

# The Canada Lancet

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## EDITORIAL

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### THE PASSING OF LORD LISTER.

“To every man upon this earth death cometh soon or late,” and, therefore, Lister, who saved so many lives, has himself passed quietly through the gateway that separates us from the Great Beyond, and the arras has closed him forever from our view. It is a long, long way from Hippocrates, the father of medicine, to Lister, the father of modern surgery. To Lister the world is a heavy debtor, but he was a willing and a cheerful giver to humanity. He not only took science by the hand to lead her gently along, but he embraced her in his arms and bore her bodily away with him as the handmaid to surgery. Lister was one of the great gifts of the human race for the cause of humanity. Carlyle says that “a great man is like fire sent down from Heaven. The rest of mankind waited for his coming, and then they, too, became aflame.” The lamp of every modern surgeon has been lighted from his torch.

Lister was born in 1827, and died on 12th February, 1912, at the great age of nearly 85. He held many important offices. He began his great career by becoming Prof. James Syme's house surgeon. Prof. William Sharpey, of London, introduced young Lister to Prof. Syme. This was in 1856. In 1860 he became professor of surgery in the University of Glasgow. On the death of Prof. Syme, in 1869, he became professor of surgery in Edinburgh. In 1877 he was called to the chair of surgery in King's College, London, to fill the place which had been held by Sir William Ferguson. In 1878 Queen Victoria made him her surgeon extraordinary, and in 1883 created him a baronet. In 1897 he was made a baron, and took the title of Lord Lister. King Edward made him seargeant-surgeon in ordinary. He was president of the Royal Society from 1895 to 1900. He was president of the British Association for the Advancement of Science in 1896, and then visited Toronto. He had honorary degrees conferred upon him by the Universities of Dublin, Glasgow, Edinburgh, Oxford, Cambridge, London, etc.

In character he was of a most unassuming nature. He came of Quaker stock, and lived all his life true to the simple customs of the Friends. Though simple in his habits, he was indefatigable in his work and his efforts in the cause of his loved profession. He was a voluminous contributor to the literature of scientific surgery.

Then and now, the surgery of 1856 and 1912 tells the story of Lister's life. His achievements are a gift to the world far exceeding in value all the gems and precious stones of the Orient. When Lister came on the scene it could be truly said:

Night wanes—the vapors round the mountains curl'd  
Melt into morn, and light awakes the world.

A leading paper in Britain speaks of his work in these terms:—

“His discoveries in the antiseptic treatment of wounds and disease have given not merely relief from suffering, but life to countless multitudes. To realize what Lord Lister has done it is only necessary to recall the fact that when he entered University College as a medical student, even the best-managed hospital was looked upon by the populace as little better than a slaughter-house. Although the introduction of anaesthetics had already done much to mitigate the horrors of the surgeon's knife, the mortality from sepsis was so great that even trifling operations were rarely successful. Pestilence stalked unseen and unchecked through the surgical wards. No precaution availed against the tainted atmosphere, and new hospitals quickly became as pestiferous as the old, while diseases following upon operations often rose to the height of epidemics.”

Lister is gone from amongst us, but his work and his influence remain. If he is no longer the companion, he has become the guide. Of him we can verily say in the words of Lowell:

Great truths are portions of the soul of man;  
Great souls are portions of eternity.

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#### A FEDERAL DEPARTMENT OF HEALTH.

We have often and for years urged the creation of a Federal Bureau of Health. We never could see why it was not done. We have shown on several occasions that the death and sickness loss to the people of this country from communicable diseases equals the national revenue; yet nothing was done, or of such an unimportant character as to be an object of ridicule and not praise.

We gather from recent announcements from Ottawa that there is some prospect that some forward step is about to be taken. We hope the rumor will be followed by fulfilment.

The question is not "what is there for such a department to do?" but the other one "is not this the most important of all the departments?" With politics the *Canada Lancet* has no concern; but with the health of the people it has every concern.

When we find that about 12,000 Canadians die annually of tuberculosis, and that about 50,000 are always ill with the disease; that about 2,500 die annually of typhoid fever, and that about 25,000 are yearly ill with it, it is time to seriously think. In these two diseases at least there is a money loss of \$50,000,000 a year.

Such a Federal Department would find other duties to perform. The large question of immigration is very close to that of national health. There is the very important topic of the pollution of public waters. There is the subject of international health regulations. There is the work of getting the provinces to act in harmony with each other so as to accomplish most on least outlay.

In union there is strength. No one would go back to the days of separate provinces. Let us have something more than mere political union of the provinces.

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#### FEE SPLITTING.

We had not intended to refer to this subject at this time. It was discussed at some length at a recent meeting of the Toronto Academy of Medicine, but no decision was reached. We do not know to what extent the practice of dividing fees between physicians and surgeons may exist in Toronto or other Canadian centres, but we are free to state that we have heard of very few instances.

It is to be hoped that this practice will not take root in this country. It is a practice that does harm to both giver and receiver. It is not like the "quality of mercy" spoken of by Portia that "blesseth him that gives and him that takes." Fee dividing is a bad practice and will give rise to many evils.

It would have the effect of putting "cases" up for auction, and being turned over to the highest bidder. The surgeon who would be willing to give the highest commission would get most of the "recommends." This state of affairs will bring no good to the ranks of the medical profession.

The real remedy is for the members of the profession to have nothing to do with the "nasty thing." The medical profession will always have enough serious problems to deal with without having this additional sort of fish-animal Calaban monster come among us.

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### FIRE-PROOF HOSPITALS.

Within a few weeks there have been reported two fires in hospitals. In London a fire started in the hospital and might have caused serious loss in property, and, worse still, loss of life, had it not been for the happy chance of someone going to his office to do some after-hour work. He saw the fire and gave the alarm, and the fire was extinguished without doing much damage.

In the new hospital for children in Winnipeg a fire broke out. In this instance about three thousand dollars' worth of property was destroyed. In the room first over the fire were twenty children. These were removed by the nurses to a place of safety in a temperature of 20 below zero.

But the aspect of the case that demands consideration is that cities and governments keep on erecting buildings for hospitals, asylums, prisons, refuges, etc., that are not fire-proof. This should not continue. It may cost a little more at first, but it will be cheaper in the end.

Surely no body of trustees, no city, and no government would wish to be responsible for a holocaust of many lives. We have called attention to this subject on several occasions, but it is so important that it will bear being repeated.

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### THE ONTARIO MEDICAL ASSOCIATION.

The meeting for this year is to be held in Toronto on 21st, 22nd, and 23rd May, under the presidency of Dr. H. A. Bruce. The following announcement is made of the chairmen of the various committees:

Committee on Papers and Business—Dr. Graham Chambers.

Committee on Arrangements—Dr. J. F. Fotheringham.

Section on Surgery—Dr. A. Primrose.

Section on Medicine—Dr. W. P. Caven.

Eye, Ear and Throat—Dr. G. Boyd.

Obstetrics and Diseases of Women—Dr. F. Fenton.

General Secretary—Dr. F. A. Clarkson.

Now, these are all first-class men for the positions they have to fill, but they are all from the same college. We do not think it is well to keep these appointments in one circle.

It would have been much better had the other hospitals had their fair share. There is no representative from Grace Hospital, from the Western Hospital, nor from the profession at large. Surely the opinion did not prevail that there was none fit to take part in helping on the Ontario Medical Association.

List as given is all right from the individual point of view, but very unfortunate from that other and broader point of view that makes for union and strength in the truest sense.

This aside, we have much pleasure in urging the members of the medical profession throughout Ontario to arrange for a short holiday and come to Toronto and attend the coming meeting of the Ontario Medical Association. This association has now a long and honorable record behind it. It has done much for the profession, and the profession should do much for it. We hope to see a large attendance. The programme, no doubt, will be a good one.

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#### THE PAST, THE PRESENT, THE FUTURE.

The medical profession in Great Britain is in a serious predicament. What is the lot of medical men in the mother country may be the lot of those of this country in the future. It behooves us all to be alert.

For a long time many members of the medical profession throughout Britain catered to lodge practice, and would bid keenly against each other to secure appoints to the clubs in their vicinity. In this way they educated the public as to how the fees could be reduced. They were putting a rod in pickle for themselves.

The politician is usually quick-eyed to see opportunities for a move in a popular direction. If the medical profession could be exploited for the good of the general public it might be a good political course. So the astute politician drafts a bill that is calculated to grant certain benefits to the smaller wage earners. This is rendered possible by the burden of the measure being placed upon the shoulders of the medical profession. This has come about because the members of the profession did not in the past refuse club practice.

But we are at the present, and the present is not rosy. In Britain the medical horizon is overcast with dark and ominous clouds. The

Chancellor tells the *people* that if the *medical* profession *refuse* to carry out the *provisions* of the National Insurance Act, he must raise an *extra* £15,000,000 by extra levies on *income*. This shifts the blame for this *extra* tax upon the shoulders of the medical profession. This extra amount would be required to pay for the medical services the Act calls for at the fees the medical men think should be paid.

Will the medical men yield? We hope not, but we fear they will. There are always some who will bend the knee. How many there may be of this class time alone will determine. If there be even a small percentage they will break down the solidarity of the profession and the force of the resistance to act is seriously impaired. The astute politician depends upon this, looks for it, and does all in his power to encourage it.

The future hides boding and terror. If the medical men yield now they can never recover themselves. Year by year the yoke will fasten itself firmer and firmer upon their necks. There will be fewer and fewer in the resisting line, and more and more in the serving line. Why cannot the medical men in Great Britain as one man say "No"? If they did the Act would be dead until it was so amended as to do justice to them. It is all very well for any Government to try to do something useful for the great wage-earning masses; but it is equally wrong to lay the head of oppression upon another class and compel its members to make bricks without straw.

The future of the general medical practitioner in Great Britain is doomed unless the terms of the National Insurance Act are determinedly resisted. There must be no half-way measure. The medical men have it in their power to compel the Government to withdraw the Act. They can end the Act if the Government will not amend it. It will be to the lasting dishonor of the medical profession if it does not demand its rights. "The brave man holds honor far more precious dear than life." This is the time to make this clear. With the words of Goethe we close:

To this I hold with firm persistence,  
 And each experience proves it true:  
 We only keep our freedom and existence  
 By daily conquering them anew.

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#### DANGEROUS AMUSEMENTS.

