and intensity of the fever. Some recent authorities state that typhoid in late years is much less virulent than it was twenty or thirty years ago, and that the old mortality of 18, and the present one of 7, or 8, might not be less than we should expect without reference to any special method of treatment. I think that it is of the greatest importance in the treatment of these cases to get the patient into a perfectly comfortable condition, with nothing to annoy him, and to attend to the diet properly. As a rule I prescribe small doses of nitro-muriatic acid, combined with a little boracic acid, and syrup of orange, which is easily taken, and is refreshing to the patient. The acid may help digestion and serve as an antiseptic to the upper alimentary tract.

With regard to the cold bath treatment, while it is undoubtedly the most efficient means of combating the fever and preventing complications by toning the system, increasing the elimination of toxins, and of the hyperleucocytosis produced, I do not think it is absolutely necessary to plunge a patient into a cold bath every time the temperature rises to 102 1-2; according to the direction of Brand. In these milder ones, which constitute the majority of cases we have to treat, I find the cool sponging is sufficient. When the temperature rises to 104, or keeps up continually with slight morning remissions, I think then that the cold water bath is the best method of treatment. The easiest way to carry this out is to use the cold pack, as advocated by Fitz. The bed is raised at the head and a rubber sheet is placed under the patient, the body is wrapped in a sheet and cold water is soused on with a sponge. This, I think, gives the patient much less shock, and causes less disturbance, and reduces the temperature quite as satisfactorily.

With regard to haemorrhage, in a case which I had recently in the Western Hospital where there was a profuse haemorrhage and collapse, the treatment which was successfully adopted was to restrict the diet for several days, not a few hours as some recommend, to much below what

he had been getting before, and to use camphor and opium. I do not think that astringents are of much service. Lead should not be given, as it adds an additional toxic element; it is absorbed from the stomach as an albuminate, appears in the intestines as a sulphide, and has no effect in stopping haemorrhage at the bottom of a slough in the intestine. I think that opium is the only part of the incompatible lead and opium pill that we can expect any good from. Cauphor and opium is a much better combination. Ergot is, I think, harmful rather than beneficial. In all kinds of medical haemorrhage a remedy that contracts the blood vessels generally, increasing the intravascular tension will increase the outflow where you have a lesion in any part, except the uterus. A vessel cut straight across might have its calibre lessened by ergot, but all haemorrhages in tpyhoid fever are rather from erosion on the sides of the vessel which it will open rather than constrict. The opposite treatment of nitro-glycerine or any nitrite, which dilates the vessels and distributes the blood under a lessened tension throughout the vessels, I think is more rational. I have had better results, in some recent cases of haemoptysis, from these remedies than from ergot or astringents. Owing to the wide distribution of the specific bacillus, intestinal antiseptics cannot be of much avail, even if any thing could inhibit the bacillus in this tract, which is improbable.

Dr. JAMES BELL—There is no doubt that perforation in the course of typhoid fever is the most important subject in connection with the treatment of the disease to-day. The medical treatment has possibly not reached its final stage; but, at any rate, everything seems to be pretty well looked into in that respect, as far as the physician can see at the present time. Perforation is responsible for more deaths, according to statistics of observers, than any other cause; and while it is generally admitted that some few cases get better without operation, it is an off chance, and no physician should submit his patient to that chance by neglecting operation. As Dr. Armstrong says, it is hard to say whether perforation has occurred or not. When perforation does occur, the operation must be performed early. I have not had any recovery after operation, but my cases were all operated on too late. Operation should be carried out within twenty-four hours, and the sooner the better. There may be a reservation here, that one should not operate on a patient in a condition of collapse, when he is actually dying; within a few hours he may have rallied and then the operation should be carried out as quickly as possible. The great point is early diagnosis, and there is greater difficulty in making an early diagnosis in typhoid fever perforation than in gastric perforation or in appendix perforation. The reason is that in typhoid fever the patients are more or less stupid and heavy, with high fever, and there is more or less discomfort about the abdomen, with distension. Very likely, the early

symptoms will not be marked at all ; but if one waits until what I may call the classical symptoms, distension and absence of liver dulness, and collapse are fully developed, he will have waited until the time has passed to do any good by operation.

I agree with Dr. Finley that there can be only one reliable early symptom, and that is pain. I think alteration in pulse and temperature is apt to occur about the same time, and I feel that in order to do any good in operating for typhoid fever perforation, there must be far less timidity about making the diagnosis, on the part of the physician ; and on the part of the surgeon in operating on an uncertain diagnosis.

Look back ten years and consider how appendicitis was treated, when the physician hesitated to consult the surgeon or recommend operation until he was sure that perforation had taken place. And the same was true with regard to the surgeon. To a less extent there has been the same history, in recent times, with regard to gastric operations. We must be prepared to open the abdomen and take chances of an unnecessary operation, when there is *prima facie* evidence, which the physician and surgeon agree is probably of the nature of perforation. The history of operative treatment has reached a stage in which there is no question of its having saved life that otherwise might have been lost. There is no doubt that to open an abdomen unnecessarily, in typhoid fever, is more serious than in any other disease, than when the patient is not suffering from disease which is serious in itself. I am pleased to hear Dr. Stewart's remark with regard to antipyretic treatment. I remember very well 20 years ago, when large doses of quinine were being used so freely for typhoid fever. I expressed some doubt of its value to some of the physicians of the General Hospital—where I was house surgeon, but it was the overwhelming opinion that such criticism as I showed was quite improper, that quinine was the remedy. I say this because physicians to-day have the fullest confidence in the cold bath treatment. Dr. McConnell is a skeptic ; but a change of opinion may take place in this respect. I do not know if it is so important ; but whether it is or not, the same cannot be said with regard to the antipyretic treatment by drugs in typhoid fever.

Dr. ADAMI—It has, I believe, been the general wish of your committee, that to-night, in discussing typhoid fever, attention should be drawn to its incidence in Montreal, its relative frequency here,—and it is painfully frequent,—its spread, and any possible local characteristics of the disease in recent epidemics. To this end we especially depended upon Dr. Wyatt Johnston with his peculiar knowledge of the subject gained in connection with the Board of Health, and with the numerous studies which he had made in connection with local epidemics. But his recent indisposition has made it obviously impossible for him to take an

active part to-night. The subject of etiology is so large and so important that it is most satisfactory to have his promise to introduce the matter at a later meeting. It will be well, therefore, that the discussion to-night be confined to the matter brought forward by Drs. Stewart and Armstrong, namely, the medical and surgical treatment of enteric fever, matter amply sufficient for a full discussion. But, this being accepted, I find all the ground cut from under my feet, for, as a pathologist, I came to say a few words upon etiology. Under the circumstances I trust that the meeting will not consider me over bold, if, forced to confine myself to treatment, I, as an outsider not in practice, venture to propound views upon practice.

Taking first the surgical treatment of typhoid: Why is it that one finds perforation to be so dangerous and operation so rarely successful here, in Montreal, as elsewhere? It was you, Mr. Chairman, who first indicated to me the reason. When, two session ago, I read a paper upon omental adhesions, you called attention to the fact that in typhoid such adhesions are practically never met with, and asked why this should be the case. At the time, it may be that I gave you a lame answer. But the question has often recurred to me, and, if I mistake not, I answered it when I discussed the subject of these omental adhesions more fully at Toronto last year.*

It is not quite correct to say that such adhesions are never found in typhoid fever. Very occasionally they occur, and I have met with them, just as very occasionally operation following perforation is successful. And the explanation of the absence of these adhesions is the explanation why operation so rarely results in recovery, namely, it is, that the type of inflammatory reaction in typhoid is low and enfeebled. Lowered leucocytosis is characteristic of the disease, and, following upon perforation, or injury of serous surfaces, in place of the healthy rapid exudation of abundant leucocytes, and development of abundant fibrinoplastic material in the region of injury, there is, almost, a thin serous exudate with small plastic powers. Instead, therefore, of the region of perforation becoming walled in, the contents of the intestine have a fatal tendency to infect the peritoneum generally; and after operation, the primary union in the parts is feeble; one must expect the wound to heal badly.

This, it seems to me, is the rational explanation why the results are so poor. Indeed, we must expect them to continue poor.

Now, to turn to the medical treatment. In his introduction to his son, Stephen Paget's *Life of John Hunter*, recently published in the "Masters of Medicine" series, old Sir James Paget makes the striking and paradoxical statement that, more especially in medicine and the biological sciences, *facts are not truths*. I do not quote the identical

* Philadelphia Medical Journal and this JOURNAL.

words for I have not the words by me, but this is the essence of the paradox. Sir James points out that the facts gleaned by one generation and serving as the basis of rational practice during that generation become so modified by the facts gathered later, that later they are seen in their true light of half facts. And, I may add, half facts are only half truths.

May we not apply this thought to typhoid and its treatment as well as to its etiology? Everyone, who studies, must admit, for example, that the cold bath treatment of the disease has done more to lower the mortality and alleviate the symptoms than any other means so far at all generally employed. Dr. Stewart's tables place this fact in a most convincing light. Does this fact, however, imply that the cold water treatment is the only rational treatment of the disease? May it not be only a half fact? Is it not possible that other means may be employed, in addition to cold water, to alleviate certain symptoms and to further lessen the mortality? For myself, from pathological considerations, I cannot but feel that though at first he overloaded his writings with hypothetical considerations about endosmosis and exosmosis, Dr. Thistle, of Toronto, has done yeomen service in directing forcible attention to the value of clearing the bowels during the course of the disease.

Whether there be constipation or diarrhoea the peculiar foulness of the typhoid evacuations is, shall I say, notorious. There must be abundant and abnormal putrefaction, that is, there must be, and we know there is, abundant bacterial growth in them. We know, further, that there is a greater or less number of open ulcers along the course of the ileum. Is it rational to permit, without an effort to arrest it, the absorption of toxic materials from the gut, the actual secondary infection of the system through these open wounds?

In a short notice in the *Lancet*, at the end of 1897, another member of a family already referred to, my old friend and pupil, Owen Paget, states the results obtained by him by what, at first thought, seems to be the utterly childish, if not absurd treatment of dosing the patient with *salad oil*—salad oil, by the cupful *per os* and *per anum*. Under most unfavorable conditions in Western Australia, without proper nursing aid and without hospital care, he, (I believe I state it correctly) brought through by this means one hundred patients without a death, when in the same town the hospital cases showed no lessening in the ordinary mortality. The explanation he afforded me recently, and it appears to be most sensible, is that salad oil is easily administered, the patients rapidly come to take it without trouble, it is a mild laxative, and at the same time acts usefully as a food stuff, by it the bowels are kept well cleared and are not irritated. In short, by this means is avoided the dangerous irritation of the bowels which constitutes the strong objection to mercurial and other purgatives, which otherwise would be useful. So soon as the stools are perfectly sweet he ceases to give it.

May it not be wise, therefore, to utilize to the fullest all the advantages gained by cold bathing and at the same time—whether using salad oil or other laxative, internal antiseptics, (if they are of the least use), or by any other means—to employ means to keep the ulcerated surface as free from irritation and secondary infection as possible? Assurance as to the value of any mode of treatment and loyalty to the same, is not incompatible with willingness, nay anxiety, to employ every rational means to arrest disease. And while to-night Dr. Stewart has especially dwelt upon the value of the cold bath treatment, and while he has been a consistent advocate of the same, as a colleague, I know that in his wards this principle is ever kept in mind.

Dr. W. E. DEEKS—I would make a few remarks in connection with my own experience with fevers. About what has been referred to here tonight, I think those who advocate the cold bath so strongly, ought themselves to have typhoid to have some practical experience, and possibly they would not recommend it so strongly. I think in the treatment of typhoid every individual is a law to himself, and has to be treated as such. There are some in perfect health who enjoy a cold bath, and others to whom the cold bath is distasteful. When I had typhoid—it was not very severe—a cold bath would have been misery. I have seen some patients shiver in the bath for a long time, and shiver after it was over, and I have never thought that they reaped the advantage from it they might have done. I do not think a patient who fears cold baths, and who, after being brought out chatters for fifteen or twenty minutes on the bed, gets benefit from them.

I think Dr. Finley referred to a very important matter in connection with the mortality. The mortality of typhoid has certainly decreased in recent years. Is it due to the cold bath treatment, or to improved hygienic conditions in our modern hospitals? It was a different thing to put a patient on a straw pallet, changed every week or two, to putting him on springs, and that itself ought to reduce the mortality.

I think there are some persistent cases of high fever where baths ought to be resorted to in private practice, but I have never done so, and I am thankful to say I have never lost a case. Where patients have headache and the cold pack did not relieve them, I have found that a few grains of phenacetine helped them temporarily, and tided them over the crisis.

About purgation and the remarks of Dr. Adami, I have never used salad oil, but I have used calomel. In my own experience, when I had typhoid, I felt stuffy and miserable, and the abdomen was distended. I asked the nurse for 3 grs. of calomel, and got relief from it. Dr. Stewart did not disapprove of it; and I used it afterwards on two or three occasions. When the patient is distended and the stomach full and he feels miserable, 3 or 4 grains of calomel give the greatest relief;

the abdominal distension disappears, and they have asked to have the same dose repeated. I have rarely even tried the cold pack to the head. The sponge bath, with either ammonia or alcohol, according to the financial condition of the patient, applied more or less constantly, was sufficient in every case to reduce the temperature to a moderate degree, and I think that the much vaunted cold bath is not by any means all that it is claimed to be.

Dr. J. M. ELDER—I quite agree with Dr. Deeks, from the standpoint of the general practitioner; I have dealt with typhoid off and on, as a general practitioner, and had my fair share of it, though I have not had Dr. Deeks's results. I have had more than one case of perforation, and I have expected more. I think to put typhoid patients on one line of treatment medically, or one diet, everlasting milk, and nothing but milk, is slightly irrational. I do not think everyone can digest milk, and we should not be restricted to one thing. We neglect too much, and it is true of our hospitals where we follow out a routine practice, the personality of the patient.

I will not find any fault with the hospital statistics, but I think we cannot compare them with the results in private practice. The private practitioner ought to get the better results; but I do not think the private patient can get the attendance a hospital can give. The hospital patients are not in as good a condition as the private patients; they only come to the hospital two or three weeks after the disease has begun, they do not go to bed early, they are a poorer class, and their health is not as good very often as that of private patients.

Dr. D. J. EVANS—I have not had a very extensive experience of typhoid in private practice, but with regard to the diet of typhoid patients, I was struck about four years ago with the fact that a diet limited to milk entirely, more or less diluted, was nauseous to some patients, and I not infrequently found that the milk produced some bad effects. I saw some caseine curds in the motions, and that led me to modify the milk in various ways. I have fed patients on modified milk, and then on paps and gruels, etc., which had no bad effect, then I used malted milk and meat juice occasionally, and got quite an extensive dietary. About a year ago I noticed this was coming out in the journals, and that many were using this dietary. The result of my experience has been quite satisfactory.

With regard to the cold bath treatment, I have always tried it, because I was told, and saw in the General Hospital, that it is the best. In private practice one is not able to carry out this treatment satisfactorily; and where I have wished to produce the same effect, I have got very satisfactory results from the careful use of the cold pack, with, I think less discomfort to the patient. I have put them in the half-pack, the

trunk of the body wrapped in iced sheets, three to four thicknesses, and the feet kept warm, with hot bottles, and wrapped in a blanket during the time they are in the pack, and kept them 10 to 12 hours, as the temperature indicated. The patient very often falls asleep, and nervous symptoms subside. I can recommend this treatment as a very efficient substitute for the bath, and somewhat better than the sponge treatment.

SIR WM. HINGSTON—I was sorry I was not in time to hear the medical aspect of the question. In listening to the discussion, the fact forces itself on my mind that typhoid fever today is not what it was thirty or forty years ago; it runs a milder course, shorter in its duration by nearly a half. I recollect when typhoid was a disease of five or six weeks' duration; and now I hear of cases getting well in half, and less than half, that time.

I do not think that we have reached the best form of treatment, certainly the indiscriminate use of cold water has never recommended itself to my judgment. I share the opinion of other gentlemen, who have spoken to-night, that there are cases where cold water would be of service; there are others where it would be fatal. There are no two persons who have the same views with regard to the use of cold water. Cold water to me is torture; I like warm water. Two men who held opposite views on this subject were Dr. Campbell, formerly Dean of McGill, and his associate, Dr. Sutherland. Dr. Campbell never recommended the warm bath, thought it was foolish; Dr. Sutherland never recommended a cold one, and took the warm one. To have put Dr. Campbell into a warm bath, and Dr. Sutherland into a cold one, would have caused each of them great discomfort. If a man like Dr. Sutherland had fallen under my care, I should probably have put him into a warm bath, and continued it as good hygiene; if it had been Dr. Campbell, I should not have done so. The indiscriminate use of cold water is a mistake, and an act of cruelty; I have seen persons blue in cold water, and remain blue for some time afterwards, and not recover their normal color.

I think there is a huge mistake made in the matter of diet. The pouring in of enormous quantities of milk, giving persons, as they get weaker, an increased quantity of milk, far more than the stomach can digest, and far more than is absorbed, so that large quantities pass into the intestine, to my mind is not wise. I think it is Osler who says that the duty of the physician is to watch carefully the evacuations, and see that no undigested milk passes away. I suppose when persons get better from fever, a relapse from meat-eating may take place. In order to obviate that, physicians do not permit their patients to take meat, but they suggest to them to take large quantities of broth and beef tea

and bouillon. I think that question of liquid meats was disposed of nearly thirty years ago, and I am astonished that anyone recommends them today. It was found that they are incapable of supporting strength, utterly valueless, and even mischievous. What will you give? I would certainly say milk, with persons who are accustomed to take milk. There is as much difference in the matter of milk as there is in the matter of cold water. If you give some persons milk, in health, you may produce constipation, in other cases, diarrhoea. Give milk to a person accustomed to milk, not to those to whom milk is disagreeable, and nauseating. It has always appeared to me that crushed wheat, rejecting the fibre, and using it as you would gruel, is perhaps, the best.

A word as to purgatives. I must appeal from Dr. Adami, to Graves, who contented himself with giving a laxative at the very onset of the disease, but never afterwards. If one proportions the food to what the patient can dispose of, there will be very little that will pass down the intestinal tube.

With regard to surgical interference, I think, unhesitatingly, one should cut into the abdomen, whenever there is the slightest evidence of perforation; and I do not think that it is always difficult to establish when perforation has taken place. Pain follows a very rapid course, and the pulse will be somewhat clear; but even if one does cut, and not find perforation, I do not know that a great deal is added to the risk of the patient. It is better, when one is in doubt, to operate, and I should be disposed to operate early. But the result has not been very encouraging.

DR. F. R. ENGLAND—Just one word which has not been touched on. Purgatives have been spoken of, but I do not think that anything has been said with regard to enemata. I remember that the late Dr. George Ross taught that purgatives were very dangerous; and I recollect one case where a dose of castor oil had apparently caused death in a patient who was doing well, with the exception of a little constipation. He taught that in cases where constipation was the rule they were generally favorable cases and got well; but if the bowels caused anxiety, and he desired to act on them, he would prescribe a small enema of glycerine and warm water. I have generally followed that plan since, with very satisfactory results. I may, perhaps, refer to a very serious case I was asked to see, a few weeks ago, where perforation was supposed to have occurred by the attending physician. It was a young woman, 18 or 19 years of age, in whom symptoms had rapidly become serious. There was present a great deal of distension, and the bowels had not been moved for seven or eight days. The pulse was rapid and there was a great deal of pain. Taking the whole clinical picture into account, I was reluctant to open the abdomen in that particular case, and as-

sumed the responsibility of waiting and watching. Fortunately, the patient recovered. The symptoms immediately improved, after I had succeeded in getting a very copious discharge from the bowels, which I effected by repeated moderately small enemata of glycerine and warm water thrown into the rectum and colon. I considered well, before deciding against operation. I was not positive that perforation had occurred, and I felt that if I opened the abdomen with the girl as sick as she was, that the result would be very likely fatal. Not very long before, I was present at an operation where appendicitis was supposed to exist. Laparotomy was performed, and the case was found to be typhoid fever. There was no perforation, and death occurred. I was struck with what Dr. Adami said. We are bound to consider it as it is borne out by Dr. Armstrong's experience in the cases which he has operated upon. Dr. Adami tells us that he believes that the important reason for the great mortality in these cases where operation is performed for perforation, is due to the fact that there is a great want of the fibro-plastic exudate thrown out, and that the powers are lowered, the patient is in a bad state to stand operation.

While Dr. Armstrong tells us that the intestine united well, he says the abdominal wound was slow to heal, and after twenty-one days he scraped the abdominal wound, and it again failed to unite, because, I believe, the exudate was not thrown out which produces union. It seems to me in severe cases we cannot expect any very great advance in the results obtained, in those cases, from surgical treatment. Of course, there is no question, it is the only means offered to a patient; nevertheless it will continue to be a grave condition, and one where I think no very brilliant results can be expected.

DR. WESLEY MILLS—It seems to me that this discussion is characterized by one thing at all events, namely, healthy difference of opinion, and seeing that the history of medicine is rather characterized by a tendency to follow what is new and restricted, rather than some broad principles, I think it is to be welcomed. I suppose we are all trying to get at some general line which will guide us in details; I could therefore have heard with pleasure the *rationale* of different methods somewhat more fully dealt with. The popular method of treatment by the cold bath is one about which I have never heard a perfectly satisfactory explanation. The difference of opinion seems to be not about the feasibility of the use of cold water, but the particular method of its use. Now, in reality, as follows from what Sir William Hingston and others have said, the personal element and one's habits would lead one to expect that such difference of treatment should prevail. I suggest that the different expression here tonight is more apparent than real, it is one of detail rather than of principle; and as a physiologist looking for new

light as to principles, to apply to the living body, I have had to try and build up a certain interpretation for myself. When one considers the use of cold water to the sleepless, to the weary, to the insane, and the use of baths generally, and compares it with the effect in typhoid fever, it seems to me that one can strike a guiding principle. If I am right the teaching of the multitude of investigators on the nervous system is that we can no longer look to regeneration originating independently; they are all related to ingoing impulses; and I have long entertained the idea of the relation between function and nutrition. But I can understand why the use of cold water should so affect the nervous centres that the nutrition should be profoundly affected thereby.

Now, Dr. Armstrong has very clearly brought out the fact, I think, from his experience, and that of others, that not only is typhoid not a disease of local lesions, but one which affects the vitality of all the tissues; and if that is so, and this treatment of cold water affects the centres which preside over nutrition, it must be a sound principle. But I think there is need of greater conservatism in surgery, if I may venture to express an opinion, with the facts before us; and that also seems to be a point in the history of surgery, a return to greater conservatism in some respects, at all events.

But with regard to diet, I think we should be aware of what I may venture to call our profound ignorance on the subject of digestion. I think we do not realize fully the depth of our ignorance; I do not think that we take into account the separate transitions which we name separately, but which are small parts of one thing.

Now, for example, the digestion of a fluid like milk is affected by its temperature, as it is in my own case. I may take a little milk and it may upset my digestion, or quite the reverse, according to the temperature. I have never heard the temperature referred to with reference to the typhoid patients. It may be worthy of consideration, both as regards a good tonic effect and otherwise; so that this plea for a less restricted diet seems to me as being on a good, sensible and physiological foundation, that is to say, with such a limited knowledge of the digestive process, and such a defective knowledge of individuals to meet this case. For instance, some think that milk is taken directly into the system, and I am not sure that they are not right. But here again there is not really so much difference of opinion as there seems to be. As I understand, it is not a question of liquid or of solid diet, but as to whether there should be a greater variety of diet, and certainly if this variety can be obtained without danger to the patient it is a good principle, because all are agreed that it is more important with the typhoid fever patient with what is long weariness to him, in the bad cases—that his comfort in

every little detail should be attended to, which means that his nervous centres should be disturbed as little as possible by things which are calculated to disturb it. So I would submit that this discussion has led to the conclusion that there is less difference of opinion as regards essential principles than might at first be supposed, and that the result of it will be to show that there may be variety with union.

DR. KERRY—In connection with the fibro-plastic exudate in typhoid it might be interesting to refer to the post-mortem condition of two of Dr. Stewart's cases. I happened to be in the Royal Victoria Hospital and I was pressed into service at the post-mortem. In the first case, in which the diagnosis for several days was not certain, it was thought it might be miliary tuberculosis or typhoid, and showed a very marked reaction. Patches were standing out a quarter of an inch from the intestine. In the second case there was scarcely any reaction, but there was a little patch up in the caecum, and there was a marked ulceration inside the intestine, which may account for the reaction.

DR. H. A. LAFLUR, *the Chairman*—In the first place, I would like to say something about diet. It has been apparently assumed, tonight, that most physicians who treat typhoid fever confine their patients to an exclusive diet of milk. That is an absolute mistake. I think I can speak for Dr. Stewart and myself. We do not pretend to confine our patients to milk. Maybe this was true ten years ago, but not now. I have jotted down a few things I allow at the height of the disease: Coffee, tea, thin gruel, egg-nog, any clear soup, koumiss—which is pretty fair diet. They are all fluid, or nearly so. I might have added jelly, and even in cases where patients refuse milk I do not refuse a soft-boiled egg, even at the height of the disease; so that an exclusive diet of milk does not refer to the general practice here. I think Sir Wm. Hingston has drawn a picture of the horrible; we do not drench our patients with anything except cold water, and that externally.

With regard to the bath, I think I was one of the earliest in America to advocate and use it. In 1890 I advocated it at Johns Hopkins in Baltimore. I had seen Wilson use it in Philadelphia, and I was so struck with the result of the treatment, although it had had a trial in Johns Hopkins, I decided to wait no longer, but subject the patients to it; and according to the subsequent statistics the results obtained fully justified it.

There has been a great deal said about the disadvantages, but not enough about the advantages—and perhaps the special advantages. It should be remembered that the treatment by cold bathing is, in the main, an eliminative treatment. It has been shown conclusively that the urine of patients subjected to the bath treatment is a great deal more toxic than other urine; which shows that the kidneys are stimu-

lated chiefly by the action of the nervous system.. That accounts for the fact that in any series of cases that have been bathed, we see fewer instances of toxemia. We may combine it with the internal administration of antiseptics. I quite agree with Dr. Adami that we have not reached the perfection of treatment; but those that compare the two kinds of treatment, the expectant, and the bath, will certainly be struck by the lack of delirium in such cases. I remember in the hospital we used to have four or five delirious patients during the night; but this has been practically abolished, and we may see only a little wandering delirium, and that very rarely. In many instances, the patients object to this bath. They also object to surgical operations, but that does not prevent us from operating when we think it necessary. To those patients who object to the initial cold bath, we begin with a graduated bath; and I practically always do this with females. The first at 90 degrees, lowered to 80; the second at 80 degrees, and lowered to 75 degrees; the third at 75 degrees, and lowered to 70 degrees, or 68 degrees. Under these circumstances, I find that, as a rule, patients take the bath very well. It is only the exceptional patient that gets blue and shivers, and then it is a sign to remove him. One should not point out all the disadvantages, without also pointing out the great number of advantages that other people have found in it.

DR. STEWART, in reply—The Chairman has saved me from replying to a good deal that has been said. There are other ways of using water besides the cold bath, but they are for the most part poor substitutes. Of course, sponging with ice cold water does reduce the temperature considerably, but in the cases I have used it in, the patients complained more than they did of the cold bath. I am sorry I am not eloquent to preach about the advantages of the bath; but the figures I showed to-night are quite eloquent, and I think anyone with extensive experience—and you need extensive experience—must be convinced of the advantages of that way of treating typhoid fever, the marked change it makes in the appearance of the patient is enough to convince the most skeptical. To-day you rarely see a delirious patient under the cold bath treatment—in fact, you might go through a ward, and you cannot tell whether they are suffering from typhoid fever or not; which is not the case under the expectant treatment. If that is not evidence, I do not know what some people need to convince them of it.

I was going to say that all the surgeons here to-night were in accord about the advisability of early operation in typhoid fever, as indicated by the onset of sudden pain. If a man were to rely solely on that in the months of August and September, I expect the surgeons would be kept pretty busy opening the abdomen, because abdominal pain is a very frequent symptom. Everyone recognizes the importance of early

operation; but you do not want to be opening abdomens, and not find the intestines perforated. Whether it is not possible to employ other measures in conjunction with cold bathing, which will be effective in further reducing the mortality, is, of course, a great question. As I pointed out in my paper, the chief influence of the cold bath is in reducing the mortality from other causes than from perforation and haemorrhage. If you can get anything that will have an equally good effect on the prevention of these two conditions, you may say good-bye to typhoid fever, but it is doubtful whether we shall attain to that degree of perfection. I expect that the first and most marked advance will be in some antitoxine treatment. I think that is the direction in which we ought at present to look.

DR. ARMSTRONG, in reply—I would like to draw Dr. Stewart's attention to the fact that I did not rely on one of the symptoms, but on several symptoms and the consideration of each, and from their consideration collectively, added to the steady appearance of the leucocytes.

There is only one other point I did not think of in my notes. In some of these cases, in operating for a perforation, I have found a number of other ulcers very thin, not perforated. I put a row of sutures over them, with the view of preventing a perforation at that spot, which, I think, is a very good practice.

HAEMORRHOIDS IN CHILDREN, WITH REPORT OF A CASE.

BY

EDWARD W. ARCHIBALD, M.D.,

Resident Surgeon, Royal Victoria Hospital.

“Do haemorrhoids occur in young children?”

Such was the question, simply put, which appeared in the *Gaz. des Hopitaux*, of March 1, 1873, apparently inviting a symposium of opinions from the surgeons of the day. Lannelongue, then a young man, had declared in his clinic that he had observed the condition in a young child. The following number contained an answer from Bouchut, which is interesting enough to quote:—

“No,” he writes, “children do not have haemorrhoids any more than they have varicose veins. For the past twenty years children have been brought to me who were said to have haemorrhoids, because of bleeding after defaecation, or because of a small anal tumor. All these cases were errors in diagnosis. . . . Up to 12 or 13 years of age, I know of no authentic observation of haemorrhoids; and I believe that cases of this nature are all to be referred to rectal polypi.”

Another interesting opinion was that of Gosselin, “*Leçons sur les Hémorrhoides*,” 1866, who remarks:—

“I have found in some works indications of haemorrhoids in children, but the details are too meagre to assure oneself that something else was not the matter; e.g., rectal polypus. We must not forget, in fact, that up to our own day, men have admitted the existence of haemorrhoids without making local examination, and simply because there was present either bleeding from the anus, or pain during defaecation. I will believe in haemorrhoids in children when I shall have seen them, or when a serious observer, after a careful examination, shall have affirmed that he has seen them.”

I have been at the pains of finding and quoting these opinions, (though they are shared probably by no surgeon of the present generation), inasmuch as, besides being of some historical interest in themselves, they serve to indicate the comparative rarity of the condition. The literature of the subject is, in fact, scant. I have been able to find only two other references previous to Bouchut's time. Of these, one is a sort of clinical note, by W. Krimer, of Aachen, (*Medicinisches Conversationsblatt*, 1830, No. 18, p. 142,) who claims to have observed haemorrhoids in children in five cases, from 1 to 4 years of age. The other is by A. J. de Montègure. (“*Des Hémorrhoides*,” Paris, 1819, p. 79,) who says the condition is not very uncommon, and cites in confirmation Wenceslas

Truka. The latter had reported 39 cases of hæmorrhoids in children below the age of 15 years.

Neither of these, however, give any indication of having made local examinations, and their cases are probably to be put into Bouchet's class of "errors in diagnosis."