A medical journal has to do with all questions that affect the life and limb of the citizen. Many a fine man and woman or promising boy

and girl have gone down to death, or, worse, have been maimed for life by the thoughtless indulgence in some dangerous pastime. Every safeguard ought to be thrown around all such amusements.

There is something in the human being that craves for the sensational. To witness a race in the air is more exciting than one between two bicyclists; and between two motor cyclists than between two foot runners. The excitement and the desire to see the event increases directly with the nerve required for the achievement and the danger in the same.

It has been said that if these dangerous amusements were done away with the race would deteriorate. This is utter twaddle. There will always be plenty of occasions to call forth the heroic element, without in a deliberate and foolhardy way inviting disaster. A toboggan slide can be arranged to yield the maximum of recreation and carry with it the minimum of danger.

But nothing can be said in favor of walking on the ice bridge at Niagara. The ice bridge is formed of masses of ice that become jammed together in the river. The structure is liable at any moment to give way and carry with it its freight of human lives down into the whirlpool, where an awful death awaits them. This sort of thing does not promote the vigor of the race any more than would a tramp through snow in one of our parks.

We contend that there should be stringent regulations that would prevent people deliberately placing themselves in positions of such peril. We are informed that on a certain day recently somewhere about one thousand persons crossed on the ice bridge, and that on the day following it broke up. Had these people been on the ice at the time when this occurred, not three, but perhaps hundreds, might have perished. Let us as people take a sane view of amusements and sports. By all means let us have plenty of healthful and exhilarating pastimes; but at the same time abolish those that are perilous and bound from time to time to end in sad fatalities. This must not be left to the people themselves, who soon forget. It must be taken in hand by the law-

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#### MODERN FAITH HEALING.

In 1784 the King of France appointed a commission consisting of Messrs. R. Franklin, Majault, LeRoy, Sallin, Bailly, D'Arcet, DeBory, Guillotin, and Lavoisier, to examine into and report upon the work of Anton Mesmer, and the treatment of disease in Paris as carried out by M. Deslon, who practised mesmerism, and claimed to cure disease by this means. According to Mesmer, animal magnetism is a fluid universally

diffused; it is the medium of influence between the heavenly bodies, the earth, and animal bodies; it is extended so that there is no vacuum; its subtlety is beyond comparison, etc.

The commission placed the claims of mesmerism under close observation. They studied the class of cases treated, the effects of the treatment, and its method of application. As the result of these studies they made a lengthy report. This report is interesting reading in the light of modern hypnotism and suggestion. The term suggestion is not used in the report, but the whole trend of the report shows that the influence of mesmerism is of this sort. Powerful influences made upon the mind, and, through it, upon the body.

The commissioners came to the conclusion that the animal magnetic fluid could not be discovered in any way, and that it did not act upon the patients which they submitted for test. They also came to the conclusion that the pressure and touches of the mesmerist were not favorable to the animal economy; also that stimulation of the imagination would effect the same results as those claimed to arise from the animal magnetism of Mesmer.

It would appear that this law of suggestion was known to the ancients, and is often called into operation by many tribes in all parts of the world. Faith healing, Christian Science, and such like are of the same nature as mesmerism, and the hypnotism practised at the present day by Arabian bedouins. The disciples of Mrs. Eddy cannot feel proud of such cousinships.

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#### DEATHS FROM TUBERCULOSIS.

Dr. W. J. Dobbie, in his annual report of the Toronto Free Hospital for Consumptives, of which he is physician-in-chief, gives some interesting figures showing the decrease in the death rate from tuberculosis in the Province of Ontario within little more than a decade, and a noticeable decrease shown in the records of the past year. In the decade preceding 1899 the death rate from this disease in Ontario was on the increase, until in that year the figures amounted to 3,405 (a rate of 1.4 per 1,000 living estimated population, or, in other words, 11.8 per cent. of the total deaths).

During that time there were no institutions for the tuberculous in the province, no dispensaries, no special visiting nurses, no educational agencies at work, no general information regarding the prevention of this disease. In 1899 there was only one institution, now there are 12 of them in the province and others projected; four dispensaries, and an increasing number of visiting nurses, while a general campaign is



being carried on. In 1908 the deaths from tuberculosis were 2,511 (a rate of 1.1 per 1,000, or 7.6 per cent. of the total deaths).

Since this report was written the returns for 1910 are available, and these show the number of deaths in Ontario from tuberculosis to have been 2,287, a decrease of 1,118 since 1899, a period of only eleven years. The percentage of all deaths due to tuberculosis was in 1910 only 6.8 per cent., and the ratio of deaths to living population was only 90 per 100,000, which is a further marked decrease.

"We think it only fair to assume, then," Dr. Dobbie goes on to say, "that this decline from 11.8 per cent. to 6.8 per cent., is due, at least in some measure, to the effort already put forth to stamp out this disease. And if so, we feel justified in looking for a still further decrease in the death rate, if more accommodation could be provided for the tuberculous, especially the advanced cases, and still more done to enlighten the public regarding the means of preventing this widespread, but controllable, disease."

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#### ASSYRIAN MEDICINE.

The patient work of the archaeologist enabled people in 1911 to form a very fair idea of medical science as it existed in Nineveh 650 years before the birth of Christ. Of the 20,000 tablets taken from the library of Assurbanipal, the great King of Assyria, who conquered Egypt and Babylonia and established his subjects in the deserted cities of Samaria, hundreds deal exclusively with medicine, and contain numerous prescriptions.

"If a man has colic make him stand up and pour over him a decoction of hypericum and he will recover.

"Or make him crouch down on his heels and pour cold water over his head."

Faith healing seems to be indicated in a prescription which runs: "If he is in a weak state make him bend down, then raise his legs and say: 'May you get quite well.' Strike him also on the head fourteen times with your thumb."

Many prescriptions deal with the cure of a disorder, which was very common at Nineveh, and which seems to have been due to over-indulgence in food and drink: "When a man is bilious rub him with an onion, and let him drink nothing but water and abstain from food altogether."

Among the medicines used by the physicians of Nineveh were sesame, olive oil, castor oil, syrup of dates, honey and salt. Fasting and massage were frequently ordered.

## ORIGINAL CONTRIBUTIONS

## ULCER OF THE STOMACH AND DUODENUM.

BY W. J. MACDONALD, M.D., ST. CATHARINES, ONT.

**C**ASE 1.—Perforated Gastric Ulcer—Closure of Perforation—Posterior—Gastro-jejunostomy—Recovery.

At 4 p.m. on August 5th, 1910, I was asked to see Mr. Joseph A——, a gentleman 64 years of age, and but recently out from England. His facial expression was that of intense suffering and despair. He lay on his back, with his knees drawn up, his breath was short and rapid, and the whole abdomen boardlike in its rigidity.

At noon he had been suddenly seized with a most intense epigastric pain, radiating more to the right than to the left side of the abdomen. This intense lancinating pain had struck him like a bolt from the blue; there had not been the slightest premonitory warning. There had been some nausea and retching, but no vomiting. The pain remained just as intense as at its commencement. Below the umbilicus palpation revealed no tenderness on either side of the median line, while above that point the slightest pressure induced intense pain. The point of maximum tenderness was in the middle line and immediately below the ensiform cartilage. The pulse was 82 and the temperature 96.

The following history was obtained: Twenty years ago he had suffered a mild and, as he considered, a very unimportant illness from stomach trouble. He was in bed no more than a week at most, the main symptoms, as near as he could remember, being gastric pain and vomiting. However, following this illness he was never free from what he described as chronic indigestion. During all these years the almost invariable accompaniment to each meal was more or less gastric distress within an hour. Certain foods he could not eat at all, and he told me that for many years he had been unable to eat any bread unless the slices had been dried for some time. On many occasions and by many physicians he had been treated in vain. On the morning in question he had eaten but a small breakfast, and had suffered as usual his post-prandial pain, which, however, had lasted but a short time. Throughout the morning he had worked at his trade without the slightest inconvenience.

The condition as above described could only be produced by the perforation of some abdominal viscus. The suddenness, the agonizing intensity, the boardlike rigidity of the abdomen and the anxious, almost hopeless, expression portrayed in his countenance could be produced by

none other than an intra-abdominal catastrophe, such as a perforation. Acute gall-stone colic, acute obstruction of the bowel, a renal calculus, or an acute pancreatitis could be responsible for some of the symptoms here depicted, or for some of the symptoms manifested in a much less marked degree; but nothing other than an acute perforation would produce the intense severity of the pain, appearing as it did without the slightest warning, the rigidity, and, above all, the characteristic facial expression of despair.

Taking into consideration the previous history, together with the suddenness, location and intensity of the pain, a tentative diagnosis of perforated gastric ulcer was made and immediate operation advised. To this the patient demurred, but after some hours finally consented to go to the hospital. At 4 o'clock, as above stated, the pulse was 82 and the temperature 96. At seven the pulse had risen to 120 and the temperature to 101 3-5, with the severity of the pain somewhat diminished, while at 10 p.m. the pulse and temperature had both fallen much, the former to 84 and the latter to 99, while at the same time the pain had partially subsided. The boardlike rigidity of the abdomen remained, some distention was perceptible, and the pinched and drawn facial expression confirmed the belief in some serious peritoneal damage due to perforation.

On opening the abdomen at 11 o'clock p.m., just ten hours after the initial symptoms, free gas escaped from the peritoneal cavity, and on rapidly surveying the surface of the stomach, a perforation the size of an ordinary lead pencil was discovered on its lesser curvature, about 1½ inches from the pylorus. Around the perforation the tissues were very friable and easily torn. The base of the ulcer was about the size of an ordinary shilling. After closing the opening as thoroughly as possible with a double row of Lembert sutures, a posterior gastro-enterostomy was performed by the suture method, and the abdomen closed, leaving only a small cigarette drain to the seat of perforation.

Recovery, with the exception of the fourth day, was uneventful. On this day he had complete retention of urine, and the presence of an old stricture effectually precluded the passage of a catheter. As the bladder became more distended urethrotomy had to be done, which gave instant and complete relief. After this there was no trouble whatever.

Within five weeks this gentleman was absolutely well in every particular. Where heretofore he invariably suffered pain after every meal, he now had none. He could eat anything and everything without producing the slightest discomfort. No doubt the old ulcer was entirely healed.

Case 2.—Double Duodenal Perforation—Suture of Perforations—Posterior Gastro-jejunostomy—Recovery.

On the morning of September 30th, 1910, I was asked to see Mr. John M——, aged 34. On retiring about nine o'clock the previous evening, he had been suddenly seized with an intense and agonizing pain in the epigastrium. Throughout the night he had grown steadily worse. The pain had shown no signs of subsiding, and when I saw him at eight a.m. his condition was very grave indeed. His pulse was 128 and temperature 101. The abdomen to the right of the median line revealed on palpation intense muscular rigidity, while the left side was comparatively free. The epigastric region was exquisitely tender, and the right hypochondriac and right lumbar only to a lesser degree, whilst slight tenderness was manifest over the entire remaining portion of the abdomen. A dark colored vomit was persistent, and general abdominal distention was commencing to manifest itself.

The following previous history was easily obtained. Up until two years before this time he had enjoyed the best of health, but since that he had been almost continuously troubled with pain in the stomach from three to four hours after meals. He himself volunteered the information that eating always relieved the pain for a time, only to invariably return, as he said, when the stomach became empty. He complained of having suffered much from "gas on the stomach," and sour eructations had evidently been very frequent. Six months previous to the present attack, he had on two occasions suffered from fainting spells, which were followed by the passage of large, black, tarry stools, a typical condition in the late stages of duodenal ulcer, when a large blood-vessel, through the process of ulceration had become opened. The previous history appeared exceedingly clear. A diagnosis of chronic duodenal ulcer could be made without hesitation, and the present condition, with its acute and well-defined symptoms, could be the only logical sequence to the perforation of such an ulcer. This diagnosis having been made and immediate operation advised and accepted, the patient was at once removed to the hospital, where I opened the abdomen just fourteen hours after the onset of the initial acute symptoms.

From the peritoneal cavity free gas escaped in profusion. The stomach was somewhat inflamed toward the pyloric end, and examination of the duodenum revealed a perforated ulcer about three-quarters of an inch beyond the pylorus. This perforation was about the size of an ordinary Canadian five-cent piece. At a point about one inch distance to this was another perforation, the aperture in this second instance being about the size of a pea. An acute inflammatory condition

was already well established, and considerable difficulty was experienced in sufficiently exposing the diseased area of intestine. Both perforations were closed with a double layer of Lembert sutures, and posterior gastro-jejunosotomy performed. A cigarette drain was carried down to the site of the closed perforations, and to ensure efficient drainage to an already intensely infected abdomen, a similar drain was carried into the lower abdomen through a supra-pubic stab wound.

The patient was placed in bed in the Fowler position, and after forty-eight hours both drains removed. Recovery was uninterrupted and uneventful. Within four weeks he was on ordinary full diet, his previous stomach symptoms had entirely disappeared, and since that time he has enjoyed perfect health.

Perforation in gastric or duodenal ulcer should be of rare occurrence, because, as a rule, the previous history is so clear that ample warning is usually given in time to forestall the occurrence of one of the greatest calamities which may befall the human being. However, the fact remains that even yet in a certain percentage of cases, some authorities place it even as high as 20, there may be no previous warning whatever, the disease may be comparatively latent, and the first indication of serious trouble, the acute onset of a severe hemorrhage; hematemesis as a rule, should the ulceration be on the gastric side of the pylorus, melaena if it be in the duodenum. Indeed it may be, as in one case in my own experience, that an acute perforation will be the first and only warning of the presence of ulceration in the duodenum.

**SYMPTOMS.**—There are few abdominal lesions in which the symptoms are more unmistakable, clear-cut and simple, than in chronic ulceration of the gastro-intestinal tract at or near the pylorus. In the vast majority of cases these symptoms appear in such a definite and well-defined order as not to be easily mistaken. True it is that in an occasional instance the symptoms may appear in an entirely different sequence, or the acuteness of some one symptom may overshadow all others, but these cases are the exception, and indeed are few.

The diagnosis of ulcer in this region may almost invariably be made on the history of the case, the physical signs and stomach analysis being employed only as confirmatory evidence. It is a fact, however, that the further from the pylorus the lesion is situated the diagnosis will be correspondingly more difficult. Should the lesion appear on the greater curvature and toward the fundus, the symptoms will invariably lose their peculiar characteristics and clear-cut significance, the patient will be void of that characteristic train of symptoms so peculiar to ulcer near the pylorus, and a positive diagnosis be arrived at only after the greatest

difficulty. A careful development of the history of each individual case will, however, almost invariably establish a train of symptoms sufficiently characteristic to allow not only of a diagnosis of ulcer, but also of its location with a certain degree of precision.

**PAIN.**—In most cases the patient will date the commencement of his illness many years back, the complaint coming on so insidiously as to preclude the possibility of fixing any definite time as its commencement. If his memory serves him well he will recollect the first indication of trouble was the presence of slight gastric distention or a sense of fulness, accompanied by pain, which would occasionally succeed every meal, until, finally, he had his first attack of "indigestion," when every meal would be followed by pain, described by many as burning or gnawing, with eructations of gas from one to five hours afterwards. This condition would last for days, weeks, or even months, when without any warning it would suddenly cease, to be followed by a period of absolute health. For a time he would be well, only to be again suddenly stricken with another attack of the same malady, probably months or even years afterward. So complete may be the relief during these intermissions that even the idea of any organic trouble may be scouted, but the cycle thus formed of attack and relief are definite links in the symptomatic chain so peculiarly characteristic of chronic ulcer in this location.

At first he notices the attack to appear with any sudden change of temperature, notably spring and fall, then, as the periods of cessation and ease become shorter, this indigestion will return without discernable cause, and in due time will appear just as mysteriously. Each day's routine is but a repetition of the previous one, ease for a time after meals, then pain, belching of gas, sour eructations, making the teeth feel like chalk, and finally more or less vomiting as stenosis of the pylorus commences to develop.

The time of the commencement of pain is very characteristic. Though usually described by the patient as being after a meal, it will be more correct to say, before a meal. It will usually appear in from two to four hours, though sometimes even as late as six hours, after partaking of food. In other words, it asserts itself when the stomach is commencing to become empty, and consequently has been aptly described as "hunger pain." The period of time elapsing between the partaking of food and the appearance of pain depends to a great extent on the character of the food. If the meal consists of solid or heavy indigestible foods the pain is longer in making its appearance; should the nourishment taken be fluid the pain appears much earlier.

The amount of time elapsing between a meal and the appearance

of the pain will give some indication of the location of the ulcer. If the meal be solid or semi-solid and four hours or more pass before the appearance of pain the ulcer will almost invariably be found on the duodenal side of the pylorus, and on the posterior surface of the gut. Should the pain after such a meal appear in two hours or less, the lesion will undoubtedly be discovered either on the lesser curvature of the stomach right at the pylorus, or if beyond it, on the anterior surface of the bowel.

During one of these periodical attacks this hunger pain will appear whenever the stomach becomes empty, and is frequently quite severe enough to wake a patient in the night. I have frequently had patients tell me they never retired without laying out a biscuit or a glass of milk on a table beside the bed to take when they were awakened by pain during the night, having soon learned by experience the benefits to be thus derived. In order to remain as free as possible from discomfort many patients arrange to take five or even six meals in the twenty-four hours. When the pain is severe it will sometimes be relieved by pressure, hence it does not take the sufferer long to discover the comfort he may experience by doubling up a blanket or a pillow and hugging it to the stomach when he is thus awakened at night.

The injection of an alkali mixture will frequently afford great relief, presumably by its neutralizing effect on the already too acid stomach contents. Vomiting will almost invariably produce the same results. In the later stages of the disease, when one of the various complications, such as cicatricial stenosis, is seriously affecting the motility of the stomach, there is nothing which appears to afford such instant and complete relief as gastric lavage. It is remarkable to observe the avidity with which some patients in this condition will resort to the stomach tube, and an occasional one will be found whose daily practice is to wash out the stomach at a stated period after each meal.

Now, epigastric pain, belching of gas, eructations and vomiting are not in themselves pathognomonic symptoms of ulcer. Other conditions, such as chronic appendicitis or chronic cholecystitis, due to gall-stones, are frequently accompanied by similar periodical manifestations. It is not the *chronic* character or the *periodical* attacks of pain, gas or vomiting; it is not the *location*, *intensity*, or *kind* of pain that tells the story; it is the invariable *time* of the pain, two to four hours after meals, it is the fact that during the attack pain accompanies almost *every* meal, and, finally, it is the *means* by which the pain can be relieved, injection of food, which stamps it as characteristically pathognomonic of ulcer in this location.

HYPERCHLORHYDRIA.—So-called "hyperacidity" of the stomach has

long been recognized as an accompaniment of ulcer, and in its direct relationship to this lesion has been the theme of many able discussions. It is an interesting fact to note, however, that in many cases of supposed hyperacidity or "acid dyspepsia," where intensely acid matter is vomited, that a test meal will reveal a normal or even subnormal amount of free H.C.L. Whether hyperchlorhydria is the cause or the result of ulcer has long been a moot question, but as more of these cases are being constantly submitted to operation, and a clearly-defined and tangible ulcer is being found in every instance, the weight of proof is fast accumulating to show that this supposed "hyperacidity" is the result and not the cause of ulcer. This has been demonstrated many times. A recent case is of particular interest:

On September 21st, 1910, Mr. W. H. F.— consulted me in regard to an intense "acid dyspepsia," which had made him almost an invalid for the past five years. The illness commenced mildly, and the pain and vomiting was considered as reflex from a chronic appendix. This supposedly offending organ had been removed, no improvement following. The attacks began to multiply, and as each succeeding one became more severe he began to lose in weight, which, when I saw him, had decreased from 165 to 128 pounds. An attack lasting a month would come on every six weeks, thus leaving him only a short time in which to recuperate. Every meal was invariably followed by vomiting of intensely acid, acrid material.

In obtaining a careful history of the case from the beginning it presented a typical clinical picture of ulcer at the pylorus. This hyperacidity had been a late complication.

Five days afterward, on September 26th, I opened the abdomen and demonstrated a cicatricial contraction of the pylorus, due to an old ulcer. The stomach was considerably dilated. Posterior gastro-enterostomy was done by the suture method. An uninterrupted recovery ensued, his vomiting ceased, his "acid dyspepsia" disappeared, and in one month he was enjoying the best of health, eating everything without that dread and fear to which he had been accustomed, and was rapidly regaining his lost weight. His hyperchlorhydria had undoubtedly been the result, and not the cause, of his ulcer. Moynihan has indeed gone so far as to assert that chronic recurrent or protracted hyperchlorhydria is ulcer.