Coming now to more recent literature, we find hardly anywhere anything beyond a mere mention of the fact that hæmorrhoids do occur in children, but are very rare. Ogston and Vincent, (*Lancet*, 1883, I., 8-9), report a case in a child 3 days old. It was apparently an inflamed external pile. Dr. Ogston, in a note appended to the report of this case, instances another example in a child of four months, "in which none of the usual predisposing causes were present—portal congestion, liver disease, and overloading of the rectum, with hard fæces." Keating says they are "very rare in childhood." Ball had seen "several cases in quite young children." Wharton, of Philadelphia, had observed "one case at 5 or 6 years of age." Holt says the condition is "not often seen in children. . . . may occur as young as 3 to 4 years. . . . The piles are generally small and external. Bleeding is usually slight."

Starr had "seen several in young children. One at 3 years of age was so marked as to necessitate operation."

Allingham is said to have reported a case, but I have been unable to find it.

This case occurred in Dr. Bell's service, and the case-report is as follows:—

Patient, a girl aged 8, was admitted on the 13th December, 1897, complaining of bleeding from the bowel. According to her mother's account, her trouble dated from about five years previously, when bleeding on defæcation was first noticed. It came on about a week after a fall from a gallery, about twenty feet high, upon bare ground. There were no serious immediate consequences of the fall. Blood came away usually with stools, but occasionally also in the intervals of defæcation. She frequently seemed to have griping pain during the act. The amount lost was never large. Since onset, bleeding had been present more or less all the time, save for remissions of various periods at irregular intervals. Two years ago had been free for about a year. She was never confined to bed, and never had serious pain with the trouble. For some time before entrance, she had been dizzy and faint at times. No definite history of chronic constipation, although the mother thinks child was sometimes constipated, and the child herself says she was.

Personal History.—Had whooping-cough and measles when a baby. Since then, always been in the best of health, though counted "not strong."

Family History.—None of tuberculosis, cancer or syphilis.

Present Condition.—A fairly well-nourished child, but small for her

age ; apparently in good general condition. Blood, in variable quantities, usually of a dark fluid character, sometimes bright red, is seen to come from the rectum after defæcation. Quantity, at most, is about half an ounce (seen once), but is usually very much less.

On digital examination, nothing is felt. Vulva and vagina look normal, so far as visible. On palpation of the abdomen, nothing abnormal is made out.

The liver is normal to percussion and palpation. None of the other organs or functions give evidence of abnormality. On examination under ether, small but distinct venous piles were found inside the anus surrounding the lumen of the bowel, not inflamed, but bleeding readily on touching.

She was discharged seven weeks after entrance, for the last three weeks of which she had had no bleeding. The hæmorrhoids were demonstrated easily on several occasions, without the use of an anæsthetic. Her general condition remained excellent. She had no treatment beyond that of securing a free and soft stool every day.

The conclusion seems warranted that we have here a case of bleeding hæmorrhoids in a child, beginning at the age of three years and lasting till the present time. Apart from the age of the patient, the interest of the case would appear to pertain mainly to the etiology of the condition. Some cause of circulatory disturbance is said to be usually at the bottom of the trouble—in children as in adults. Cirrhosis of the liver and chronic constipation are the main etiological factors accused. In the present case there was nothing of this nature to be made out, save a very dubious history of constipation. That her attack of whooping-cough could have induced the trouble is certainly unlikely, and must remain matter of mere speculation.

There was nothing hereditary in the case; a factor which, by the way, is frequently enough found in histories of circulatory disturbances generally and hæmorrhoids in particular.

The case was seen again two weeks ago. There have been only two recurrences of bleeding since discharge, slight on both occasions. General health has remained very good.

RESTORATION OF THE NORMAL UTERO-VAGINAL ATTACHMENT IN PROLAPSE OF THE VAGINA.

BY

R. E. WEBSTER, M.D. C.M., Ottawa.

The operations heretofore described for the cure of rectocele, or cystocele, and prolapse of the vagina, have been rather disappointing to the gynaccologist on account of the recurrence of these conditions after a few months, with the same troublesome symptoms.

To aid in the relief of these conditions, the operation here described has been performed by me, during the last five years, in a number of cases, and in none of these have I seen a recurrence.

It will, I believe, be found to be a valuable adjunct to the ordinary methods in use for these cases, and if properly performed, will, in the majority of cases completely restore the normal condition without any further plastic operation on the upper vagina.

To fully understand the mechanical reason for this operation, it is only necessary to notice carefully the ordinary case of cystocele, or rectocele, with prolapse of the vaginal walls, and to compare this pathological condition with the virgin condition. In the nullipara we find the utero-vaginal attachment high up, the cervico-vaginal vault well defined, and the elongated cervix extending into the vagina.

In the case of prolapsus, we see the cervico-vaginal vault obliterated, the cervix shortened as to its vaginal exposure, and the attachment of the vaginal wall about at the level of the external os.

This is caused by the stripping down of the vaginal attachment from the uterus, during childbirth, until the cervico-vaginal attachment exists only at the extreme of the cervix, instead of being attached higher up.

The operation suggested is simply the restoration to their natural position of the parts, and the reattachment of the upper vaginal wall to its normal position on the uterus, and by this means reducing the prolapse of the vagina.

Although somewhat more difficult of performance than the ordinary plastic operations for prolapse of the vagina with rectocele and cystocele, it repays all trouble by the better results, and more lasting benefit to the patient, and is, I believe, the only perfect operation for the relief of this troublesome condition.

The patient being in the lithotomy position, the operation is performed as follows: The cervix is seized and drawn down, and an incision is made around the cervix, at the junction of the vaginal attachment, down to the muscular tissue, just as in the operation for

vaginal hysterectomy. The tissues are now dissected from the muscular wall of the uterus, up to the normal level of the vaginal vault, which is opened as far as the abdominal peritoneum, which is pushed up, care being taken not to enter the abdomen. This is done all around the cervix. The haemorrhage is slight and easily controlled.

A short, curved needle, threaded with chromicized catgut, is now passed well into the tissue of the detached vaginal wall, posteriorly, but not including the mucous membrane, and carried around longitudinally for about one inch, before emerging. It is then passed deeply into the muscular tissue of the uterus at the upper border of the denuded area, and brought out at a point opposite the point of entrance into the detached vaginal wall.

This is repeated until the cervix is surrounded; the sutures not being tied until all are placed.

They are now tied, and the detached vaginal wall is thus replaced high up, with this row of sutures.

Care must be taken not to injure the ureters or bladder in placing these sutures. The mucous membrane of the vagina and cervix are now united by a running catgut suture, and the operation is completed. We have now our natural cervix and our natural attachment of the parts restored. If any narrowing of the vaginal canal is required, any of the ordinary operations may be used as an adjunct to this method, but in the great majority of cases, this operation, if properly performed, is all which is required, and is much more permanent in its results than the ordinary methods.

Case Reports.

COMBINED CARCINOMA AND EPITHELIOMA OF AN OVARIAN DERMOID CYST.

BY

F. A. L. LOCKHART, M.B., & C.M., Edin.,

Gynaecologist to the Montreal General Hospital and to the Protestant Hospital
for the Insane, Verdun; Lecturer on Gynaecology, McGill
University, Montreal.

AND

D. P. ANDERSON, B.A., M.D.,

Assistant Pathologist to the Montreal General Hospital; Demonstrator in
Pathology, McGill University; Bacteriologist to the Montreal
Protestant Infants' Home.

The patient from whom this tumour was removed entered one of the medical wards of the Montreal General Hospital in September of this year. She was an unmarried woman, 50 years of age, and complained of swelling of the abdomen and shortness of breath.

Menstruation was first seen when she was fifteen years old and had recurred regularly each month until she was 42, since which time she has seen no flow. This latter was always moderate in amount, painless, and lasted for four or five days. No history could be obtained of any pelvic trouble, up until last March, at which time the abdomen began to enlarge and it has continued to do so until the patient was operated upon.

I first saw her towards the end of September, at which time the abdomen was nearly filled by a smooth ovoid swelling. A clear note could, however, be obtained in both flanks, and both hypochondriac regions, as well as over the left renal and epigastric regions. The position of the dulness was not altered by change of position of the patient, a vague feeling of fluctuation could be made out on careful palpation. On making a vaginal examination, the hymen was found to be lacerated, the vaginal walls contained the usual rugosities of a nulliparous vagina, and the cervix, which also possessed the usual characteristics of a nullipara, could be felt high up. The fundus uteri and both of the appendages appeared to be too intimately incorporated into the tumour to be felt. A diagnosis of ovarian tumor of a malignant nature was made and an immediate operation advised. The patient was not transferred, however, to the gynaecological ward until October 10th, some three weeks

(*Read before the Montreal Medico-Chirurgical Society, Nov. 21st, 1898.)

after the previous examination. By this time the growth had increased to such an extent that no clear percussion note between it and the liver could be made out, and the patient had lost ground rapidly. Her abdomen measured forty-four inches in circumference at the level of the umbilicus, although she was very much emaciated, with an anxious expression of face. Her body was covered with a fine perspiration. Her respirations ran up to 32 per minute, and her pulse was 108, and of poor volume. She suffered greatly from thirst, but her appetite was good. There was no vomiting or other digestive disturbances to be observed.

As it was probable that the malignancy was confined to the tumour, it was decided to perform an exploratory coeliotomy and remove the whole growth if possible.

On opening the abdomen it was seen that the tumour had pushed the omentum and bowels upwards, and to the left. The abdominal walls were too tightly drawn over the tumor to allow of thorough exploration for adhesions, but the only ones within reach were so easily separated and the tumour had grown so rapidly that it was hoped that no very dense ones had formed. The cyst, therefore, was punctured and fully one hundred and twenty ounces (3cxx.) of thick grumous fluid, containing caseous material and hair, were allowed to escape, care being taken not to allow any to enter the peritoneal cavity. The dermoid nature of the tumour was now apparent and on further exploration, of the lower attachment of the mass, it was learned that it was the left ovary which was diseased, and that the pedicle, consisting of the uterus and broad ligament, was twisted half way round. A large solid mass still remained and could not be withdrawn from the abdomen, owing to dense adhesions to the upper part of the left wall of the abdomen, the omentum, the under surface of the right lobe of the liver, the right anterior abdominal wall and the intestines. The omentum was tied off and divided across, and after considerable trouble the other adhesions were divided, ligatures being frequently required. The mass was then lifted out of the abdomen and the pedicle clamped. The pedicle was then cut across the distal side of the clamp, after which it was secured by a series of chain sutures (catgut), and the clamp removed. The abdominal cavity was then carefully cleansed with swabs and flushed out with saline solution, as much as possible of this being left in the abdomen. The wound was then closed by two rows of sutures, continuous catgut for the peritoneum and silk-worm gut for the fascia and skin. Just previous to the operation, the patient was given one pint of saline solution per rectum. Although the tumour was emptied very slowly, the process was followed by collapse, the pulse at the radial not being perceptible, so 1-60 grs. of strychnine was given hypodermically and one pint of saline solution was injected under the breast, which

procedure produced a sudden and marked improvement in the patient's condition. Altogether she received three doses of strychnine, gr. 1-60 each, during the operation, and she had another saline enema upon being removed to her bed, as well as two others during the night. For the next two days, the patient received nutrient enemata, consisting of peptonized milk, $\bar{5}$ iii, and brandy, $\bar{5}$ ss. every three hours. During this time her pulse was very poor, and she vomited small quantities of dark blood-stained fluid. For the first four weeks after operation, the patient did very well, sitting up in a chair on the 26th day, and leaving the ward on the 31st day after operation. I am sorry to have to add that the patient died one week after leaving the ward.

The question may be asked, "was the operation justifiable?" I think that it was. The patient would certainly have died within one week or ten days of the date of her admission to Ward G. if the tumour had not been removed, and it was utterly impossible to determine the extent and density of the adhesions until a stage of the operation had been reached, where the friable cancerous tissue had been torn in several different places, when it would have been more dangerous to retreat than to advance.

The diagnosis was comparatively easy. Tumour of the liver or spleen could be put to one side, as there was no jaundice, as there would probably have been in the case of hepatic trouble, and when first seen, there was a distinct tympanitic area between the tumour and the structure above it. A tumour of the pancreas would not have been so large, would have been more centrally situated, (as also in the case of an omental tumour), and would have caused more digestive disturbance. If the growth had been of renal origin, there would have been some urinary disturbance, and the uterus would rather have been depressed than elevated, as it was. There is no way, however, to differentiate a dermoid from any other kind of ovarian cyst, with semi-solid contents, in a woman of this age. All dermoids are probably congenital and may start into activity at any period of life, whereas it is doubtful if the ordinary ovarian cystomata are present at birth, except upon very rare occasions. Therefore, if you have a cystic pelvic tumour present in a young child, the chances are that it is a dermoid, while in the adult the case is reversed. In addition to the extreme rarity of the condition of a dermoid tumour of the ovary becoming the seat of carcinoma and epithelioma, a point worthy of note is the absence of any fluid in the peritoneal cavity, although it is usually present in cases of malignancy of any of the abdominal organs.

Pathological Report.—The tumour is a large irregular-shaped mass, measuring 18 x 15 x 14 c.m., weighing 1,570 grms. The surface is markedly uneven in outline and nodular, the peritoneal covering being

greatly thickened and very haemorrhagic. On section, it is seen to be composed of a series of large cysts whose walls are markedly thickened, in places measuring 5 c.m. These walls are composed of a soft, whitish-looking infiltrating mass, with interlacing bands of glistening fibrous tissue. On scraping the surface, a juice containing epithelial cells is obtained. The cyst contains a large amount of thick, oily, flocculent fluid, as well as two large rounded masses of hair, about the size of large apples. At one point three teeth, evidently one canine and two molars, are found embedded in its walls and projecting into the lumen of the cyst.

Microscopically.—The tumour is seen to be composed mainly of epithelial elements, which infiltrate extensively the fibrous tissue stroma. Multiple pearl nests are found in these areas. At other points the epithelial cells are arranged in alveolar and tubular forms, as in carcinoma, with large bands of fibrous tissue surrounding them. A large amount of adipose tissue is also present. The vessels throughout are numerous, and engorged with blood, and in places surrounding these are a large number of small, round cells.

The tumour is, therefore, an ovarian dermoid cyst, with epitheliomatous, and, in some places, carcinomatous infiltrations. It also shows evidences of acute, and in some places, sub-acute, inflammatory reaction.

In reviewing the literature upon the subject, there were found only ten cases of malignant growth involving an ovarian dermoid cyst, in only one of which the two conditions, epithelioma and carcinoma, are combined, viz.:—

Coley (J. M.) Case of Scirrhus of the Ovary, in which was found an adipose tumour containing hair and teeth, in a patient who died in the fifth month of pregnancy.—*Edinb. M. and S. Jour.*, 1810, VII., 50-55.

Forget. Hydropsie, enkystie, cancer, kysto-pileux et dentaires des ovaires.—*Gaz. Meds. de Strasb.*, 1848, VIII., 169.

Unverricht (H.) Sarcomatosis dermoid des ovarium mit secundärum uterusarcoma.—*Breslau Aerzil. Zisch.*, 1878, V., 15-18.

Van Schröder. Communicatio inter duodenum et cystidem dermoid ovarii d. ex. carcinon, epithel, cyst.—*Aerzil. Ber. d. k. k. allg. Krankenh. zu Wien.* (1882), 1883, 27.

Babinski. Deux cas d'épithéliome pévimenteux ayant vraisemblablement pour point de départ un kysto-dermoïde de l'ovaire.—*Bull. Soc. Anat. de Paris*, 1883, XVIII., 234-236. Also *Progrès Med.*, Paris, 1884, XII., 29.

Heinmelforb (G.) Dermoid carcinoma ovarii dextri et dermoid ovarii sinistri.—*Med. abozr. Mosk.*, 1886, XXVI., 257-261. Also *Transl. Centralblatt f. Gynäk.*, Leipzig., 1886, X., 569-571.