**HEMORRHAGE.**—Hemorrhage, as made manifest by hematemesis or melaena, should never be considered a symptom, but rather a late complication of ulcer. In at least 80 per cent. of all cases a diagnosis should be made before the ulceration has progressed to such a stage as to open a



deep vessel. The clinical picture of ulcer is now so complete that its existence should be recognized early, and by timely treatment obviate all the latter complications, such as hemorrhage, pyloric stenosis, hour-glass stomach, and eventually the most serious complication of all, carcinoma engrafted on the base of the old ulcer. I have within the last six months seen two fatal cases of duodenal hemorrhage. Both these cases had had malaena for months, one of them also having had several attacks of hematemesis. In each case the patient had refused operation, and each finally suffered a hemorrhage which proved fatal before surgical aid could be given.

**TENDERNESS.**—In the majority of cases of ulcer no physical signs or manifestations are present, though sometimes in the later stages, especially if subacute, perforation has produced a localized peritonitis, tenderness will be observed to the right of the median line if the ulcer be duodenal, and sharply localized in the epigastrium if it be gastric. A typical instance of each of these conditions is exemplified in the following cases:—

**Subacute Duodenal Perforation.**—On April 8th, 1911, I was asked to see Miss G. B——, a young lady of twenty-one. Five years previously she had suffered a serious illness from what was diagnosed as gastric ulcer, since which time she had had many recurrent attacks of epigastric pain. The attacks would return regularly every six months, and of late had been increasing in severity. The present attack commenced in December, 1910, and during the four months of its existence the patient had been steadily losing weight. One week before my seeing her she had been suddenly seized with a severe pain just to the right of the middle line and above the umbilicus. Palpation in this region elicited great tenderness. Vomiting was frequent. Hunger pain and its relief were typical. Temperature 100 3-5; pulse 84.

At operation the following day a subacute perforation on the anterior surface of the duodenum was discovered, to which point the gall-bladder was adherent. Posterior gastro-enterostomy effected a complete cure. Her former symptoms have vanished and she is now absolutely well. The tenderness was the result of the subacute perforation.

**Subacute Gastric Perforation.**—On July 25th, 1910, I was consulted by Mr. K. B—— in regard to a severe pain in the epigastrium, which for two weeks had failed to yield to treatment. His history was briefly as follows: For two years he had suffered periodical attacks of "indigestion," which had gradually grown both more severe in character and frequent in occurrence. Two weeks previous to my seeing him, while drinking a glass of cold water, he had been suddenly seized with an ex-

cessively severe epigastric pain, which persisted for some three or four hours. When the acute symptoms had subsided a burning severe pain persisted, and from which he failed to obtain any relief.

On examination I found the epigastric region rigid and tense and excessively tender on palpation. The tenderness was just as acute to the left as to the right of the median line. Vomiting was frequent. Temperature 101 1-5; pulse 92.

At operation on August 7th a subacute perforation of the lesser curvature of the stomach, about one and one-half inches from the pylorus, was revealed. On the fourteenth day he returned to his home feeling quite well, and continued to so rapidly improve that in a month he was again attending to his regular business. Since that time he has had no return of his former symptoms. As in the other case, the tenderness here was the direct result of the subacute perforation.

**DIFFERENTIAL DIAGNOSIS.**—The only condition which is at all liable to become confused with ulceration in this location is chronic cholecystitis, due to the presence of gall-stones. The first and chiefest point to be considered in the differential diagnosis is the fact that in ulcer the pain is invariably appeased by partaking of a meal, and just as invariably returns from one to five hours afterward. In cholelithiasis it is in no way affected by food and that sense of comfort and ease which in ulcer is produced by food is wanting.

The character of the pain differs essentially. In ulcer the pain, though severe, is endurable, while in cholelithiasis it is frequently of that excruciating variety which can only be relieved by the most powerful of opiates, and sometimes chloroform may even have to be resorted to. Once again, cholelithiasis is frequently accompanied by heavy chills and sweats, a condition entirely foreign to ulcer, and the most lancinating pain, suddenly striking the patient unawares, is referred to the right shoulder blade, and frequently disappears just as suddenly as it appears.

**WHY OPERATE EARLY?**—A positive diagnosis of gastric or duodenal ulcer having been arrived at, what is the proper course to pursue for its relief? Until within the last few years the frequency of this condition has been entirely unappreciated, mainly because these patients were put to bed with a somewhat hazy diagnosis of "indigestion," "acid dyspepsia," or "hyperchlorhydria"; were treated expectantly until the acute symptoms had subsided, and the patient had either become well, or passed into that most unfortunate class, chronic dyspeptics, when the only opportunity of demonstrating the true pathologic condition was the post-mortem table.

Of late years, however, the surgeon, in the course of other ab-

dominal work, has been able time and time again to demonstrate decisively an old cicatricized ulcer in the duodenum or stomach. After treating this condition in the proper surgical manner the old chronic dyspepsia or recurrent hyperchlorhydria would disappear, until at the present time, as the result of such work, the characteristic clinical manifestations are so closely associated with a definite pathological lesion that in the vast majority of cases a positive diagnosis may be readily arrived at, and in those chronic cases at least a complete and permanent cure may be confidently anticipated by the proper application of those surgical measures, which we have learned to be peculiarly applicable to each variety of condition. Far be it from me to say, however, that all cases of chronic dyspepsia should submit to surgery. Only those whose condition can be shown to be due to a definite lesion, as typified by the symptoms already described, will reap the benefits they so much desire. This definite demonstrable lesion is in most instances an ulcer of one variety or another, either in the duodenum or the pyloric end of the stomach. If in the duodenum, it will give rise to those classic symptoms of hyperchlorhydria; if in the pylorus, by contraction in the process of healing, will produce stenosis, with all the characteristic symptoms of stomach distention; while if in the pre-pyloric region we may have an extensive saddle ulcer on the lesser curvature, or if on the greater curvature, that somewhat more rare condition, an hourglass stomach. If any such definite lesion is the direct cause of the symptoms manifested by the chronic dyspepsia, surgery will at once offer excellent prospects for complete relief.

But it is not for the exclusive relief of the present symptoms that surgical measures should be undertaken in these chronic cases, but also to prevent a catastrophe, which in a certain percentage of all cases is sure to come sooner or later—perforation—fatal hemorrhage—gastric cancer becoming engrafted on the base of an old ulcer.

**ACUTE PERFORATION.**—An acute perforation of a gastric or duodenal ulcer is not an uncommon complication, and unless prompt surgical measures are adopted every case must rapidly reach a fatal termination. When perforation has occurred general peritonitis is rapidly established, and death cannot be delayed many days. The subacute form is not necessarily so fatal, for protecting adhesions frequently limit the infection, and thus protect the general peritoneal cavity. In this class of cases the resultant condition is usually a localized abscess.

Duodenal ulcer perforates twice as often as the gastric variety. In gastric ulcer perforations occur more frequently in women, in the ratio

of about 4 to 1, while duodenal perforations occur more frequently in men, the ratio in this case being about 10 to 1.

Fatal hemorrhage from an ulcer is a complication of comparatively infrequent occurrence, though much more common in the duodenal than in the gastric variety. A severe hematemesis may result from gastric ulcer, and yet the patient quickly rally and rapidly recover, but in the duodenal variety, such a happy ending must not be too confidently anticipated, especially if the hemorrhages are recurrent. The risk of fatal termination from this cause is an ever-present danger to one suffering from ulcer.

Gastric cancer is perhaps the gravest complication which can befall the patient suffering from an old, deep-seated, chronic ulcer. That this should be productive of more fatalities than perforation or hemorrhage is because of its more frequent occurrence. Indeed, it may in the near future be decisively demonstrated that in every case of carcinoma of the stomach, by no means an infrequent malady, the disease is engrafted directly into the base of an old chronic ulcer. At the present time over 70 per cent. of the cases can be thus demonstrated. In perforation or hemorrhage the diagnosis is comparatively easy, and immediate surgical aid will frequently save the patient, but in cancer the prospects for complete cure have so often vanished before a diagnosis is made. The positive diagnosis of cancer in that early stage when operation would produce the desired results is so difficult at the present day that many a patient has lost his chance of life before he is really aware of his perilous condition.

For the immediate relief of the present symptoms so characteristically portrayed in the chronic dyspeptic and for the prevention of any of the graver complications so liable to occur in the majority of cases every person whose chronic indigestion, or "dyspepsia," can be directly attributed to a definite lesion of the stomach or duodenum should at the earliest possible opportunity receive the benefits of the present-day surgery.

There is perhaps no operation better illustrating the recent advances in surgery than that employed in the surgical treatment of gastric or duodenal ulcer. The first occasion on which the operation of gastro-enterostomy was performed was when on September 27th, 1881, Wolfier, of Vienna, short-circuited the pylorus for obstruction from cancer, his patient living four months. From that time until 1885 there are on record thirty-five cases, with only twelve recoveries, showing a mortality rate of 55.71 per cent., one so appalling as to cause the operation for a time to fall into utter disrepute. It may be said, however, that this

early death rate was largely the result of operations on moribund patients, surgery only being resorted to when all other hope had gone. In all of these cases the operation was performed to overcome obstruction at the pylorus, in most of them the obstruction being due to cancer.

As time went on this operation was revived, and being recommended for all conditions the result of pyloric stenosis began to show marvelous results, this being more especially the case when surgery was resorted to in the earlier stages. The results were good and the mortality rate generally reduced, according to the early stage of the disease for which the operation was performed. As the mortality rate rapidly decreased (in 1905 it had been reduced to 5 per cent.), thus bringing the operation into the realm of comparative safety, it began to be applied in the treatment of those conditions most likely to produce stenosis and obstruction of the pylorus, notably ulcer in this location. In several instances where gastro-enterostomy was performed in those early days for the relief of pyloric obstruction, and where at operation this obstruction was found to be the result of the cicatricial contraction of an old ulcer, the patient has become entirely well, being completely relieved of all the former symptoms. In some of these cases at least, death having at some future date ensued from an entirely different cause, the post-mortem table revealed the fact that the old obstruction had disappeared, and the gastro-intestinal tract in this location had resumed a much more normal condition.

As a direct result of several such instances, the question arose as to whether earlier operation, thus securing complete physiological rest of the affected part, would in these cases not only prevent stenosis, but be the means of curing the ulcer. The work on this class of cases has indeed been very recent, the bulk of it having been done since 1905, but the results so far have been good, in fact, so good that to-day I know of no operation in surgery which gives such speedy and complete relief and shows such truly remarkable results as does this, in that class of chronic dyspeptics whose primary lesion is ulcer. The victim of an old chronic ulcer who may be wasted and wan, and who has been, figuratively speaking, for years with one foot in the grave, will occasionally derive such benefits from a gastro-enterostomy as to give him an entirely new lease on life, he will rapidly regain his lost weight, his meals will be heartily enjoyed, and life in general be viewed from an entirely new perspective. Great discrimination, however is required in selecting cases for operation, but now that the symptoms are so well known, each group of symptoms, bearing as it were the almost indellible stamp of the pathological lesion beneath, no great difficulty should be experienced.

Dr. Robert J. Buchanan, of Liverpool University, thus tersely summarizes the results to be obtained by operation on selected cases:—

1. Rest to the duodenum and pyloric region.
2. Prevention of mechanical irritation by food.
3. The provision of a second outlet through which food may pass.
4. The neutralization of gastric contents, or the outlet of them before maximum acidity is reached.
5. The relief of pain. This is practically a certain result, at least in the early post-operative period.
6. The prevention of perforation and hemorrhage.
7. A lasting cure and the prevention of recurrence.

One more important result should have been added. By thus inducing early and permanent healing of the ulcer, the possibility of the development of cancer is reduced to a minimum.

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#### IMPERFORATED RECTUM.

BY JOHN FERGUSON, M.A., M.D., TORONTO.

THIS condition is not a frequent one, and any cases of it are worth recording. The child, a healthy male, was born on the thirtieth of January of this year. The baby was rather above the average size, and the genital organs appeared to be perfect. During the afternoon of the day following the nurse observed the absence of an anal opening, and informed me of the fact. I visited the house and found the condition to be as reported.

In the evening the nurse took the child to the operating room of the Toronto Western Hospital. I was assisted by Dr. W. Ewart Ferguson, House Surgeon Campbell, Miss Bell, the lady superintendent, and one of the nurses.

A careful examination of the parts revealed a slight depression where the anal opening should be. The skin was slightly corrugated, resembling the condition found around a normal anus. The child was anaesthetized with chloroform. A small incision was made in the centre of the depression and along the line of the raphè. The tissues were then separated gently by means of a blunt pair of haemostatic forceps. By gentle manipulation of the forceps, using as little pressure as possible, the forceps were insinuated through the tissues to a distance of a little over two inches, when the meconium was reached.

I then carefully worked my finger along the passage made by the

forceps until it reached the bowel canal. A large, soft catheter was then inserted, and the bowel washed out. A considerable quantity of thick, clotted meconium was evacuated.

The child made an excellent recovery. The sphincter control is beginning to develop. There has not been a single unpleasant symptom, and the child is comfortable and nursing well.

Having in view the process of embryonic development of the rectum, I felt that a blunt forceps' dissection was the safest method to adopt. The rectum, like many other parts of the body, is formed by two opposing parts coming together. The point at which these would meet would not be as firm as other parts of the pelvic tissues, and would separate with less pressure by the forceps than in the case of ordinary tissue. This proved true, and the forceps found its way up the course where the rectal canal should have been, and separated the walls of the bowel, with very little tearing of tissue and haemorrhage.

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### APPENDECTOMY ON SHIPBOARD.

BY EBENEZER BRYCESON, M.A., CAMB., L.S.A., LOND., TORONTO.

THE account of an operation performed in mid-Atlantic under somewhat trying and unusual conditions may prove of some interest.

Since leaving Liverpool we had encountered strong and continuous westerly gales, accompanied by unusually heavy head seas, and at the actual time of the performance of the operation a raging hurricane was just abating, whilst tremendous seas were running as high as the top of our smokestack. As may well be imagined, such a state of things did not contribute to the formation of an ideal condition for a surgical operation of any sort, and although the ship's captain, Captain Evans, who was kindness personified throughout, did his utmost to mitigate the movements of pitching and rolling by stopping the ship for two hours; still the floor of the deck hospital assumed such steep angles that one was glad to anchor oneself whilst operating as well as might be to the iron uprights of the berth, which served as an operating table.

The patient was a Finn, a boy aged 16 years, and the history of the case as given to me by the ship's doctor, Dr. Pratt, who called me to see the boy in consultation, was shortly as follows:—

On Oct. 20th, the first night on board ship, the boy complained of colicky abdominal pains, which, whilst yielding at the onset to suitable treatment, had recurred with occasional remissions, and gradually in-

creasing severity, up to the night of Nov. 5th, when I first saw him. There had been no vomiting and the bowel had acted fairly regularly. There had been practically no pyrexia.

On examination I found considerable rigidity of the abdominal parietes, extreme tenderness on pressure, and a well-marked fulness on the right side. Palpation proved this swelling to extend from the umbilicus to Poupart's ligament, to be oval in shape, and to have a transverse diameter of about four inches. Light percussion gave dulness over area of swelling and a tympanitic note elsewhere over abdomen.

The tongue was moist and covered with thick whitey-brown fur; breath offensive; pulse fairly full, soft, regular and 84; temperature 101.2. The bowels had acted that day and the motion was rather constipated and light in colour. As the patient could speak no language but Finnish, one had to depend upon the somewhat inadequate interpretation of a steward as the sole means of communication with him, hence particulars as to subjective symptoms were difficult to obtain. But the physical signs were so plain that I had no difficulty in arriving at the conclusion that we were dealing with a case of perityphlitis, consequent upon an appendix lesion, and accompanied by a large formation of pus, which was well defined by adhesions.

Considering the great shaking about to which the patient was subjected from the violent motions and jarrings of the ship, I found the opinion that a grave risk of the breaking down of the adhesions was incurred, and a consequent danger of the development of a general septic peritonitis.

We therefore decided to perform abdominal section early the next morning.

The ship was stopped, the patient was anæsthetised and prepared, and an incision was made about three inches long through MacBurney's point and nearly parallel with the upper part of Poupart's ligament. This incision was continued direct through the abdominal parietes, and on reaching the peritoneum the knife immediately sank in, and a fountain of evil-smelling pus gushed out. Altogether close on thirty ounces was evacuated. The index finger was then inserted through the peritoneal opening and a very gentle exploration was made to find the appendix. As this could not be discovered, it was considered advisable to be content with giving a free drainage to the abscess cavity. Accordingly, after washing thoroughly but gently out with warm saline solution, followed by a warm solution of one in 6 listerine, the largest size drainage tube available (about 3-5 of an inch in diameter) was inserted for about seven inches; and this was supplemented by a gauze



wick of generous proportions. The wound was then partially closed at its upper end by two stitches and dressed by covering over with cyanide gauze, followed by a large pad of gamgu tissue going right round the abdomen and kept in position by a six-inch flannel bandage.

I should mention that towards the end of the escape of pus we noticed a lot of gas bubbling up through it, and as this was greatly increased by pressure over the bowel through the abdominal wall, it evidently pointed to the existence of a small opening in the bowel. This same phenomenon was noted on each of the four subsequent dressings and it then ceased. As no pus was ever discovered in the motions, although diligent search was made, I think that the opening must have been quite recent, very small, and closed up when the tension was relieved by operation.

That night the patient was free of pain and slept well. Temperature normal; pulse 76.

The wound was dressed night and morning, always under difficulties on account of weather conditions, until Nov. 12th.

Paroxide of hydrogen, one in four, was used while the supply lasted for cleaning out the wound, and this was always followed by a gentle irrigation with warm listerine, one in six.

The bowels were well cleaned out on the second day by a calomel purge, and subsequently acted well.

No bad symptoms followed the operation, and the boy was landed at Montreal on Nov. 14th, and sent on to the hospital.

### MEDICAL COLLEGE RECORDS IN CANADA.

SESSION 1910-11.

	Registrations.	Graduates.
Manitoba .....	137	19
Dalhousie .....	71	16
McGill .....	308	31
Laval, Quebec .....	84	19
Laval, Montreal .....	195	51
Western, London .....	129	26
Queens .....	232	46
Toronto .....	510	143
	1,666	351

## CURRENT MEDICAL LITERATURE

## MEDICINE

Under the Charge A. J. MACKENZIE, B.A., M.B., Toronto

## THE CAUSES OF ASCITES.

Cabot (*Am. Jour. of Med. Sciences*), in the consideration of this subject, has made a study of 5,000 cases. The actual causes of ascites are tabulated as follows: (a) Causes of ascites as found post mortem in 2,217 autopsies from the records of the Massachusetts General Hospital; (b) as observed clinically in 3,086 cases during the last forty years at the same hospital; and finally (c) a tabulation of the *rates* at which ascites accumulates in different diseases (valuable as an assistance in identifying through its more or less characteristic *tempo* of accumulation the ascites of tuberculous peritonitis). Post mortem examination revealed the following as some of the causes, in order of their frequency: Cardiac weakness, nephritis, abdominal neoplasms, cirrhotic liver, and tuberculous peritonitis. In the clinical statistics of ascites, the diagnosis was verified either by operation or autopsy in all cases of neoplasms and thromboses and with most cases of intestinal obstruction and tuberculous peritonitis; but in the cardiac, renal, and hepatic cases and most of the blood diseases the evidence is wholly clinical. These statistics follow closely those of the first series as to relative frequency. The following are points of interest in this view of the subject: (a) The frequency of ascites with ovarian cysts and tumors, and (b) the large figures obtained in intestinal obstruction (the fluid in these cases may have the result of an actual peritonitis associated with the obstruction). The rate of ascitic accumulation was studied in forty-nine cases, with the following daily results: Cardiac weakness, 36 to 54 ounces; cirrhosis of the liver, 20 ounces; nephritis, 13 ounces; solid ovarian tumors, 12 ounces; neoplasms of the abdominal organs and glands, 11 ounces; adherent pericardium (before cardiolysis), 11 ounces; same (after cardiolysis) 2 ounces; uterine fibroid, 8 to 11 ounces; tuberculous peritonitis, 5 to 6 ounces. In the different varieties of ovarian tumors ascites occurred in fibroma, 50 per cent.; carcinoma, 40 per cent.; sarcoma, 20 per cent.; cystoma, 7 to 9 per cent. In none of the fourteen cases of parovarian cyst operated in was ascites found. The writer concludes his study as follows: 1. Among the possible causes of extensive ascites we must not lose sight of the small solid tumors of the ovary. 2. Pleural effusion may be produced by an extensive ascitic ac-

cumulation. This association may lead to a false diagnosis of pleural and peritoneal tuberculosis. 3. The cure of both pleural and peritoneal effusions may result from excising a benign tumor. 4. Among all causes of ascites tuberculous peritonitis may sometimes be recognized by the greater slowness of its accumulation of fluid. 5. Intestinal obstruction ranks fifth, and diseases of the female genitals sixth among the causes of ascites, being surpassed in frequency only by cardiac disease, nephritis, cirrhosis, and tuberculous peritonitis. 6. Beside the causes just mentioned, abdominal neoplasms and adherent pericardium are the only factors of importance in the production of ascites.—*New York Med. Jour.*, Jan. 25th.