Pomorshi. Cancerous dermoids.—*Centralblatt für Gynäkologie*, 1890.

Lannelongue de Foquet. Case of dermoid cyst with Endothelioma.—*La Semaine Med.*, Paris, Aug 10th, 1885.

Clark (J. G.) Carcinoma from the wall of dermoid cyst of the ovary.—*Amer. Jour. of Obstet.* Sept. 1898.

TUBERCULOSIS OF THE FALLOPIAN TUBES.

BY

F. A. L. LOCKHART, M.B., C.M. (Edin.)

Lecturer in Gynaecology, McGill University; Gynaecologist to the Montreal General Hospital, and to the Protestant Hospital for the Insane, Verdun.

The following report of a case of tuberculosis of the Fallopian tubes is of considerable interest. The specimens from the case were exhibited before the society.

The patient, a woman aged 27 years, had been married for eight years, but had never been pregnant. Her chief complaints were pelvic pain, nervousness, indigestion and rapid emaciation. In July of this year she was exposed to cold and fatigue during one of her menstrual periods, and three days after this she was seized by a very severe pain in the right side of the pelvis. This was relieved by rest in bed and hot applications, but it recurred twice again before she came to town for operative interference. Her sexual history was unimportant, except that during the last four years she has had attacks of pelvic pain, beginning the day after the menstrual period ceased, and lasting for one day. No case of phthisis had occurred in her family, and examination of her chest yielded negative results.

On making a local examination of the pelvic organs, the os was found to be patulous, with soft margins. The uterus was in good position, but was very slightly enlarged. Through the left fornix a distinctly trilobed mass could be felt, the lower lobe being sensitive, and was diagnosed as the left ovary, surrounded by its tube, a small, and an elongated mass could be felt on the right side, i.e., an enlarged right tube.

When the abdomen was opened, the right Fallopian tube was found to be enlarged in two places, and to embrace the ovary which was healthy. The tube was removed, as was also that of the left side, both ovaries being left. The tubes themselves were not ligated, but were slit up for some distance, and the mucous membrane was stitched to the peritoneal covering, so as to ensure the tube remaining patent. The appendix was then removed, as it was evidently diseased.

The right tube contained two rounded swellings, with a constriction in the centre, consisting of simply the impervious tube. There was no adhesion of any kind whatever, to have caused this constriction. The proximal swelling measured 48 x 30 x 3 m.m., the distal one 35 x 35 x 30.

On the right tube was a distinct inner dilatation, measuring 35 x 28 x 25 m.m., while external to this the tube was enlarged to the size of a lead pencil for 25 m.m. of its extent.

All of these dilatations contained caseous masses, and, although no tubercle bacilli were found, typical giant cells were abundant in the tubal walls.

The peritoneum showed no sign of tuberculosis.

The appendix contained about 3i of grumous mucopus, and its walls were very much thickened.

The patient made a perfect recovery, rapidly gaining in flesh and strength.

TWO CASES OF TUBAL PREGNANCY ; OPERATION—RECOVERY.

BY

A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng.; Fellow of the American Gynaecological Society ; Fellow of the British Gynaecological Society ; Professor of Clinical Gynaecology in Bishop's University ; Gynaecologist to the Montreal Dispensary ; Surgeon-in-Chief of the Samaritan Hospital for Women ; Surgeon to the Western Hospital, Montreal, Canada.

My eleventh case of tubal pregnancy was Mrs. B., 33 years of age, to whom I was called in consultation by a medical friend on the 5th October. She gave me the following history: As a girl she had enjoyed good health. She had been married twice, the first time when twenty-one years of age. She had three children by her first husband, the last one six years ago. She married the second time two years ago, and three months after her marriage she began to complain of pelvic pain, and has never been well since. During these two years she was thought to have been pregnant several times; that is, her periods stopped for three months, and then came on with haemorrhage and severe pains. Menstruation had stopped for four months before I was called in. A month ago, and when she thought she was three months pregnant, she was taken with severe pain and a moderate flow appeared. She had to take to her bed and send for her physician, who attended her for about five weeks before I saw her. Four days before coming under my notice she was taken with a flooding and such severe pain that she became unconscious and does not know what came away. Her physician, who had already diagnosed disease of the ovaries and tubes, now came to the conclusion that there might possibly be a ruptured tubal pregnancy. I agreed with his diagnosis in every respect; a large mass, the size of a cocoa nut, could be felt by the vagina, and could even be seen protruding up under the abdominal wall, and I advised her removal in the ambulance to the Samaritan Hospital. As her pulse was a hundred and ten, her temperature 101, and as she was vomiting incessantly, I thought that I might safely delay the operation a little, until I could get her in a little better condition, although I was fully prepared to operate at a moment's notice if the pulse went any higher, indicating more haemorrhage. The uterus was pushed over to the left by the mass, and the right ovary was apparently imprisoned in

* Read before the Montreal Medico-Chirurgical Society, December 19, 1898.

the tumor, because the slightest pressure on the mass caused severe vomiting and pain, lasting for several hours. She was put on a stomach mixture and carefully fed until the 25th of October, when her pulse and temperature came down to normal. Her bowels were toned up by the administration of one-twentieth of a grain of strychnine three times a day, during the three weeks that she was waiting, and they were well emptied. On the above date, abdominal section was performed, a large incision being made, as the lump was large. On entering the abdomen a ruptured tubal pregnancy was found; and the omentum had cleverly come to the rescue by walling off the ruptured tube and blood clot, from the rest of the peritoneal cavity. On detaching the adhesions, which were quite firm, I came upon a mass of blood clot, with a foetus five inches long, slightly macerated, among it. This was carefully cleared out, and then the densely adherent right tube and ovary, together with the vermiform appendix, in one inseparable mass, was shelled out with difficulty. The ovarian and uterine arteries, the latter at the corner, were tied separately and the mass removed. The vermiform appendix was removed in the manner in which I always do it, namely, by cutting it off level with the cæcum, and the hole thus left, closed, as we would close a bullet wound, by two rows of Lembert sutures. The distal end of the appendix can still be seen, deeply imbedded in the mass of inflammatory exudate surrounding the ovary and tube. Although there was no bleeding at the operation, the pulse went up to 140, and the temperature to 101 that evening, but both were normal on the third day, and remained so since, now more than a month after. The nausea and vomiting stopped the day after the operation, although she had been vomiting almost steadily for five weeks before. No pain at all since the operation, has good appetite and feels well in every way. The left tube was very diseased and was removed, but the left ovary was allowed to remain, so as to avoid the discomforts of the premature menopause.

This was my eleventh case, all of whom recovered and are still alive and in good health.

My twelfth case consulted me at the Montreal Dispensary. She was a Mrs. C., 38 years of age, mother of six living children, the two last being twins, which were born years ago; before the birth of twins she had kept herself from having children for eight years, by taking large doses of sennâ and salts before each period was due. Several times during these eight years she had miscarriages at two or three months. She appears to have menstruated at the 7th of August, the flow lasting till the 20th August. This stopped then for seven weeks, until the 9th of October, when she began to flow freely, and the flow was accompanied with great pain. I sent her into the Samaritan Hospital, but she de-

layed until the loss of blood became quite serious, and it was not until the 23rd of November that she was operated upon. By this time the left tube could be felt larger than the thumb, but fairly movable. The uterus was dilated and curetted, although it was quite empty, but rather large, iodine and carbolic was applied to the endometrium very thoroughly. A lacerated cervix was also repaired. Then the anterior vaginal wall was opened, and the fundus, ovaries and tubes were brought out and inspected. The procedure was difficult, owing to the adhesions of the ovaries and tubes on both sides, and to the enlargement of the left tube. It was finally brought out, and tied off at the cornua of the uterus. A few cysts on ovaries were opened and the uterus was replaced and the vagina closed, one stitch taking in the fundus of uterus. She made an excellent recovery. On cutting open the specimen only blood clot is seen with the naked eye, but I will gladly hand the specimen to the pathologist of this Society for a careful search for chorionic tissue. It was generally remarked by the medical and nursing staff of the hospital, that this patient made a much more rapid recovery than after the smallest laparotomy. They all agreed that I would have completed the operation in half the time, namely, thirteen or fourteen minutes, by the abdomen, instead of half an hour, which it took by the vagina. But from the patient's point of view, the time was well spent, as she had no scar, no chance of hernia, and she has had much less pain and a shorter convalescence. Although I mentioned the possibility of tubal pregnancy, yet I was not at all sure of it, so I will classify this case as one undiagnosed before rupture and before operation. Out of the twelve, in five, I think, the abdomen was full of blood.

CARCINOMA OF THE ŒSOPHAGUS WITH FATAL HÆMORRHAGE FROM THE SUBCLAVIAN ARTERY.

BY

F. G. FINLEY, M. D. AND D. P. ANDERSON, M.D;

James H.—A carter, aged 60, was admitted to the Montreal General Hospital on September 6, 1898, complaining of hoarseness and inability to swallow solid food.

He had used alcohol to excess for years, but was moderate in the use of tobacco. In April, of the present year, he began to suffer from a slight cough, and in June, he first noticed difficulty in swallowing solid food. He has been hoarse for six weeks.

Present Condition. He is a rather poorly nourished man, with a slight degree of anaemia. The muscles are soft and small, and the subcutaneous tissue scanty. There is complete aphonia, the patient being only able to speak in a whisper. Dr. Birkett reports that there is complete paralysis of the left vocal cord, and deficient adduction of the right. A No. 8 œsophageal sound was arrested 13 1-2 inches from the mouth, but a No. 7 passed into the stomach.

Apart from some arterial sclerosis and emphysema of the lungs there was no disease of any of the organs. The left radial pulse was noted as much smaller than the right.

On September 20th, the patient began to have evening elevations of temperature, began to complain of a dull pain behind the sternum, and the difficulty in swallowing continued.

Oct. 10. A No. 3 œsophageal sound was arrested eight inches from the teeth.

Nov. 4. Temperatures continue elevated, varying from 98 to 105. There was a severe rigor yesterday, the thermometer registering 105 2-5.

Nov. 15. Cough is more troublesome, but expectoration is scanty and not fetid. Repeated examination never revealed any tubercle bacilli. About this time the breath became offensive, and four days later this feature became so marked that he was transferred to an isolation ward. Septic temperatures, with occasional rigors, continued. Emaciation was marked, but not extreme.

Nov. 25. At 7 p.m. there was a slight attack of coughing, immediately followed by a profuse hæmorrhage. He asked for a towel, then suddenly fell back, gave a few gasps and died.

Abstract of Autopsy—The body is that of a somewhat emaciated old man.

At a point 3 1-2 cm. above the bifurcation of the trachea the œsophagus only admits a small probe, and on its mucous surface there

is an ulcer 3 cm. in diameter, with an irregular base from which cauliflower-like masses project. Surrounding the oesophagus at this level is a firm mass about the size of a hen's egg. This growth extends to the left, and surrounds the left carotid and subclavian arteries, compressing these vessels and narrowing their channels. The growth is of very firm consistence, of whitish appearance, traversed by glistening bands, and exuding a cancerous juice. The adjacent lung is densely adherent and a gangrenous cavity about the size of a large apple is present at the apex of the lung, in close relation with the tumor. This cavity is filled with dark clotted blood, and a large division of the bronchus opens into it. There are several small cancerous nodules in the left lung, and small patches of broncho-pneumonia. On the wall of the subclavian artery 1-2 inches from its origin is a small circular perforation, 3 inches in diameter. This opening communicates with the gangrenous cavity in the lung.

The crico-artenoideus lateralis and posticus on the left side are markedly atrophied. Microscopical examination of the tissue from primary growth in oesophagus shows this to be composed mainly of fibrous tissue with extensive infiltration of epithelial cells, these being arranged in tubular and alveolar forms as in a carcinoma. The secondary nodules in the lung though of the same character, differ slightly in that the cellular elements of growth are more of an endothelial type.

Anatomical Diagnosis. Cancer of oesophagus, Gangrene of lung. Perforation of second portion of subclavian artery. Broncho-pneumonia and secondary growths in tissues of neck and epigastric glands. Cloudy swelling of organs. Perforative appendicitis and peri-appendicular abscess.

The diagnosis made during life was cancer of the oesophagus, followed by gangrene of the lung.

The presence of dysphagia in an elderly and somewhat emaciated man at once drew attention to the oesophagus; obstruction about 8 1-2 inches from the teeth, as found at the second examination, corresponded to about the bifurcation of the trachea, near which the stricture was ultimately found.

No obvious explanation was found for the fact that the sound first passed 13 1-2 down the oesophagus, and then was arrested. There was no stricture at this point, and there was possibly some error in observation.

In a case under the late Dr. Geo. Ross, one of us once passed an oesophageal sound into a large gangrenous cavity of the lung, and so failed to find obstruction in the oesophagus. At the autopsy some days later the communication with the lung had closed. It is needless to say that in the present case such a fallacy could not have occurred.

A feature of interest was the extreme narrowing of the oesophagus,

which only admitted a small probe. In spite of this there was never difficulty in swallowing fluids.

The association of paralysis of the left vocal cord with a small pulse in the left radial artery is a combination which, apart from aneurism, must be somewhat rare. The growth of the tumor around the artery, compressing and narrowing its lumen, was very obvious at the autopsy, and satisfactorily explains the character of the pulse. Paralysis of the left recurrent laryngeal nerve is of frequent occurrence in cancer of the oesophagus, and occasionally both nerves are attacked, so that by itself this sign would not mislead the clinician. It is, however, quite conceivable that the combination of two such well known signs of aneurism might prove deceptive.

Death from haemorrhage is an unusual termination in oesophageal cancer. In our case the artery was adherent to the lung, and in close contact with the gangrenous area, and perforation occurred from extension of the necrotic process. The haemorrhage thus took place into the gangrenous cavity, and thence passed by the bronchi to the mouth. Taylor* has collected nine cases of fatal haemorrhage from the aorta, resulting from carcinoma of the oesophagus. In most of them death resulted from sudden and profuse vomiting of blood, and in nearly all cases blood was found in the stomach. In his own case there was a hole the size of a pea in the aorta; through this a portion of the malignant growth from the oesophagus had extended, presenting a shreddy filament free in the aorta. There was an ulcer opposite the hole in the aorta, probably produced by friction with the filament of cancerous tissue. There was no external haemorrhage, all the blood having found its way to the stomach.

In our case the haemorrhage was from the artery into the gangrenous cavity, so that none reached the stomach. The small peri-appendicular abscess was not suspected during life, and the rigors which occurred were attributed to an ulcerative process about the tumor. That this origin was probable is indicated by the facts that the rigors only occurred late in the disease, and were accompanied by cough, and later by fetor of the breath, and sputa.

* Guy's Hospital Reports, XLIX., 1892.

RETROSPECT OF CURRENT LITERATURE.

Gynaecology.

UNDER THE CHARGE OF WILLIAM GARDNER.

Uterine Fibroids and Cancer.

Babcock, W. Wayne, M.D., "The Co-existence of Fibromyoma and Carcinoma of the Uterus, with the report of three cases."—*Amer. Gynaecol and Obstet Journal*, Nov., 1898.

Howard Kelly states that the association is merely a coincidence, and that the growth of the one has no influence upon that of the other, but we should not altogether give up the theory formerly held, that fibromyoma may predispose to carcinoma.

The author relates three cases which occurred in the practice of Dr. Chas. P. Noble, one patient being sixty-three years of age, and a multipara, the other two being aged sixty and forty-eight respectively, and unmarried. He concludes that,

I. The frequent association of fibroids with adenoma and carcinoma of the corpus uteri is greater than would be, *a priori*, expected and relatively much greater than with the much more common epithelioma of the cervix.

II. That a coincidence of the two growths is favoured by their individual proneness to affect the nulliparous; but that the frequency of the association seems greater than is thus explained, or than is explained by the frequency of fibromyomas in all uteri after middle life.