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#### WHAT CONSTITUTES HYPERCHLORHYDRIA.

Charles Summer Fischer, New York, believes that the diagnosis of hyperchlorhydria, considered as a diseased condition, is often made when the acidity is really normal. The standards of normal acidity have been too low, since each patient has an individual acidity which is normal, and this varies considerably. An apparently excessive secretion of acid cannot always be regarded as pathological. The normal percentage of acidity in an average stomach is higher than formerly supposed. The average acidity depends on four factors: quality and quantity of contained food, rapidity of discharge from the duodenum, and secreting capability of the organ. Attempts to permanently influence gastric secretion by diet have been failures. Abuse of the stomach is an over-rated conception. Monotonous diet usually does more harm than good. The rate of discharge of food into the intestine has an important bearing on acidity. An intelligent interpretation of all the facts concerning a given case must be added to the results of examination before a reliable diagnosis can be arrived at in any patient. Simple determination of gastric acidity is not sufficient for diagnostic purposes.—*Medical Record*, September 2, 1911.

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#### OBESITY TREATED BY UROTROPIN AND DAILY PURGES.

Marini, *Journal des praticiens*, 13 May, 1911, gives the following suggestions:

##### DIET, PER DIEM:

Roast beef (without salt), 120-200 grams; bread (without salt), 70 grams; 2 eggs; green vegetables, cooked in water; 4 cups of tea, weak, and no sugar.

This ration may vary to suit the case.

Clotted milk (leben-rayle or lait caillé) from 500 grams to one kilo per diem may be exchanged for the green vegetables, which, as they contain water, and by their residue, add to intestinal fermentation. The lactic acid, on the contrary, of the milk, increases the powers of gastrointestinal antiseptics, and the salts increase diuresis, the casein and the phosphates add nutritive factors, and the whey reduces thirst, so aggravating to the obese.

Marini takes issue with Bouchard, who claims that obesity is a slackened nutrition. Obese persons may eat so voraciously as to bring on glycosuria or albuminuria. This need not alarm us. The following daily purge should be administered:

℞ Magnesium Sulfate .....	30 grams
Infus Gentian .....	100 "
Sodium Phosphate .....	2 "
Sodium Benzoate .....	1 "
Sodium Salicylate .....	1 "
Glycerine .....	5 "
Lactic Acid .....	30 drops
Sulfuric Acid .....	10 "

Divide, so that half is taken on arising and the second portion at two in the afternoon. This is a necessary daily routine for one wishing to lose flesh rapidly.

Give, also, twenty grains (1.5 grams) of urotropin in three parts, daily, after a meal. Marini adds that he has tried theobromine, so highly praised by some, and prefers urotropin.

An obese in convalescing requires four things:

1. Four stools a day.
2. A walk of an hour daily.
3. No excess water, and little fat or alcohol.
4. Avoid constipation; for no cases of chronic diarrhoea terminate obesity.—*Medical Times*, Oct., 1911.

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### THYROID DISEASE.

J. Rogers, New York (*Journal A. M. A.*, September 2), discusses the relation of diseases of the thyroid to diseases of other organs and reports experiments on stimulation of the thyroid and adrenals, etc. He gives a summary of what is known about the physiology of the thyroid and points out the close relation to the pancreas and chromaffin

system. There appear to be two closely related substances in the thyroid secretion, the nucleoproteid, affecting chiefly, if not solely, the sympathetic nervous system, and the globulin or colloid which could almost be called universally activating. In this connection he refers to the anti-thyroid serum prepared and described by S. P. Beebe some years ago (see *Journal A. M. A.*, Feb. 17, 1906, p. 487), and goes on to describe the symptoms referable to the chromaffin system which may indicate its participation and functional disease in disorders of the thyroid. Electric stimulation of the adrenals in dogs causes symptoms closely resembling those due to Graves' disease and there may be confusion between the two. The presence of goiter will often supply the clue to such obscure conditions. He also points out the symptoms which may indicate implication of the pancreas in thyroid disease and shows how its secretion is often useful as a sedative in hyperthyroidism. A parallel column statement of the symptoms of hyper and hypothyroidism is given. Normally the thyroid, through a small but important part of its secretion, is supposed to activate specifically the chromaffin or sympathetic system, and through the larger portion of its products every other organ and tissue in the body, according to his hypothesis. A goiter means an attempted increase in the functional activity of the thyroid glands unless it happens to be a true tumor of the gland. Sometimes this may be compensatory as at puberty or at the menopause. The existence of hyperthyroidism without any perceptible goiter seems to indicate that the gland is so defective or fatigued as to be unable to hypertrophy, and in general such cases have a worse prognosis and may terminate in myxedema. When symptoms of Graves' disease and myxedema coexist, it seems probable that certain portions of the thyroid are more fatigued than others. The therapeutics based on his hypothesis demand, primarily, rest for the gland, so that it may regain its ability to metabolise iodine properly. The superabundant thyroid nucleoproteid, and probably the thyroid globulin, must be cut down, not only to relieve the auto-activation of the gland, but also to check the abnormal stimulation of other organs. While this is being done the strain must be relieved by feeding, preferably with the combined sheep thyroid proteids, but this must be kept below the point where it intensifies the symptoms. Attention also should be given to all associated errors and the general nutrition kept up and improved. Pancreas feeding seems also usually a necessity in myxedema and is generally beneficial in thyroidism. The antithyroid serum, he thinks, is almost as specific in acute attacks of thyroidism as is the antitoxin for diphtheria. It should not be pushed, however, beyond the acute symptoms and should be used with great

caution in the acute exacerbations of chronic thyroidism. The operations of ligation of blood-vessels and partial thyroidectomy in local thyroid disease are also sometimes beneficial and may be even imperative. In hypothyroidism, rest is as essential as in the opposite condition, but the treatment of myxedema in some of its atypical forms is not at all a simple matter. The simple hypertrophies of the thyroid occurring in young girls should be regarded as protective rather than pathologic, but they carry with them the chances of thyroidism and should not be looked on as altogether of trifling importance.

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#### IRREGULARITY OF THE HEART AND AURICULAR FIBRILLATION.

A. R. Cushny (*Am. Jour. Med. Soc.*, June 17, 1911) finds that no heart affection responds so satisfactorily to the digitalis group as auricular fibrillation. However, not all cases respond; the slow irregular heart, in which fibrillation is accompanied by impaired conduction is comparatively little improved. The rapid irregular heart of old rheumatic disease, with fibrillation along with good conductivity through the bundle of His, and a readily responding ventricle, responds best to digitalis, which in this condition reduces the pulse rate rapidly from 120-150 to 60-70; whilst all the symptoms improve with the falling pulse. If the drug is pushed the pulse continues to fall and may reach 40 to 50. Beyond this digitalis generally induces gastro-intestinal symptoms, when its dose has to be reduced. However, if abandoned altogether the previous condition soon returns, often in a less marked degree; it is therefore advisable to continue the treatment for several months. Digitalis does not arrest the fibrillation of the auricle; but it does reduce the number of impulses which reach the ventricle and thus lessens the latter's rate. This reduction of rate, mainly inhibitory in nature, is the only effect of digitalis; though this effect is the only one which can be ascertained with certainty at present; it undoubtedly plays an important role in the action. When this drug is given in auricular fibrillation and the pulse is slowed, the rhythm becomes more regular and the beats more equal as to strength, although complete regularity is not attained unless complete block is induced. When the drug is pushed a new form of irregularity may appear—coupled beats of continued bigeminus, in which each ventricular beat arising normally from an auricular impulse is followed by a contraction arising from the ventricle itself. It is possible in certain circumstances that an attack of fibrillation may be precipitated by digitalis.—*Medical Times*, Oct., 1911.

## GOITRE.

Dr. E. Bircher, of Aarau, Switzerland, has made extensive experiments on animals in studying the ætiology of goitre, which is more frequent in that country than anywhere in the world, but which is endemic in certain districts of great altitude everywhere. The result of his experiments leaves no doubt that the endemic form—not the form caused by infectious diseases, Basedow's for instance—is due to drinking water, not, as has been supposed by Virchow and others, through bacterial, but through chemical action. For as long as nine months he supplied white rats, dogs, and monkeys with drinking water taken from different goitre springs, and thereby produced macroscopic as well as microscopic general and nodular thickening of the thyroid gland, showing that certain drinking water has to be considered as a goitre-producing agent. To find which of the constituents of such water cause goitre, he conducted the water of goitre-producing springs through a fine porous clay taper to exclude bacteria, and with the water which had been filtered in this manner he was able to produce goitre in rats. As a controlling experiment, he fed rats of the same litter with the residua collected from the clay taper, but the result was negative.

Peculiar relations have been observed between goitre and geological formation. H. Bircher, the father of the distinguished physician, has studied this question in the existing literature, and by means of many personal geological excursions. His conclusions were confirmed by new investigations of his son, Dr. E. Bircher. Thus the highly interesting fact was discovered that in Switzerland the whole plateau of the former molasse seas (under molasse the geologists understand certain sandstone and conglomerate strata of the tertiary period) has the greatest goitre endemics. All sweet water and all eruptive formations, the crystalline atle, the sediments of the Jura, and the chalk sea are free. Dr. E. Bircher had goitre-producing water passed artificially through the river Malm, of the Jura, and gave it to rats to drink. Even after six months of experimenting he could not produce goitre. The confirmation of this fact by further experimenting would give a simple and trustworthy prophylactic measure.

The great significance of Bircher's experiments, especially for Switzerland, is shown by the following statistics: Among the Swiss recruits there are per annum in the average 1,703 men, that is 72 per mille, found unfit for military service on account of goitre, and every year there are about 400 soldiers, already drilled, who have to be discharged for the same reason. H. Bircher, school director, a son of the physician,

examined the school children of the district Aarau and found 804 among 3,153 pupils, that is 25.4 per cent., to be strumous.—*New York Med. Jour.*, Nov. 18.