III. That the endometrial hyperplasia, and the congestive and irritative influences produced by fibromyomas would seem to favor the development of the malignant tumour.

IV. That further investigation is desirable, before the old theory that fibroids predispose to cancers in the uterus is considered as disproved.

V. That the occasional serious errors of diagnosis from this association renders the routine examination of the endometrium desirable in elderly women with fibroids and imperative when there is excessive or odorous discharge, or abundance of scrapings.

Clinical Study of Hysterectomy for Fibromyoma.

Peterson, Reuben, M.D., "Clinical and Pathological Study of Five Recent Cases of Hysterectomy for Fibromata."—*Amer. Gyn. and Ob. Journal*, Nov., 1898.

The author reports a short series of five cases which are of interest chiefly on account of the number in which the tumour was accompanied by pus tubes, this complication being present in three out of the five cases, and of these the left side was affected in two instances. He concludes that the frequency with which this complication occurs will depend upon the surroundings of the patient, and the degree to which she is exposed to gonorrhoeal or other infection. The extent to which the presence of pus tubes will affect the post-operative mortality, will depend upon the variety and virulence of the organism present in the pus, the extent of contamination of the peritoneal cavity by this pus, and the resistant power of the patient.

Dr. Peterson prefers total to supra-vaginal hysterectomy, saying that it takes no longer to perform, and that better drainage is secured. He has kept track of most cases, and has seen no prolapse of the vaginal wall follow panhysterectomy. He limits myomectomy to cases where there are only one or two fibroid nodules; and where both appendages had to be sacrificed, would always perform panhysterectomy.

Irrigation of the abdominal cavity should be employed in cases where the cavity requires to be cleaned of blood-clot, etc., as saline irrigation is less injurious to the peritoneum than swabbing.

Drainage through the abdominal incision should be avoided as septic infection is apt to occur through the tube. When there are but few indications for drainage, the lower pelvic opening is almost completely closed, only room for a small strip of gauze being left, the gauze being removed on the third or fourth day. Where, however, the condition is more serious, the lower pelvic opening is not closed at all, but is lightly packed with gauze, the free ends of which project into the vagina.

Cystitis in the Female.

Etheridge, J. H., M.D., "Remedial Treatment of Cystitis in the Female."—*Amer. Gyn. and Ob. Jour.*, Jan., 1899.

The treatment of this condition may be divided into I. Constitutional and II. Local. The former consists chiefly in increasing the activity of the bowels and skin, rendering the urine bland and unirritating, and relieving pain, and vesical tenesmus. Purgation with salines is indicated and smaller doses of these

are effective if taken with hot water than if cold is used. By their diversion of the blood current towards the bowel, salines relieve the congestion of the bladder wall. The skin, which will probably be dry and harsh, should be rubbed with a rough crash towel twice daily, thus relieving internal congestion. Deranged systemic conditions should be sought for and relieved. The diet is of great importance, exclusive restriction to milk curing many cases, but one may give broth, the yolks of eggs, beef essence, etc.

The chemical reaction of the urine should be carefully watched. If too acid, give alkalis, such as salts of lithium, citrate of potash, etc. Large quantities of water should be imbibed so as to dilute the urine, and this may be rendered more agreeable to the patient if flavoured with fruit acid, which becomes an alkaline carbonate in the blood, and acts as a diuretic. Such demulcents as slippery elm or flax-seed may be used with advantage, in the acidulated water. When the urine is too alkaline, benzoic and boric acids may be used efficaciously. Germicides are useful in freeing the urine from micro-organisms.

Unclean catheterization is the cause of many cases of cystitis, so one should be very strict with their antiseptic precautions in passing the catheter. Where there is great tenderness, the urethra may be rendered less sensitive by the application of a 4 per cent. solution of cocaine before using this instrument. Before the medicated solutions are passed into the bladder, that organ should be washed out with saline or boric acid solution. The writer advocates nitrate of silver solution 1-10 to 1-2 per cent., in obstinate cases going as high as 20 grains to the ounce. Only a few drops of this solution are used at first, every second day, and then every day until a cure has been obtained. Other astringents such as tannin, sulphate of zinc, acetate of lead, infusion of hydrastis, potassium, and chlorate or perchloride of iron may be tried in obstinate cases.

Vaginal Hysterectomy by Cautery.

Byrne, John, M.D., LL.D., "Bloodless and Aseptic Vaginal Hysterectomy."—Amer. Gyn. and Obstet. Jour., Jan., 1899.

Since 1895, Dr. Byrne has been performing vaginal hysterectomy by means of the galvano-cautery knife, discarding the use of scissors or scalpel. He, however, clamped the vessels where these were divided, this causing the patient considerable discomfort and pain. He now reports two cases in which the broad ligaments, including the ovarian and uterine arteries, were compressed by Skene's electro-haemostatic forceps, by which means, he was able to remove the uterus without the use of either forceps or ligature. In both cases, the patient made an uneventful recovery.

Canadian Medical Literature.

UNDER THE CHARGE OF KENNETH CAMERON.

[The editors will be glad to receive any reprints, monographs, etc., by Canadian writers, on medical or allied subjects (including Canadian work published in other countries) for notice in this department of the JOURNAL. Such reprints should preferably be addressed to Dr. Kenneth Cameron, 903 Dorchester street, Montreal.]

THE CANADIAN PRACTITIONER.

December, 1898.

1. The Surgical Treatment of Insanity. Ernest Hall.
2. Impressions Received on a Recent European Trip. Dr. Neu.
3. Pleurisy. George Hodge.

1. *Hall* refers to a case upon which he made a preliminary report last April. It was one of insanity of two years and ten months duration, which was relieved by removing the appendages. He now reports that nine months after the operation there is a continued physical improvement, the patient having gained thirty-five pounds in weight and has been restored mentally. Since treating that case he has examined eleven insane women with the result of finding abnormal conditions of the pelvic organs in nine instances. In six of these cases operative measures were adopted with results upon the whole satisfactory.

3. *Hodge* reports a case of pleurisy with effusion into both pleural cavities. He aspirated the chest twenty-one times, fourteen times the right and seven times the left, removing altogether 1054 ounces.

THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

December, 1898.

1. Plastic Induration of the Corpora Caverosa Penis. M. J. Ahern.
2. A case of Bicornate Uterus Mistaken for Ectopic Gestation. W. J. Gibson.
3. Pulmonary Tuberculosis—Symptoms and Diagnosis. John Hunter.

January, 1899.

4. Club-Hand. B. E. McKenzie
5. Antitoxine in the Treatment of Diphtheria. A. B. Eadie.
6. Diphtheria, with Special Reference to the Laryngeal Cases requiring a Choice between Tracheotomy and Intubation. A. Gandier.
7. Infection and Serotherapy. Edward Laberge.
8. Therapeutic Suggestions for Children. Louis Fischer.
9. Ectopic Gestation—Abdominal Pregnancy. H. E. Vaux.
10. Genito-Urinary Instruments required by the General Practitioner. Fred. C. Valentine.

1. *Ahern* reports three cases of this interesting condition, char-

acterized by a localized induration of the fibrous sheath of the corpora cavernosa and also of the pectiniform septum. The first case was that of a man, 46 years of age, who presented no history of gout, diabetes, or venereal disease. On the right half-dorsal aspect of the penis, one-half inch behind the glands, was felt a hard, well-defined round plate, seemingly a foreign body, situated in the right corpus cavernosum and over which the skin moved freely. It had the shape, and was about the size of a ten-cent piece. A short distance behind this plate both corpora cavernosa are hard, round, nodulated, and tender. This induration extended backwards to the crura. Treatment by iodide of potash for some months had no effect.

The second case was that of a man of 64 years of age, who had gonorrhoea at the age of 19, but no history of syphilis, gout, rheumatism, or diabetes. On the dorsal aspect of the penis close to its root, could be felt a hard, wedge-shaped nodule, in the left corpus cavernosum, entirely independent of the skin, which was freely moveable over it. Behind this hard mass were several smaller ones of the same consistency. These indurated spots had never been painful nor were they sensitive under pressure. Potass. iodid. had no effect on the disease.

In the third case, a man of 50, there was in the middle of the penis a broad plate of bony hardness which extended forwards, and became narrow, reaching almost to the glands. The narrow part felt like a pipe-stem, and was grooved on its upper surface, which was flat. It occupied the septum. When young the patient had the habit of bending the penis during erection, and since then the organ has always had a tendency to double up when distended.

2. *Gibson* records the case of a young woman in whom pregnancy was suspected. On examination, the cervix was found softened, and an ovoid tumor lay to the left of the uterus, apparently continuous with it, and in size about two inches wide, and three inches long. It was thought that the condition might be a congenital lateral displacement of the uterus to the left, with a fibroid growth to the right, or more likely, it might have been a case of ectopic gestation. The great amount of pain, together with the history of a flow of a shreddy character, a couple of months before, gave a strong probability to the latter diagnosis. Again there was a possibility that it might prove to be a bicornate uterus. There appeared to be no means of determining between the two latter conditions, except by exploratory incision. Accordingly, the abdomen was opened, and the tumor proved to be the impregnated left horn of the uterus. On the right side was the other horn with tube and ovary. The abdominal wound was closed. Eight days later labor set in, and the foetus and placental structures were quickly expelled. The recovery was slow.

4. *McKenzie* points out that deformities of the upper extremity

are much less common than those of the lower. Club-hand is sometimes of the acquired variety, and depends upon cicatrices from burns, upon disease of the bones of the arm interfering with the growth of the lower epiphysis of the radius or ulna, upon diseases of the bones of the hand, upon fractures of the bones of the hand and arm, or upon paralysis. The most remarkable cases of the deformity are congenital, and are frequently caused by defects in the bones. Six very interesting cases are presented, three of them illustrating that well-marked variety where the radius is absent, and the hand presents defects both functional and anatomical.

5, 6, 7. These three papers relate to the anti-diphtheritic serum. *LaBerge* discusses the pathology of infection, and relates the history of diphtheria and the results obtained by the use of the serums. *Gandier* acknowledges the brilliant results of the serum treatment, but sounds a note of warning against carelessness. Every case should be as carefully isolated, as carefully treated locally and generally, for cases of mixed infection occur which resist the antitoxine, and as promptly reported, as if there was no antitoxine. He also refers to those laryngeal cases which go on to stenosis, and urgently require immediate relief. Tracheotomy and intubation are compared, showing the advantages of each operation under different circumstances.

THE CANADIAN MEDICAL REVIEW.

December, 1898.

1. The Antitoxine Treatment in Diphtheria, with a Report of Four Cases. J. Andrew Hall.
2. Pain in Metritis. Ernest Hall.
3. The Treatment of Phthisis. J. Ferguson.

1. *Andrew Hall* reports several cases of diphtheria treated with antitoxine and mentions two points worthy of notice. First, the immunity a nursing mother seemed to confer upon the infant she nursed; and next, the failure to develop the bacilli in the laboratory from a swab taken after a spray had been used.

2. *Ernest Hall* discusses the characters of pain found in the various diseases of the uterus.

3. *Ferguson* in discussing the treatment of phthisis lays the greatest stress upon the maintenance of the highest degree of nutrition. Among drugs he holds that arsenic is of the greatest value as a means of arresting tissue waste, especially in young persons. He thinks that quinine and some mineral acid holds the first place in the treatment of the fever.

THE CANADA LANCET.

December, 1898.

1. Cocain Addiction and its Diagnosis. Stephen Lett.

January, 1899.

2. Serum Therapy. John L. Dawson.

1. *Lett* says that the importance of an accurate diagnosis in cocain addiction is second in importance only to that of opium addiction, and must be sought for in the physical and mental symptoms as well as the chemical analysis of the urine.

After noting the symptoms of the several stages, he describes the method of extracting this alkaloid from the urine of those using the drug. To a suitable quantity of urine (10 to 20 ounces) add sodium or potassium carbonate, until the mixture is very distinctly alkaline; let it stand for half an hour and filter; to the filtrate add two ounces of pure sulphuric ether, agitate quietly for two or three minutes, then allow to settle for half an hour; draw off the ether and to it add one ounce of dilute hydrochloric acid, thoroughly mix, place in an open dish and permit the ether to evaporate spontaneously; apply gentle heat to effect perfect solution of any alkaloid that may be floating on the surface or adherent to the sides of the vessel; let it then cool; the remaining liquid may then be tested for the hydrochlorate of cocain by any of the reliable tests for that salt.

A test is also given for the detection of morphine and cocain in cases of double addiction.

THE DOMINION MEDICAL MONTHLY AND ONTARIO MEDICAL JOURNAL.

December, 1898.

1. The Lepers of D'Arcy Island. Ernest Hall.
2. Two Months Work in Gynaecology and Abdominal Surgery. Laphthorn Smith.
3. Some Points in the Management and Treatment of Diphtheria, J. E. Hett.
4. The Hydropathic Treatment of Fevers. A. K. Sturgeon.

1. *Hall* gives a description of the British Columbia leper colony at D'Arcy Island, which is situated about a league off the eastern coast of Vancouver Island. All the lepers are Chinese, only one white man having been incarcerated there since the establishment of the station.

THE MARITIME MEDICAL NEWS.

December, 1898.

1. Higher Medical Education in Canada. R. MacNeill.
2. Fibroma Molluscum. Murray MacLaren.

3. Intra-Uterine Haemorrhage, Simulating Rupture of an Ectopic Sac. M. Chisholm.
4. Glioma of the Retina. E. A. Kirkpatrick.
5. Antitoxine in Ophthalmic Practice. G. H. Powers.

January, 1899.

6. Disorders of Nutrition in Childhood. W. H. Laughlin.
7. Sarcoma of Orbit Secondary to Intra-Ocular Growth. G. R. J. Crawford.
8. Case of Puerperal Septicaemia. J. H. Scammell.
9. Mesenteric Infarct with Intestinal Perforation. W. E. Ellis.
10. Six Cases of Tubal Gestation. A. B. Atherton.
11. Foreign Body in Lung for Eight Years. Simulating Tuberculosis. M. A. B. Smith.

2. *MacLaren* describes a case of *Molluscum Fibrosum* in a woman 25 years of age. One of the tumors was so large as to render movement difficult. It was attached and hanging from the left side of the abdominal wall and measured twenty-one inches in length and thirty-six inches in circumference. Its attachment extended from the costal margin above to the inferior spinous process of the ilium below, and from the middle line in front to the mesial line in the lumbar and upper sacral regions posteriorly. There was no pedunculation, the base of the tumor, on the contrary, spread outwards. There were many smaller nodules and patches of pigmentation over the body. The large tumor was removed. There was no capsule, and the growth was ill-defined, the attachments being to the fasciae, and muscular aponeuroses. Microscopically the structure was fibro-cellular.

3. *Chisholm* relates the history of a case illustrating the difficulties of diagnosis between recurring intra-uterine haemorrhages and rupture or abortion of the sac in a gravid tube. The patient six weeks after missing a period was taken with severe pain in the pit of the stomach and a slight haemorrhage from the vagina. There was elevation of temperature and abdominal distention. The condition was relieved, but the symptoms all returned with great violence several days later. On examination no tumor could be detected. Later, on the application of ice and morphia, was followed by relief, and a slight vaginal flow. Then the vagina was found filled with a tense sac about the size of a goose egg. It was necessary to rupture it to get at the decidua in the cervix. The sac was found filled with blood-clot, and red liquid. No embryo was found. *Chisholm* offers no explanation for the peritonitis and thinks that the haemorrhage was the result of degenerative changes in the decidua.

4. *Kirkpatrick* records the history of a case of glioma of the retina in a child two years and one month old. When first seen vision was found to be a little better than a perception of light. There was not the slight-

est sign of irritation about the eyes, tension was normal and media clear. An examination of the fundus of each eye revealed a degeneration of the retina. Six weeks later the eyes became painful, and at a glance in the pupil of the right eye, the pinkish white neoplasm was seen occupying a large part of the posterior chamber, and in the left eye a similar growth was to be seen, though not so far advanced. The disease was in its second stage with increased tension. Enucleation was advised, but the proposition was not received with favor. The third and fourth stages rapidly followed, and the child died within six months.

5. *Power* relates the history of a patient who had extensive granular conjunctivitis, vascular keratitis and corneal ulcers on both eyes. Thick pus exuded from the lids, and on averting the upper lid it was found stiff and covered with a diphtheritic looking membrane. He injected 500 c. c. of anti-diphtheritic serum with the result that next morning all the membrane had disappeared.

8. *Scammell* used the anti-streptococcic serum on a case of puerperal septicaemia with good result, when the ordinary routine treatment had no effect. She reacted well, her pulse became stronger, temperature dropped after each injection, delirium ceased, and the tongue became moist, but she suddenly died from haemorrhage from an abscess cavity.

10. *Atherton* reports six cases of tubal gestation upon which he had operated, with one death, from gangrene of the intestine.

11. *Smith* reports a case in which the symptoms and physical signs simulated closely tuberculosis, but were probably set up by a head of timothy grass which the patient had drawn into his lungs several years before.

THE MANITOBA AND WEST CANADA LANCET.

October, 1898.

1. The Wind as a Factor in Spreading Infection. R. S. Thornton.

1. *Thornton* says that typhoid fever has become so generally distributed in the province of Manitoba that it may be regarded as epidemic. The sources of the water supply are largely independent of one another, and a great majority of cases cannot be explained by the direct soaking of surface water containing germs into the wells. There is, however, one factor which does not seem to have received the attention it deserves, and that is the wind. The tendency of bacteria to cling to dust particles is well known, and they may be thus carried to places where the conditions favor their development, such as into open wells, into vessels, containing milk, or butter, or on to the roofs of houses thence to be washed by the next rainfall into the cisterns. There are two practical points to be deducted from this suggestion, first the necessity for very careful disinfection of all typhoid stools and their subsequent disposal

by being burned, or buried deeply in a hole with a liberal quantity of lime or other disinfectant. The second point concerns the water-closets on railway trains. Many people with ambulatory typhoid or other diseases *en route* for home or hospital use these closets, and thus typhoid stools are spread along the track, ready for distribution by the wind all over the neighboring country. It would not be difficult to attach a box below the chute, or adopt some modification of the earth closet, the excreta being removed and burned at divisional points along the line.

CANADA MEDICAL RECORD

October, 1898.

1. A Cases of Suppurative Pylephlebitis with no Apparent Cause. S. H. Martin.
2. A Case of Incontinence of Urine Cured by Anterior and Posterior Colporrhaphy. A. Laphorn Smith.

Practical Relations of State Health Authorities with Railways and Other Public Carriers in the Matter of the Transportation of Corpses. P. H. Bryce, Toronto. *The Railway Surgeon*, Dec. 27th, 1898.

Recent Work Bearing upon the Pathology and Morbid Anatomy of Shock. Wyatt Johnston, Montreal. *The Railway Surgeon*, Jan. 24th, 1899.

A Strange Case of Granuloma of the Face and Extremities. Francis J. Shepherd, Montreal. *Journal of Cutaneous and Genito-Urinary Diseases*. January, 1899.

Reviews and Notices of Books.

TWENTIETH CENTURY PRACTICE—An International Encyclopedia of Modern Medical Science, by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Vols. X., XI. Diseases of The Nervous System. New York. Wm Wood & Company.

The *tenth* volume of this great work deals with, Diseases of the Brain and Meninges, Hysteria, Epilepsy, the Spasmodic Neuroses, Neurasthenia, and the disorders of Speech and Sleep. Dr. Joseph Collins contributes the articles on Diseases of the Brain, and Membranes: He begins with the morphology and anatomy of the brain, and in a few pages describes clearly and fully the most important points pertaining to our present day knowledge of this intricate subject: We are much pleased to see him hold to the ordinary nomenclature. The habit of certain recent writers in adopting every new fangled term leads to much confusion.

The part dealing with the physiology of the brain is very complete on localization.

The different forms of encephalitis, infantile cerebral palsy and sclerosis together with the bulbar and cerebellar diseases are taken up in order. Dr. Collins' contributions to the volumes extend over 260 pages, and are characterized throughout by a successful effort to make difficult subjects plain.

Dr. Charles L. Dana, of New York, writes on Intracranial haemorrhage, Embolism, Thrombosis (Apoplexy and Hemiplegia). It is hardly necessary to say that this well known writer has done full justice to a group of every day diseases to which he has paid special attention, and our knowledge of which his researches has materially advanced.

Dr. B. Sachs, of New York, is the author of the chapters dealing with Tumors of the Brain; a short but excellent presentation of the subject.

The articles on Hysteria and Epilepsy, by C. S. Féré, of Paris, are both of great value. The article on hysteria is more complete and thorough than anything we know of in the English language on this subject.

Dr. H. T. Pershing, of Denver, writes a very clear and sensible article on the disorders of speech, The Disorders of Sleep are dealt with by Sanger Brown, of Chicago.

The XI. volume opens with an account of the Diseases of the Cerebro Spinal and Sympathetic Nerves, and their treatment by J. Hendric

Lloyd, of Philadelphia. The diseases and injuries of the individual nerve trunks are taken up in order, and we have also a very good account of the subject of Multiple Neuritis. The Trophoneuroses have been entrusted to C. K. Mills, of Philadelphia. He describes, under this heading, Hemifacial Atrophy and Hypertrophy, Hypertrophy of one-half of the body, Localized Atrophies and Hypertrophies, Hyperostosis of the Cranium, Raynaud's disease, Perforating Ulcer of the foot and Ainhum.

Dr. F. X. Dercum, of Philadelphia, contributes the article on the remaining Tropic disorders including Scleroderma, Acromegaly, and Adiposis Dolorosa. The latter disease having been first described by Dercum, it is appropriate that he should write on it in this important work.

Bruns, of Hanover, and Windschcid, of Leipsic, contributes a series of articles on diseases of the Spinal Cord, among which may be mentioned localized myelitis, syringomyelia, spastic spinal paralysis, amyotrophic lateral sclerosis, and progressive spinal muscular atrophy.

Tabes Dorsalis, by Möbius of Leipsic, in an article of more than usual value among a series of able contributions.

Strumpel, of Erlangen, the author of the well-known text-book of Practice, contributes the articles: "The Combined System Diseases of the Spinal Cord." Under this heading he describes Friedrich's Disease, Hereditary Spastic Spinal Paralysis, and the Combined System Diseases in the Lateral and Posterior columns of the Cord which are due to exogenous causes, especially Syphilis, Poisons, Severe Constitutional Affections, and Pernicious Anaemia.

A thoughtful article on Pain, by Lightner Witmer, of Philadelphia, concludes the 11th volume.

Both volumes are well illustrated.

J. S.

DWELLING HOUSES—Their sanitary construction and arrangement, by W. H. Corfield, M.D.; Oxon, F.R.C.P. Lond., London; H. K. Lewis, 1898, pp. 125.

That a fourth edition of this work is called for is sufficient evidence of its merits. It is specially adapted for administering elementary instruction on house sanitation to architects—who, as a rule, sadly need it. The scope is somewhat wider than the title implies, and includes water supply and drainage. The usual cuts of water closets, etc., are not omitted. We notice that several elaborate pictures and explanations of obsolete domestic filters are given—the Bastem and Berkenfeld models being causally mentioned in closing. It is decidedly a book that one would wish to see widely read by architects and builders:

W. E. J.

AN AMERICAN TEXT BOOK OF GYNECOLOGY. Edited by T. M. Baldy, M.D. Second Edition, Revised, Philadelphia. W. B. Saunders, 1898.

This edition is the revised form of a volume which has been very favorably received both in Great Britain and America. The names of the authors are well-known, and are a guarantee of good work.

The book is essentially a practical one, and is especially valuable to the practitioner. There are a large number of illustrations, some of which, unfortunately, are not in keeping with the excellent quality of the text. Thus Figs. 26 and 27 are very indistinct, and are not calculated to be very instructive. Figs. 170 and 171 are apt to mislead the student. They are intended to illustrate the method of introducing a pessary. The cuts might have represented the fundus of the uterus turned to the front. A student might imagine that replacement of the organ is brought about by the introduction of the pessary; whereas, of course, reposition should precede the latter. A full page coloured plate representing the Hottentot apron is scarcely necessary in a teaching manual.

Such defects as these are very apt to creep into a book of such magnitude, and they might be easily remedied in a new edition. The predominating excellencies in the work are too abundant to be mentioned in detail. They amply suffice to recommend the book to many readers.

J. C. W.

THE SEXUAL INSTINCT. Its Use and Dangers as Affecting Heredity and Morals. By James Foster Scott, B.A. (Yale University), M.D., C.M. (Edinburgh University), 800, pp. 436, New York, E. B. Treat & Co., 1899: Price, \$2.00.

A well written book pleading for a higher standard in sexual life for physiological, ethical, and moral reasons. It is a book that all medical men will wish success to, and might be read with great advantage by other than medical men.

It deals with sexual instinct, and the importance of a just appreciation of its influence; the physiology of the sexual life; a proper calculation of the consequences of impurity from the personal standpoint; woman, and the unmanliness of degrading her; some of the influences which incite to sexual immorality; prostitution and the influences that lead a woman into such a life; the regulation of prostitution; criminal abortion; gonorrhœa; syphilis; onanism; and the perversions.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, December 5th, 1898.

H. A. LAFLEUR, M.D., VICE-PRESIDENT, IN THE CHAIR.

Drs. A. A. Robertson and Mackenzie Forbes, of Montreal, were elected ordinary members.

Drs. John McIntyre, James Allan, and James Maclean, of the Western Hospital, were elected temporary members.

PATHOLOGICAL SPECIMENS.

Dr. A. G. Nicholls showed the following specimens:—

A Case of Myodegeneratio Cordis with Atheroma of the Coronary Arteries.—This was taken from a female, aged 70, whose main trouble had been shortness of breath. There had been no pain, headache, nor oedema of the body, but she had occasionally suffered from blindness. The cardiac area was increased, and there was a loud blowing systolic murmur at the apex.

The heart weighed 440 grammes. The right side was hypertrophied and dilated; the left ventricle was dilated. Both coronaries showed extensive adhesions. In the anterior vessels beginning 2 c.m. from the origin and extending for a distance of 2.25 c.m., the artery was converted into a calcareous tube, into the lumen of which projected two hard nodules which greatly narrowed the lumen. Microscopically the heart showed diffuse fibrosis. Death occurred suddenly.

A Case of Mitral Stenosis and Aortic Regurgitation Associated with Adherent Pericardium and Corbovinum.—The patient was a young man of 24, who had suffered from severe attacks of inflammatory rheumatism. The heart dulness was greatly increased in both directions; the apex in the 5th space, and outside the nipple line. There was a marked presystolic thrill felt at the apex, a presystolic and systolic murmur was heard also at apex. At the aortic cartilage there was a diastolic murmur transmitted down the sternum.

The heart was very large, and the pericardium generally adherent by old adhesions. The mitral orifice was stenosed, being of a funnel shape, with great calcareous deposit. There was evidence of regurgitation through the aortic valves.

Two Cases of Ulcerative Tuberculosis of the Kidneys.—The first was found unexpectedly at an autopsy performed on a female of 36 years.

The left kidney was enlarged; the capsule adherent; the surface coarsely granular. On the surface little groups of abscesses like hemp-seeds were noticeable. At the upper end was a cavity filled with cheesy material, connected with a calyx. At the lower end was a larger caseous abscess and several papillae were seen to be involved in an early process. The ureter was thickened and the mucosa of the upper third showed minute tubercles.

The left kidney was represented by a small fibroid mass with only a small portion of kidney cortex recognizable. It contained firm cheesy material, becoming absorbed. The bladder showed tuberculosis about the orifice of the left ureter, and near the neck of the trigone. The second was a man of 47. He gave a history of untreated gonorrhoea 25 years before, and "grippe" (?) four years before, after which he had noticed a urethral discharge with pain and frequency of micturition.

During the six weeks before admission, all these symptoms were very marked, and he had had chills. The urine was 1020 sp. gr., contained pus and a little blood. No tubercle bacilli were found.

The left kidney had a puckered surface with numerous miliary tubercles fairly generalized, but most numerous in the lower portion.

On section an abscess the size of a hickory-nut was seen at the upper end filled with caseous material. Below this was a second focus, the size of a bean, not communicating with the pelvis. One small focus about the middle was in communication with a calyx. The ureter was dilated; the lumen showing numerous small tubercular foci. A few tubercular nodules were found at the trigone of the bladder. The vesiculæ seminales were caseous, as was also the left epididymis. In the apices of both lungs were fibrous nodules with calcareous spicules, with some recent tuberculosis about them.

There was also miliary tuberculosis of the lungs, liver, right kidney, and spleen, also tubercular enteritis.

Dr. G. E. Armstrong asked, in regard to the first kidney exhibited, of which *Dr. Nicholl's* stated that the tuberculosis of the kidney was apparently secondary to a focus in the lung, if there was any evidence of the way in which the infection passed from the lung to the kidney, whether it was through the blood or the lymphatics. And, also, whether there was any history of traumatism in the case. If so, he thought that this might have some bearing on the case as tending to produce blood stasis in the organ.

Dr. J. M. Elder, referring to the second kidney exhibited, asked if it was common to find a kidney so shrivelled up as this one was, without anything in the organ itself to account for it. Might it not be a congenital condition, a want of development of the kidney?

Dr. Nicholls, in reply to *Dr. Armstrong*, said that it was, perhaps, a little hypothetical to say where the disease started. He had made the

statement that the primary focus was in the lungs because the lesion there was apparently the oldest one in the body. The condition of the kidney itself did not throw much light on the subject, but the fact that the pelvis was not involved would point to the blood rather than to the genito-urinary tract. If coming from below, one would expect to find the pelvis of the kidney diseased. There was no history of traumatism in the case, but a previous history of gonorrhoea, and of possible influenza, the bacillus of which is extremely liable to attack the kidney, and lessen its resisting power.

In reply to Dr. Elder, he did not think that it was possible that the atrophied and fibroid kidney in the other case could be due to a congenital condition. He had seen three cases of this kind, and one in Vienna, was even smaller than the specimen shown.

With regard to the Chairman's remarks, he had seen in the autopsy room on several occasions an adherent pericardium which was not suspected during life. There was no symptom definitely pointing to adherent pericardium except retraction of the chest wall from adhesions between it and the pericardium, and this latter condition was not often present.

MULTIPLE TUMORS OF THE HANDS.

Dr. W. M. Nelson, referring to the case exhibited by Dr. Springle at the last meeting, said that when he had first heard of the case he had thought that it might possibly be multiple fibromyomata, but he had thought worse of it. On looking up the subject he had come upon a very similar case in Hutchison's Archives and by the plate given (shown in meeting), it was seen to closely resemble Dr. Springle's case. Crocker had also reported a case with a coloured plate (shown) which was considered to be of the same nature as Hutchison's.

HAEMORRHOIDS IN CHILDREN, WITH REPORT OF A CASE.

Dr. E. W. Archibald, the author, being unavoidably absent, this paper was read by Dr. A. G. Nicholls. (See page 110.)

Stated Meeting, December 19th, 1898.

H. A. LAFLEUR, M.D., VICE-PRESIDENT, IN THE CHAIR.

Drs. N. C. Smillie, and J. A. Dickson, of Westmount, and Dr. W. H. Smyth, of Montreal, elected Ordinary Members.

TUBAL PREGNANCY.

Dr. A. Laphorn Smith read the report. (See page 121.)

URINARY INCONTINENCE TREATED BY TIGHTENING THE SPHINCTER VESICAE.