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### TUBERCULOSIS IMMUNITY.

G. B. Webb and W. Whitridge Williams, Colorado Springs (*Journal A. M. A.*, October 28), report experiments in which they were assisted by Drs. A. M. Forster and G. B. Gilbert, as to the production of immunity to tuberculosis. It had been formerly shown by them that small numbers of tubercle bacilli could be inoculated into guinea-pigs and the doses gradually increased without producing tuberculosis. In their present study they have experimented on twelve monkeys who were tested with old tuberculin, according to Römer's method for cattle, and also by the conjunctival test, and found free from infection. They then proceeded to inoculate gradually increasing doses of living human tubercle bacilli and testing the results with tuberculin. Tests for antibodies in the serums of the monkeys by the Ascoli meiotigmin reaction were also made and careful leukocyte counts are also given. Their results in similar minutes inoculations of two children of tuberculous parents, one aged 3 years and the other 3 months, are also given. The children gained in weight and are healthy up to date, four months after the inoculations. Their conclusions are stated as follows: "1. We have not yet ascertained the exact number of tubercle bacilli of the culture employed which will infect a rhesus monkey. 2. A rhesus monkey, weighing 2,332 gm., withstood infection when injected at one dose with more than six times the dose of human tubercle bacilli which caused tuberculosis in a guinea-pig weighing 744 gm. 3. Two monkeys each received safely virulent human tubercle bacilli enough to kill at least 12,000 full-grown guinea-pigs. 4. No antibodies so far have been satisfactorily demonstrated in the serums of the vaccinated monkeys. 5. The temperature charts indicate the possible presence of such antibodies which might be interfering with the normal night drops following the subcutaneous inoculation of old tuberculin for diagnostic purposes. 6. It would appear that it is possible by the intradermal inoculation of old tuberculin to sensitize the skin of a monkey to tuberculo-protein. 7. Two children, both of whose parents were tuberculous, have been successfully vaccinated with upward of 600 virulent human tubercle bacilli, without infection being produced to date."



## SECONDARY ANEMIA OF TUBERCULOSIS.

W. J. Barlow and R. L. Cunningham, Los Angeles (*Journal A. M. A.*, October 28), report on the treatment of twenty-eight patients suffering from tuberculosis in Turban Stages II. and III., who were treated by hypodermic injections of the organic preparations of arsenic for the secondary anemia of the disease. The preparations used were the cacodylates of iron and of sodium and arsacetin. They have not observed in pulmonary tuberculosis any severe grades of anemia and in the blood examinations the average hemoglobin content of the twenty-eight cases was 81 per cent. The average red-count was 4,904,428, with an average color-index of 0.826. A tabulated statement of their results accompanies the paper, and they conclude from their observations that the following statements are justifiable: "1. The subcutaneous or intramuscular injection of sterile solutions of arsenic or iron, or of the two in organic combination, is entirely practicable in the treatment of the tuberculous in sanatoriums. 2. The effects of such medication are seen chiefly in the changes in the blood and in the body weight. 3. The preparation of iron seems to affect the hemoglobin content more profoundly than it does the number of red blood-cells. 4. The preparations of sodium cacodylate and of atoxyl (arsacetin) seem to affect the number of red-cells more markedly than the hemoglobin. 5. These solutions are in no sense specifics against the tubercle bacillus, but seem to exert a general tonic or alterative action within the organism. 6. The use of these preparations is entirely safe and is not attended with danger to the patient, even when continued over a period of many months. 7. Relatively larger doses are borne when given thus than are tolerated when given by the mouth. 8. The dosage is capable of exact control and the amount of the drug absorbed is known definitely. 9. The body weight is more rapidly and more certainly raised when these preparations are employed than when the unassisted hygienic-dietetic form of treatment is maintained. 10. There is no demonstrable increased liability to pulmonary hemorrhage accompanying the use of these preparations in pulmonary tuberculosis, even with advanced cases and in the presence of progressive destruction of the lung."

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BLOOD-PRESSURE IN PROGNOSIS.

Henry Wireman Cook, Minneapolis, Minn., states that instrumental estimation of blood-pressure has become an established clinical sign of increasing importance in life insurance examinations. Coincident with

greater experience in the use of this method there is a tendency to restrict the limits of the normal variation of blood-pressure. The maximum blood-pressure that can be considered normal varies with the company requiring the examination between 145 and 180; the minimum is not yet certain, but a pressure below 105 should receive investigation. This test is easily carried out with no inconvenience to the applicant and gives valuable information. At present over one hundred companies require the determination of blood-pressure. This varies with waking and sleeping, eating and exercise. Change in blood-pressure plays an important part in pneumonia, bronchitis, and emphysema. Persistently increased blood-pressure is a cause of arteriosclerosis and atheroma, and is always associated with Bright's disease. In tuberculosis, anemia, and debility there is a low blood-pressure.—*Medical Record*, November 11, 1911.

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#### THE MODERN TREND OF PSYCHIATRY.

J. V. May, Fishkill-on-Hudson, New York (*Interstate Medical Journal*, November), reviews the progress that has been made in recent years in our study of psychic diseases. The work is only beginning to yield results, thanks to such men as Kraepelin, Nissl, Alzheimer, and many others. Special attention is given to the "psychic trauma" of Freud, with the sex problem, dream interpretation and psycho-analysis. May believes that the outlook for psychiatry is exceedingly hopeful.

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#### SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE TORONTO WESTERN HOSPITAL.

At the Third Congress of the International Society of Surgery, held at Brussels, 26th to 30th September, 1911, the three subjects of discussion were:—The Diagnosis and Treatment of Pancreatitis; the Diagnosis and Treatment of Colitis; and Pleuro-Pulmonary Surgery.

##### PANCREATITIS: DIAGNOSIS AND TREATMENT.

The following classification was adopted:—Acute pancreatitis may be hæmorrhage, suppurative, or gangrenous, and these three types, according to Körte, differ only in the degree and the duration of the in-

flammatory process. Chronic pancreatitis may consist in sclerosis, lipomatosis, or lithiasis. The catarrhal inflammations of Mayo Robson, which are curable by operation before they become chronic, may also be included, but fat necrosis of the pancreas does not constitute a clinical entity.

*Etiology.*—Körte stated that nearly all the cases he had observed gave a history of prolonged epigastric pain, with convulsive exacerbations assigned often to gastric cramps, more rarely to duodenal ulcer or hepatic colic, but most frequently of all to the crises of cholelithiasis. This, combined with the fact that gall-stones were present in fifty per cent. of his cases, led him frequently to consider inflammation of the biliary passages as the cause of the acute pancreatitis. Delagenière was even more definite regarding the onset when he stated that acute pancreatitis nearly always supervened on chronic pancreatitis.

*Pathology.*—Doubt was cast on the existence of hæmorrhagic pancreatitis by Delagenière, who held that in almost every case the condition was a hæmatoma in the lesser sac resulting from a tear of the splenic vein, and not associated with any pancreatic lesion. Körte was, however, able to prove, from a large number of personally observed cases, that the initial pathological process was hæmorrhagic, and was followed by suppuration and necrosis. Compatible with this view is an interesting suggestion made by Reynaldo dos Santos that acute pancreatitis is at first embolic and not infective. Necrosis and peri-pancreatic suppuration may appear as early as the third or fourth day, but they are rare before the second week. In the fourth week they are frequent, and between the fifth and seventh weeks they are invariably present.

*Diagnosis.*—Even at the stage when there is a palpable swelling, the tumor shows nothing to suggest a pancreatic origin, except possibly when it causes an area of dulness between the stomach and colon. Dilatation of the stomach with effervescent powders may aid in localisation, but it entails a risk. Gobiet's sign, isolated dilatation of the transverse colon, is a manifestation of acute pancreatitis, and Körte attaches some importance to the presence of epigastric boarding. The pain of acute pancreatitis is characterized by its agonizing intensity. It may radiate to the præcordia, and a spasm may be invoked by pressure in the costo-vertebral angle. The latter sign is not, however, pathognomonic, as it also occurs in embolism of the renal artery (Santos). Among the functional signs progressive emaciation, rapidly reaching an extreme degree, is of importance. Bulky stools containing an excess of fat, in the absence of jaundice or probable intestinal affection,

indicate pancreatic disease. Loewy has shown that in pancreatics adrenalin dropped on the conjunctiva produces mydriasis.

*Differential Diagnosis.*—Hæmorrhagic pancreatitis takes one of three forms—fulminating, in which death takes place in a few hours; acute, in which death does not occur for three, six, or even fifteen days; and relapsing (Cabot), in which it is usually the third crisis that proves fatal. The last named is in reality a hæmatocele encysted most frequently in the lesser sac.

The diagnosis is usually made only when fat necrosis is seen at the operation. It has to be distinguished from sudden intestinal obstruction, in which the pain does not continue so intense and is not evoked by pressure in the costo-vertebral angle, the anæmia is less marked, and the temperature is much lower; from peritonitis following a perforation in the stomach, duodenum, or gall-bladder, in which the boarding of the whole abdomen is marked; from tuberculous and appendicular peritonitis; and from obliteration of the mesenteric vessels. The relapsing type may be mistaken for hepatic or lead colic, gastric crises of tabes, and muco-membranous enterocolitis.

Suppurative pancreatitis may be a diffuse suppuration, in which the picture is more like peritonitis and less like intestinal obstruction, or a pancreatic abscess, in which the onset is slower, a well-defined tumor appears, emaciation and weakness are pronounced, and the temperature swings. As it grows the tumor may resemble an encysted pyo-pneumothorax, but more frequently it develops abdominally, and it is necessary to eliminate all other forms of left-sided posterior subphrenic abscess; or it may develop towards the lumbar region, and at the operation, undertaken for a renal tumor, the diagnosis is made by the appearances of the fluid. A relapsing form of suppurative pancreatitis is met with in which the symptoms are those of suppurative cholangitis. Finally, there is the gangrenous type with fat necrosis.

In the acute catarrhal pancreatitis of Mayo Robson there are transient glycosuria, steatorrhœa, and sudden attacks of violent pain coming on in the course of a toxæmia.