Dr. A. Laphorn Smith read the following report:—

During the last twenty-four years I have been consulted by a number of women for incontinence of urine following a very severe labor. A few of these were found, on close examination, to have a vesico-uterine or a vesico-vaginal fistula, which were dealt with in the usual way and cured by operation. Nearly all the others were treated for two or three months with a mixture of iron, strychnine, and phosphoric acid in full doses, and were also cured the cause in their cases being weakness of bruised and overstretched muscular fibre. But about six months ago the present case came under my care at the Montreal Dispensary, and proved an exception to the rule of my experience. Mrs. M., age 40, had a very severe instrumental labor about a year ago, ever since which time she has had to wear large pads to catch her urine. Her physician was unable to stop it in any way. If she remained in bed she could hold water for an hour or two, and then it would trickle out if she moved or took a long breath, and when she went about her work it kept running all the time, keeping her clothes wet, and always smelling of urine. I put her on the above tonic treatment, and in order to observe her better took her into the Samaritan Hospital for a couple of weeks. A careful examination failed to detect any fistula, in fact, in filling her bladder with warm salt solution the latter flowed out, beside the catheter; there seemed to be no life in the sphincter. There was a large rectocele and cystocele and lacerated perineum. Although I have seen a great many patients with this condition and quite commonly causing desire to micturate frequently and also a sensation as though some urine still remained in the bladder, as indeed it doe; yet I do not remember to have had a case in which it caused incontinence. I therefore feared that the cure of these conditions alone might not suffice to cure her of her trouble, and I had some intention of, at the same time shortening or taking a reef, so to speak, in the relaxed sphincter. This I found was quite easy to do, when I had removed the vaginal mucous membrane to the extent of two and a half inches in length, and an inch and a half in breadth. In order to tighten up the sphincter I made the denudation further down towards the meatus than usual, and instead of drawing the edges surrounding the denuded area with a purse string suture, as I usually do, I tightened up the sphincter by means of a running catgut suture which was buried in the muscular layer of the bladder right down to the urethra. The vaginal mucous membrane was then accurately brought together over this. Hegars' operation on the posterior vaginal wall was then done, with a buried and a superficial row of catgut. This made a good support for the bladder. Fortunately the catgut was good, and her tissues healthy, so that in both primary union was obtained. The result was all that could be desired. She could cough and turn in bed from the first day without wetting herself, and at the end of two weeks she could walk about with comfort, and without a single drop of urine passing involuntarily.

FOREIGN BODY IN THE NASO-PHARYNX.

Dr. H. S. Birkett read the report of the case. (To be published later.)
VOICE, FROM A MEDICAL STANDPOINT.

Dr. H. D. Hamilton referred to the accessory parts of the body concerned in voice-production, as the thorax, lungs, etc., and the various resonance-chambers of the nose, the ear and the cranial cavities. Much depends upon these parts being kept in a state of perfect health. To maintain the musical voice in a state of perfection it is necessary for the whole body to be in perfect health. Faulty methods of vocalization and overstrain of the voice are to be avoided.

Dr. Wesley Mills was interested in the voice physiologically, and aesthetically, but the subject had many points of view. He had thought it possible that *Dr. Hamilton* had meant to suggest that voice might be an indicator of disease, just as the face is. He was still of the opinion that such was the case. Here was a subject for investigation not requiring a very special knowledge of the voice musically considered, but only of the pitch and qualities of sound. When in practice, *Dr. Mills* had had a large proportion of speakers and singers, a class in which he took a special interest. Regarding the voice in health and disease, volumes might be written. Children are so little guarded against the dangers of over-straining the voice that it may be injured for life during school days. Those who sing should be warned against using the voice during the change of life. It is well known that a voice of a certain quality may be changed after puberty; a tenor after puberty may become a baritone. Then, too, singers in societies strain the parts, producing congestions and exhaustion of the nervous system from attempting a range beyond their power. Excessive use of the voice was seen in country clergymen, who were fond of talking, and often crowded the whole of their speaking into a few hours, in one day. One case where a man had preached for three hours on Sunday, and also conducted the singing, came to his office with a growth on the vocal cords. An improper method of speaking and of breathing with an exhausted thorax, which leads to elevation of venous pressure and exhaustion of the parts, were the two principle reasons in explaining the troubles of clergymen. Another important cause was speaking under worry, and the irregularity of their work. Troubles of the voice were comparatively rare among actors, who are regular in the use of their voice, and understand a few plain principles of common sense, which they employ. In public speaking the speaker is more effective if he ascertains just the amount of effort necessary to reach his hearers. It is quite superfluous to speak of the evil effects of alcohol and tobacco on the voice, but one must remember that in explaining these we must make large allowances for different individuals, and remember that there are different

ways of producing tones. Pitch is altered in two ways, by shortening the vocal cords and by altering their tension. There is the same perfection in the trained singer, that there is in the trained athlete. Some time ago the speaker had made use of a great many students in the laryngoscopic investigation of the voice, and had never failed to get some sort of a record. One result of this investigation was to teach him that rigid views of the physiology of the voice did not hold any more than rigid views on other parts of the economy. It is well to remember that there is different ways of doing the same thing. This is well known to actors and singers, who, in spite of the abuse of alcohol can perform their duties. These are the wonders of nature, who can treat themselves in the wrong way and yet not suffer as others do for it. Two professional singers in this city had spoken to the speaker about the condition of the nose in their pupils. So little attention was paid to this point that in one instance the teacher had been obliged to stop in the middle of the lesson and request his pupil to blow his nose. He had been reminded of this by noticing the fact that in the Leipsig clinic, Professor Barthin invariably taught his young patients how to blow their nose by closing one passage and blowing one at a time. Another point to be taken into consideration in speaking was the condition of the room. A bad atmosphere, or exposure to draughts, was harmful from the action of the vitiated or cold air on the larynx, and the nervous system. When one takes into account the amount of work done in speaking, one does not wonder that the conditions must be the most favorable to get the least fatigue. Often all that is required in treating a case of breakdown is to send the patient away for a perfect rest.

Stated Meeting, January 9th, 1899.

J. G. ADAMI, M.D., PRESIDENT, IN THE CHAIR.

Drs. Elizabeth Mitchell and Maude E. Abbott, of Montreal, and Dr. Arthur Birt, of Westmount, were elected ordinary members.

OSTEOSARCOMA OF THE SKULL.

Dr. J. M. Elder exhibited for Dr. Armstrong, who was absent, a case of osteosarcoma of the skull. (To be published later.)

EPITHELIOMA OF THE UPPER JAW.

Dr. Elder also exhibited a patient on whom Dr. Armstrong had operated for epithelioma of the upper jaw.

HAEMORRHAGIC MENINGITIS.

Dr. Wyatt Johnston showed the specimens of a case of haemorrhagic meningitis.

CANCER OF THE OESOPHAGUS WITH ABSCESS OF THE LUNG.

Dr. F. G. Finley gave a report of this case and *Dr. D. P. Anderson* demonstrated the pathological specimens. (See page 125.)

A CONTRIBUTION TO THE STUDY OF BRIGHT'S DISEASE WITH SPECIAL REFERENCE TO THE ETIOLOGICAL RELATIONSHIP OF THE BAGILLUS COLI.

Dr. A. G. Nicholls read a paper on this subject, which will be published in the March number.

THE LATE DR. W. M. NELSON.

Resolved:—That this Society records with extreme regret the loss which it has sustained in the death of *Dr. W. M. Nelson*, who, although but lately returned to us after a long absence, had, by his zeal, seriousness of purpose, and enthusiasm for his special work—dermatology—impressed all with his great value as a member of this society. He had already made many friends and gave promise of a brilliant future.

Further Resolved:—That a copy of this resolution be sent to the relatives of the late *Dr. Nelson* and to the press.

Stated Meeting, January 23rd, 1899.

H. A. LAFLEUR, M.D., VICE-PRESIDENT, IN THE CHAIR.

Dr. F. W. Gilday, of Montreal, was elected an ordinary member.

DISCUSSION ON TYPHOID.

Dr. James Stewart, and *Dr. Geo. E. Armstrong*, introduced the discussion from the medical and surgical aspect. (See page 81.)

Correspondence.

PRIVATE WARDS IN PUBLIC HOSPITALS A CAUSE OF HOSPITAL ABUSE.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,

The contention of the writer of the editorial in your January number, that the existence of private wards in public hospitals is a fruitful source, (in fact the inference is that it is *the most fruitful source*), of hospital abuse is the most extraordinary and illogical argument that I have yet seen advanced in discussions upon this subject. It is all the more surprising, when the fact is borne in mind, that five of the six editors, (who are responsible for this article), are physicians and surgeons in active practice, with large hospital experience, and who are daily treating patients in the private wards of the Montreal General and Royal Victoria Hospitals.

At the present time three classes of patients are treated in the hospitals above mentioned, (1) The *bona fide* poor, who are the class for whom hospitals are primarily maintained, and who are treated free of all, or any, charge. (2) A large class, mainly from outlying districts, who pay fifty cents per day, for hospital service, including medical and surgical treatment, drugs, stimulants and everything which they receive while in hospital, and (3) Private ward patients, who pay \$2.00 to \$2.50 per day for hospital service alone, and pay for their medical and surgical treatment besides. Now, surely, when one considers that the first class, are those who cannot pay their way and are therefore *bona fide* and admittedly objects of charity; and that the patients of the third class do fully pay their way in every respect, while the patients of the second class pay only fifty cents per day, for what costs the hospital, in round figures, about \$1.25 per day, and pay nothing at all for professional services, it is not difficult to see where lies the most likely source of abuse. Moreover, these patients are admitted without any systematic or thorough investigation into their financial positions, and practically on their own statements or those of a physician, clergyman or philanthropist, that "they are too poor to pay for a private ward"—an expression of opinion be it observed, and not a statement of fact. Their ideas on this point are naturally very lax and, they fondly believe, or pretend to believe, that in paying fifty cents per day, they are paying their way and scorn the imputation that they are charity patients. This abuse is now of so long standing, and may I say, so respectable, that philanthropists,

clergymen, and even many physicians lend themselves to it, and recommend patients for admission on these terms who are quite able to pay, and who expect to pay their way in every other sphere of life. Not only is it quite clear to my mind that this is the chief source of hospital abuse, (I do not here refer to hospital out-patient departments), but it is equally clear that by a very little trouble on the part of the hospital boards, lay and professional, acting in co-operation, this abuse can be entirely removed without inflicting any hardship on anyone, and to the great benefit of all concerned. Briefly, the remedy which I have to propose is: A rearrangement of the terms of admission of the patients who are treated in the public wards, so that the present fifty cent per day class shall be abolished and instead, class (2) shall be obliged to pay the cost of maintenance, (say \$1.25 per day), and not necessarily, as heretofore, be exempted from paying for their medical and surgical treatment. Classes (1) and (3) would remain as at present, the hospital receiving such voluntary contributions from the patients of the first class as they are able or willing to give. The burden of proof as to financial condition I would put upon the patients themselves. I would fix a standard of income, whether from salary or otherwise, and in the case of property holders, a standard of assessed or assessable property which would be the dividing line between classes (1) and (2), and (2) and (3), and I would demand from applicants for admission, official certificates from the regular municipal officers of their towns or parishes, and not, as at present, be satisfied with vague general statements which prove nothing and which enable the unscrupulous to defraud the hospitals and the medical profession with the greatest ease. I am perfectly certain that such a plan must commend itself to every one, who looks into the matter, as simple and workable, and that it would meet with the hearty co-operation and support of the medical profession everywhere.

As for public hospitals maintaining a certain number of private wards, I contend that not only is it necessary in the interests of the public, that they should do so, but that the maintenance of such wards by constantly exposing the hospital service to the test of the experience of independent and intelligent people, (private ward patients and their friends), is the greatest possible safeguard against possible abuses to the charity patients. Furthermore it must be borne in mind that the changes which have taken place in the practice of medicine and surgery during the last quarter of a century, have completely revolutionized the relations of the public to the hospitals.

Twenty-five years ago, all except very poor were treated in their homes, their hotels, or their lodging houses. To-day, no physician or surgeon will dispute the fact that many surgical operations and many forms of medical treatment cannot be nearly so efficiently nor so satisfactorily carried out, even in the most comfortable and luxurious homes,

as in a hospital, and that justice, (in the way of treatment), simply cannot be done to the many people living in hotels and lodging houses. Private hospitals can, and do, to a great extent fill these wants, but there still remains the fact that it is obviously almost impossible to have a private hospital so fully equipped or so efficiently manned for general surgical and medical cases as the large modern general hospital is.

Private hospitals for special classes of cases can, of course, be much more easily equipped and manned than those which are required to be prepared, at all times, for all classes of cases. Besides, accidents and emergencies, especially to strangers passing through our cities must always demand of the general hospitals, at least a certain number of private wards, or the alternative will be, the treating, from time to time, of well to do people as charity patients in the charity wards.

Much more might be said in favour of the propositions which I have advanced, but as this letter is already too long I cannot deal with the subject in detail.

JAMES BELL.

Montreal, February 18th, 1899.

BRESLAU AS A MEDICAL CENTRE.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,

Breslau, although little visited by Canadians, contains one of the best and most active medical schools in Germany, and a few notes by one spending the winter there may not be uninteresting.

The buildings of the medical faculty are new. In fact one or two of them are not yet quite completed. They cover several acres and each department has its own separate building. The greater number are arranged around a pleasantly laid out garden in the form of a large triangle.

One side is taken up principally with the medical building, embracing four large wards and a number of smaller ones, as well as an isolation building a few yards away. The Chief of this department is Prof. Alfred Kast, an old assistant of Erb's, who has collected a very large amount of clinical experience in Hamburg, Erlangen and Breslau. His teaching is thoroughly practical and his methods of diagnosis and treatment are eminently adapted for use in private practice. He presents his cases as far as possible in series. At the beginning of the session he gave a most excellent and practical course on blood diseases.

In a case of pernicious anæmia he was able to demonstrate anky-

lostoma duodenale in the stools. In one of acute leucæmia with hæmorrhages, and also in one of purpura hæmorrhagica he dwelt on the importance of excluding septic causes for all blood conditions accompanied by a tendency to hæmorrhages. In chlorosis he emphasized the necessity of excluding: 1. Phthisis; 2. Gastric ulcer; 3. Excessive loss of blood from any cause, before reaching a diagnosis.

After blood diseases he presented a series of cases of spitting of blood due to cancer of the stomach, injury to the chest, and phthisis with hæmoptosis.

Then he had a very marked case of jaundice due to secondary syphilis in which the skin showed a macular syphilide at the same time as the jaundice. He has himself seen some half dozen cases of jaundice in secondary syphilis, and is inclined to ascribe it to an inflammation of the smaller biliary passages; although an enlarged gland at the hilus and a syphilitic exanthem in the bile ducts have also been mentioned as possible explanations. Lately he has been giving us some interesting nervous cases in which as an old pupil of Erb's he is quite at home.

To day he had up a case of hysteria with intractable hiccough. Last day it was paraplegia due to pressure on the conus terminalis by a spinal curvature.

A few days ago one of his assistants demonstrated the use of the X-rays in the diagnosis of hypertrophy of the heart. The heart could be very distinctly seen in all the cases shown. This method is especially useful in emphysema, when the percussion dullness is difficult to mark out.

The next side of the triangle is taken up by the ear and throat clinic and the surgical. The latter is presided over by Mikulicz who seems to be quite a popular idol in Breslau. The asepsis in his clinic is the most complete I have ever seen. The ordinary class in surgery which is in a large theatre, consists of demonstrations of cases for diagnosis, and of small operations; also the results of former operations. The first time I visited his clinic he had a case of septic poisoning with localised inflammation in the infra-axillary region. For the treatment of this case he put on rubber gloves and then proceeded to make multiple and deep incisions to an extent that I never saw equalled. He was certainly thorough but as to whether he did more than was necessary or not I am not prepared to say.

On sending in my card I was invited to follow him to the operating room proper, which is quite separate from the theatre and to which only a few students at a time are admitted. In the anteroom I was told to take off my coat and made to don a linen duster. I had also

to put on a pair of rubbers over my boots. All who went near the patient had also to put on linen caps and a contrivance like a respirator over their mouth and nose. Those who took part in the operation after disinfecting their hands, put on white cotton gloves fresh from a sterilizer, which were handed to them by the nurse with a pair of forceps. All instruments and dressings were handed to the operator with forceps by a nurse on a raised platform just within easy reach of him.

The case was one of cancer of the stomach. The preliminary incision and examination of the stomach was made by an assistant, and then Mikulicz himself took the case in hand and would have finished the operation, but found such extensive adhesions to the liver that he decided nothing could be done and left the case for the assistant to close up.

The other buildings forming the triangle are those for skin diseases, women's diseases, psychiatry, pathology, residences of several of the professors, and administrative buildings and chapel.

Neissy, in syphilis and skin diseases, is one of the best teachers here, and is also very agreeable personally. He holds his clinic for students three times a week. Recently he has shown a number of cases of primary syphilis, ordinary and extraordinary. Among the latter was a primary sore on the cervix, a primary sore on a man who had many years ago had a former attack of syphilis, and a primary sore on the lip. Across the street from the surgical clinic is the clinic for children's diseases, where Prof. Czerny gives three excellent lectures a week, and where there is a very good out-door department. They keep a record of the weight of every child they treat, and consider it most important for both diagnosis and prognosis. Czerny is very simple in his treatment. He believes that there are innumerable theories and practices current among teachers of pediatrics which have no scientific foundations, and will have nothing to do with them. Even antiseptics in diarrhoea he has little faith in, and trusts mostly to getting stomach and bowel free from food by putting the child on what is practically boiled water for a day or more.

In nervous diseases, Prof. Carl Wernike gives a clinical lecture lasting a couple of hours once a week. He is very enthusiastic over his cases and is also one of the best teachers. His cases are well chosen and very interesting. Last Saturday, for instance, he had four cases. 1. Infantile cerebral paralysis, in which the attack only came on three weeks ago, so that the characteristic rigidity of the limbs was just beginning to show itself. 2. Musculo-spiral paralysis due to alcoholic neuritis and apparently immediately induced by the man

sleeping on his arm. 3. Tabetic knee joint, and 4. Hysterical hemi-crania and tongue paralysis.

His clinics are given in the surgical theatre as the nervous clinic is some distance away and has no auditorium. Wernike also has a psychiatric clinic twice a week, but I have as yet not been able to attend it.

The eye clinic, under Professor Uhtoff, is also in a distant part of the town, but if one can judge by the ophthalmoscopic courses, the teaching there is of the best. A new building is now being built for this department near the others. Among some of the other buildings which are near but not in the clinical triangle are those for hygiene pharmacology and anatomy. The latter is the newest, and is here thought to be the most complete anatomical institute in Germany. A new physiological building on a grand scale is also in process of construction and will be occupied in the course of next summer.

The present physiological institute is old and, although splendidly stocked with apparatus and well adapted for graduate work has not sufficient room for the undergraduate classes. Prof Carl Hürthle, who has succeeded Heidenhain, is especially well known for his work on the circulation. He is a master of technique and is a most conscientious and painstaking guide to those working with him, and gives them a great deal of personal attention.

As a city, Breslau is a little larger than Montreal. It has no very special natural or architectural beauty, but is well supplied with good opera and theatre, and living is not expensive. Fair board can be had for twenty dollars a month, and college fees do not cost more than forty or fifty dollars for five months with from four to six classes a day.

One needs a fair knowledge of German before one can do much however, as very little English is spoken; but for any one who knows German, and who wishes a five or six months course in anything medical, I can recommend it in the highest terms.

WILLIAM S. MORROW.

Breslau, December 19, 1898.

T H E

Montreal Medical Journal.

A Monthly Record of the Progress of Medical and Surgical Science.

VOL. XXVIII.

FEBRUARY, 1899.

No. 2.

The second issue of the MONTREAL MEDICAL JOURNAL in 1899, is under an enlarged Editorial Board. It has always been the aim of the Editors of the MONTREAL MEDICAL JOURNAL to publish a high-class monthly that would be helpful to the general practitioner in his daily rounds of hard work and great responsibilities, and at the same time be a medium through which the best work in original research in the varied fields of medicine, might be briefly indicated. That this high ideal might be more perfectly attained the Editorial Board has been enlarged, and the JOURNAL has been fortunate enough to secure the following men who will at once take an active interest in, and assume control of their respective departments.

William Gardner, M.D., Professor of Gynæcology; Frank Buller, Professor of Ophthalmology and Otology; F. G. Finley, M.B., (Lond.), M.D., (McGill), Assistant Professor of Medicine and Associate Professor of Clinical Medicine; and Henry A. Lafleur, B.A., M.D., Assistant Professor of Medicine and Associate Professor of Clinical Medicine.

These gentlemen are members of the Faculty of medicine in McGill University; their names are familiar to the graduates of McGill and may be taken as a guarantee that their work in matter and literary style will be of a high order.

Medicine is such an immense subject, and the advance so rapid that no one or two men can hope to put the readers of a journal in possession of the new material that is accumulating almost daily and specialisation in journalistic work is a necessity.

In addition, the services of a number of collaborators have been secured. May we ask our subscribers to second our efforts in this work by sending us original articles, reports of cases in practice, reports of the transactions of local and provincial societies, and items of interest to the profession. May we also ask you to secure for us

as many new subscribers as possible. It is difficult to successfully publish a pure medical journal and we need the co-operation of the profession.

THE TREATMENT OF TYPHOID FEVER.

We draw the attention of our readers to the discussion on the Treatment of Typhoid Fever at a recent meeting of the Montreal Medico-Chirurgical Society, a resume of which appears in the present issue of the Journal. The very large attendance, and the evident interest taken, both by the minority who spoke, and the majority who listened, fully justified the choice of a topic on which the last word seems destined never to be said. The surgical questions involved were clearly and forcibly presented, a plea being specially made for early diagnosis of perforation, and prompt surgical interference in such conditions, in view of the more recent favorable statistics bearing on the operative treatment of that formidable complication. While the discussion, which ensued, showed no dissent from the conclusions regarding the necessity of early diagnosis and operation, there was not the same unanimity about the most reliable subjective and objective signs of perforation, the surgeons, probably influenced by their experience with appendicular disease, laying most stress on the occurrence of sudden abdominal pain, while the physicians were inclined to attach more weight to the associated constitutional disturbance, and particularly the signs of collapse. Certainly the surgeon is quite right in asking that whenever perforation is even suspected he should have the opportunity of consulting with the physician in charge. Too often, he claims, he is called upon to operate when general peritonitis has set in, and the outlook is the worst possible. At the same time one must admit that it is a most delicate point to decide when it is advisable to resort to the knife, and when to stay one's hand, for it can hardly be denied that an exploratory operation is not to be lightly undertaken in the case of a subject already exhausted by a serious disease. The discussion of the medical treatment of typhoid fever evoked, as was to be expected, a wide divergence of opinion, notwithstanding the very convincing arguments and statistics brought forward by the opener of the discussion in favor of systematic hydrotherapy. It is to be regretted that some ardent advocate of the so-called antiseptic and eliminative treatment was not present to urge the claims of this, the most recent, and in some quarters, highly popular, method. As it was, the ancient expectant plan was the only one that found supporters among those who, for one reason or another, condemned the bath treatment, as either barbarous or unnecessary. Really it is too late in the day to advocate a return to methods, which, even under the most favorable conditions, resulted in a mortality ranging from eleven to seventeen per cent. It would be

useless, as well as out of place, once more to recapitulate the advantages of the bath treatment of typhoid fever. We can only point out that the great majority of hospital physicians who have had an extensive experience in the treatment of typhoid fever is unquestionably in favor of this method. It is equally certain that outside of hospital practice very few physicians see a sufficient number of cases of typhoid fever to enable them to judge of the relative merits of this or any other treatment of the disease. No one will deny that the bath treatment has certain advantages, and is open to certain objections, but these are infinitesimal when compared with "The greatest good to the greatest number," achieved. Moreover, it is not claimed that the bath treatment is the final expression of the physician's control over the disease, but that, in the present state of our knowledge, and in the absence of a truly specific treatment, it is the best we know of, working more constantly and more thoroughly for the patient's welfare in supporting the circulation, and the nervous system, assisting elimination of toxins, and relieving or preventing the occurrence of many of the more distressing and even dangerous symptoms in the course of the disease; and, last, but not least, lowering the mortality from this disease to a surprisingly uniform level, wherever the treatment has been introduced.

Obituary

W. M. NELSON. M.D.

We regret to have to chronicle the death of Dr. W. M. Nelson, a graduate of McGill, in 1884. After spending several years in New York, in the study of dermatology, he settled in Montreal, where he devoted himself to his specialty. Several interesting contributions have appeared in this journal from his pen, and he always took an active interest in the Medico-Chirurgical Society; particularly in the discussion of dermatological subjects. Although laboring for years under the disadvantages of grave cardiac disease, and fully realizing the nature of his complaint, he continued at his post, and carried on his duties with unflinching zeal till within a day or two of his death.

Many of his old classmates and confreres will retain a kindly memory of Dr. Nelson, and admiration for his enthusiasm, and for the heroism which enabled him to lead a useful life in spite of unusual physical disabilities.

PROFESSOR KANTHACK.

It may well be that to many medical men in Canada, the name of Kanthack was, until his sudden and premature death, almost unknown, and that it has been a surprise to them to find the leading medical journals on both sides of the Atlantic giving fuller and more appreciative references to him than they gave to one, who, known universally as a great physician, died almost at the same time, full of years and full of honours.

To those, however, who have known Kanthack, and have followed his course, this is no surprise. Sir Edward Jenner had years ago fulfilled his career, Kanthack was but entering upon its fruitful stage, and there is something pathetic in a life of promise abruptly brought to a close. Jenner, although in his younger manhood, the teacher and helper, had for long fought the hard fight to obtain pre-eminence as the fashionable consultant, a position, which, however, influential, is, somehow, rarely sympathetic; on the other hand, Kanthack had devoted himself wholly to medical science for science sake; he had not sought popularity, and his very devotion to work was the indirect cause of his death. Just as there are artists little appreciated by the general public, who are the idols of their fellow artists, so, to a very large extent, was Kanthack the idol, or more truly the ideal, of his fellow workers in pathology. Those who came under his influence, whether as his teachers, his colleagues, or his pupils, saw in him one so single-minded in the pur-

suit of his work, so enthusiastic, so determined to realize rather than imagine the truth, that with his early death it is felt that there is left a gap that cannot soon be filled.

I do not think that Kanthack, had he lived, would have made a name among the great discoverers in medicine, if I may so express it. Discovery of new facts was not his aim, although his friends well know that he was the first to cultivate the actinomycoses hominis, and that Kitasato, but employed a simple method devised by him to gain readily pure cultures of tubercle bacilli from the sputum; matters in which he never claimed a rightful priority, in an age when any serious worker at the new subject of bacteriology is sure to make discoveries, if he so desires. Discoveries as such did not appeal to him, what he constantly sought was to make sure of his facts. He was content, nay anxious, to establish the ground work for others to build upon, and was impatient of nothing so much as of conclusions reached from premises not rigorously sound. I must acknowledge, that rare and valuable as is such habit of mind, it at times, I used to think, rendered him a little illiberal towards men who, gifted with the scientific inquisitiveness, were performing good work in propounding and testing theories, men who from their very gift were apt to express rapidly their conclusions, without indicating or appearing to weigh adequately the data from which their conclusions were deduced. But this very caution in arriving at conclusions, together with his untiring devotion to work, made Kanthack the ideal teacher. He taught those under him to investigate minutely, and imbued them with the true scientific spirit of careful analysis and balancing of facts and observations.

When the remarkable galaxy of talented British physicians and surgeons of this century is called to mind, and when we remember the brilliant advances that have been made by them in medical science, it is remarkable how, with scarce an exception, the best results have been obtained by independent workers, who in their turn had not passed on the mantle to any pupil. With the possible exception of the teachers at Edinburgh and at University College, London, during the third quarter of the century, there has been no live, well characterized school of medicine with the highest scientific traditions well sustained. No one in Great Britain has established a school of pathologists comparable, for example, to the Johns Hopkins School under Professor Welch, or to the school of physiologists created at Cambridge by Michael Foster. Roy founded such a school at Cambridge, but disease arrested his efforts after a few brilliant years. Horslev at University College, promised to accomplish much, and attracted men from afar, until surgical practice and medical politics forced him to resign his professorship. Coats, of Glasgow, has died just as admirable new laboratories have been provided for him. At Liverpool with the Yates Thompson laboratories recently opened by

Lord Lister and Virchow, Boyce may accomplish much. Delepine, in Manchester, appears to be drifting from pathology to public health, and in so doing is performing an excellent public service. Sims Woodhead, just appointed to succeed Kanthack, who accomplished a brilliant beginning for the Laboratory of the Royal College of Physicians at Edinburgh, found the environment at the conjoint laboratories on the Embankment in London, such that it was impossible to found a school. All looked to Kanthack to establish at Cambridge, the great English school of scientific medicine. Everything was in his favour, training, capacity, depth of knowledge, while added to this the old English university afforded pupils, well trained and well prepared, to devote the necessary time for research bringing no immediate remuneration. Apart from personal grounds, it is the fact that the establishment of such a school may be delayed, which renders his death so lamentable. On personal grounds, those who came in contact with him felt the loss of one possessed of a master mind, who, at the same time, was so modest that he did not realize his remarkable influence.

The facts of Kanthack's life are relatively simple, although he passed so swiftly from one post to another that in reviewing the life, one is apt to fall into chronological confusion. Born in Brazil, he spent his school life in Hamburg; his medical education was largely earned in Liverpool and at St. Bartholemew's Hospital. In 1888 he obtained the F.R.C.S. and the M.B., B.S., of the University of London, gaining the gold medal in obstetrics, the London University gold medals being among the highest prizes of the British medical student's career, for they are gained against competitors from all parts of the Empire. 1889 was spent in Berlin under Virchow, and the main paper results from this work, a study of the pathology of the larynx, attracted wide notice. In 1890, in the midst of further researches, he was called back to St. Bartholemew's to be assistant under the late Matthews Duncan, the celebrated obstetrician. That same year he gave up the post, being appointed a member of the British Leprosy Commission and travelling in various parts of India. Of that commission he was the most active member, and the larger portion of the report was compiled by him. It shows well his extreme caution in weighing evidence. Returning, in 1891, he was appointed John Lucas Walker Student in Pathology at Cambridge, and there (with Hardy) he made sundry remarkable studies upon leucocytes and their properties, and again upon snake poison. Within little less than a year he was appointed Medical Tutor and Demonstrator in Bacteriology at Liverpool and hardly was he established there than St. Bartholemew's appointed him head of its pathological department.

In a very short time he made his influence felt profoundly through the hospital. His courses upon pathology and bacteriology attracted wide attention, and his small laboratory became filled with workers. What

is more, he established clinical pathology upon such a basis as had never been known or attempted in London. He worked unremittingly and in 1896, added to his labors by assuming, in addition, the duties of Deputy Professor at Cambridge, during Roy's illness. In 1897, upon Roy's death, he was elected to the full chair of pathology which he thus occupied but a little more than two years.

Of Canadians who have come under his influence may be mentioned Professor Westbrook, of Minneapolis, with whom he published a report upon immunity against cholera, and Professor Connell, of Kingston, who at the Montreal meeting of the British Medical Association, read for himself and Kanthack a valuable communication upon the morphology and flagella of the tetanus bacillus.

As noted in the Philadelphia Medical Journal, the article which will best indicate to the ordinary medical man Kanthack's peculiar power, is his essay upon the General Pathology of Infection, in the first volume of Clifford Allbutt's system.

J. G. ADAMI.