Chronic pancreatitis may be associated with biliary or intestinal disease, or it may be tuberculous, syphilitic, or associated with circulatory disturbance. The most important signs are rapid emaciation with jaundice and the character of the stools, which contain an excess of proteins, carbohydrates, fats, and water. The frequency of glycosuria was left undecided, and great diversity of opinion was expressed regarding the value of Cammidge's reaction. An increase in the diastatic power of the urine has been alleged. The differential diagnosis

between chronic pancreatitis, cancer of the head of the pancreas, and stone in the common bile-duct is usually impossible.

*Treatment.*—Körte founded his conclusions on 44 cases of acute pancreatitis which he had observed—6 at autopsy and 38 operated on. In 4 cases the biliary passages were alone treated, and all died; in 34 the pancreas was directly dealt with, and 18 recovered. The results depended largely on the date of operation. Of 16 operated on during the first fortnight 11 recovered; of 14 during the second fortnight 7 recovered; of 4 between the fifth and seventh weeks none recovered. The difference in the mortality is due to the presence of suppuration or gangrene in the late cases.

Of the three proposed routes of approach to the pancreas the anterior abdominal is to be recommended, because it allows of examination and treatment of the biliary passages. The lumbar route is chosen only in a few rare cases of late operation for a retro-peritoneal collection, and the transpleural route for encysted collections in the sub-phrenic space. Through the mesial abdominal incision the pancreas may be exposed either through an opening in the gastro-colic omentum or by the retro-duodenal route. During the early stages, when suppuration and gangrene have not yet developed, but the pancreas is swollen, firm, and congested, and exhibits foci of fat necrosis and effusions in the lesser sac, the pancreatic foci may be punctured at different points with a blunt instrument and drained. The collections are emptied, and provision is made for the escape of any pancreatic fragments that undergo necrosis. The gall-bladder must be examined, and, if necessary, drained. If the stage of necrosis has been reached the foci are evacuated. Needless exploration, especially among the intestinal loops, is to be strongly condemned.

*Complications.*—The only grave post-operative complication is secondary hæmorrhage occurring after an interval of fifteen to thirty days. It is due to erosion of vessels in the necrotic foci, and is nearly always fatal. It is less likely to occur if operation is carried out at an early stage. Pancreatic fistulæ may form, but they tend to close spontaneously.

The treatment of chronic pancreatitis by cholecystostomy was unanimously praised.

#### PLEURO-PULMONARY SURGERY.

*Pneumothorax.*—Garrè stated that the chief danger of operative pneumothorax arose, not from the exclusion of one lung, but from the flapping of the mediastinum, which led to a diminished gaseous exchange in the other lung. In a sudden crisis danger might be averted by fixing the mediastinum or drawing forward a lobe of the lung.

The introduction of differential pressure methods was bound to lead to vast extensions in thoracic surgery. The positive pressure methods departed more widely from the physiological, and theoretically their long-continued use in a feeble heart involved a risk, as the right ventricle was distended; yet in practice, with the careful management of Meltzer and Auer's apparatus, that risk has been shown to be insignificant.

The surgical treatment by resection of costal cartilages of rigid dilated thorax, associated with emphysema of the lung, was recommended. The suitable cases were those in which the cartilages were calcified and inelastic, and the thorax was fixed in the position of inspiration. It was not yet decided whether the pulmonary emphysema or the chondral condition was primary. The operation was useless in cases of rigid thorax due to hypertonicity of the respiratory muscles—in bronchitic and asthmatic dyspnoea, nervous and cardiac asthma. In otherwise suitable cases the operation was contra-indicated if febrile bronchitis, bronchorrhœa, broncho-pneumonia, or bronchiectasis was present.

*Acute Empyema.*—Washing out of the pleural cavity, except in desperate cases, found only one supporter, Championnière, who used a solution of zinc chloride. The systematic use of suction drainage after pleurotomy received a considerable amount of support.

The chief discussion arose on the treatment of pneumococcal empyema. Gaudier favored repeated aspiration of the pleural cavity with oxygen insufflation, and Dollinger stated that aspiration was quickly followed by death of the cocci and sterilization of the pus. On the other hand, Vanverts said that not more than one-third of the cases were cured by a single aspiration, and at each subsequent aspiration the condition of the patient was worse. Hence he advocated early opening and draining of the pleural cavity.

In tuberculous empyema the alternative lines of treatment suggested were repeated aspiration and pleurotomy without resection of a rib or after-drainage.

In any case of acute empyema, if operation was refused, 15 to 20 c.cm. of a 1 per cent. solution of collargol might be injected after each tapping (Gaudier).

*Pleural Fistulae.*—Girard said that the outstanding cause of permanent fistulae was mixed infection. Whether they were of tuberculous origin or not, the prognosis was grave if they were left to themselves. As regards non-operative treatment, injections of Beck's paste were considered dangerous, and respiratory gymnastics, which might effect a

cure in the slight degrees of fistula, were chiefly indicated as an adjuvant to post-operative treatment.

For efficient treatment by operation emphasis was laid on the importance of determining the cause of the fistulæ, the dimensions of the suppurating cavity, and the condition of the lung and visceral pleura. For extensive shallow cavities Estlander's operation was recommended, and for large, deep cavities Schede's operation. Girard and Lambotte favored the combination of Schede's operation with decortication and mobilization of the adherent lung. Cecci held that decortication was usually impossible owing to interstitial fibrous pneumonia, and when possible gave only a temporary expansion of the lung.

*Wounds of the Pleura and Lung.*—Lenormant said that wounds of the lung showed a great tendency to spontaneous cure. Of the immediate complications, in hæmothorax the prognosis was usually favorable, and pneumothorax by inducing collapse of the lung was so efficient in stopping hæmorrhage that it frequently was artificially produced. The closed and open varieties rarely caused trouble, but valvular pneumothorax was dangerous. Derjinsky showed from cases in the Russo-Japanese war that in gunshot wounds the bullet might cauterise its track, and the most characteristic symptom of wound of the lung, blood in the sputum, might be absent.

The discussion resolved itself into a contrast between the classical or expectant treatment, and systematic, early intervention, and the general opinion leant towards the former. It was found impossible to lay down rigid rules for intervention in the presence of complications, but Baudet gave the least indefinite indications. He said immediate operation was indicated in cases of extreme gravity, with death apparently imminent, in seemingly benign cases for infection or general emphysema, and in cases in which the danger was not immediate, but arose from persistent or repeated hæmorrhage. Lejars favored early operation in stab wounds as contrasted with gunshot wounds, and he was supported by Championnière. The operation mortality in stab wounds was 25 per cent., and in gunshot wounds 50 per cent.

The importance of keeping the patient at rest in bed for a prolonged period was emphasized—fifteen to twenty days in medium cases, and six weeks in grave cases.

By the expectant treatment the statistics of 1,056 cases showed 90 per cent. of recoveries; of the deaths two-thirds were due to hæmorrhage and one-third to sepsis. Differences of opinion arose as to the indications for operative interference in grave hæmorrhage, but the opinion was

universally held that if the wounds of the lung were surgically treated the pleural cavity should be closed without drainage.

*Pulmonary Tuberculosis.*—Friedrich laid down the following rules regarding resection of the ribs for pulmonary tuberculosis:—

The operation was to be recommended in fibrino-cavernous cases, especially of one-sided phthisis not acute in its progress, in patients still strong and between fifteen and forty years of age.

It was specially indicated when the tendency to contraction or flattening of the affected side, narrowing of the intercostal spaces, or displacement of the mediastinum or diaphragm was evident.

It was not contra-indicated by pleural adhesions or by the presence of slight, old foci in the other lung, but it was contra-indicated in metastatic disease of the larynx, intestine, and bones, and in extensive infiltrating processes in the lung.

The choice between complete thoracoplasty with pleuro-pneumolysis, partial resection of ribs, and operation in several stages depended on the careful estimation of each patient's strength and cardiac activity.

In all cases that survived the operation there was a notable improvement.

Discussions were also held on parasites and tumors of the lung, on pulmonary abscess and gangrene, and on bronchiectasis. The last named was characterized as the least profitable of all lesions for surgical intervention, mainly owing to the multiplicity of the bronchiectatic cavities.—*Edinburgh Med. Jour.*, Jan., 1912.

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#### EXPERIMENTAL THERAPY OF CANCER.

The results of an important and interesting experimental research into the therapy of malignant growths were recently communicated, as our Berlin correspondent records, to the Medical Society of Berlin by Professor V. Wassermann, Dr. Keysser, and Dr. Michael Wassermann. The communication was of a preliminary character, and the details of the experiments are reserved for future publication. The experiments were made upon mice suffering from carcinoma or sarcoma. In some of the mice the tumors had arisen spontaneously, but in the majority of cases they had been produced by inoculation from mice similarly affected.

In presenting a brief account of their results the authors were careful to point out that these are at present of merely scientific importance,



and that there is no reason to suppose that the precise means which they have found effective in their animal experiments would be successful in the case of man.<sup>1</sup>

Encouraged by the brilliant researches of Ehrlich, whose educated search for poisons sufficiently selective in their action to kill protozoan parasites whilst leaving the cells of the host uninjured, has been attended with so much success, Professor Wassermann and his collaborators have been striving to find a chemical substance which, introduced into the blood, shall exert an action sufficiently differential to destroy the cells of a new growth without endangering the life of the animal.

This must not be regarded as by any means a hopeless quest, for the selective affinity towards and relative susceptibility to chemical substances exhibited by the various tissues and even different cells of the same tissue are indeed striking. To this is due the fact that one substance is a narcotic, another raises the blood pressure, whilst a third stops the heart. The specific action upon particular cell groups is just as strikingly manifested when substances of closely related chemical constitution are considered, such as morphine and apomorphine, or the various toxic proteins of animal and vegetable origin. It is, therefore, not unreasonable to believe that these specific affinities for particular chemical groupings may be exploited for therapeutic purposes to an almost indefinite extent by careful and patient study of the relationship of particular cells to substances of definite chemical architecture.

Although the subject of chemo-therapeutics is in its infancy, important guiding principles have been laid down. They are largely due to the genius of Ehrlich. A general protoplasmic poison such as mercury or arsenic displays little selective action. To make such a poison specific it must be, to use a crude analogy, wrapped up in a parcel which is chemically more attractive to the protoplasm of particular cells than to cells in general. Acting on this principle Ehrlich introduced arsenic into various organic compounds, and by modifying with the greatest skill the precise nature of the chemical configuration of the latter, ultimately obtained arsenic compounds for which the protoplasm of trypanosomes and spirochaetes exhibited an avidity considerably in excess of that manifested by the cells of mammals harboring these parasites. He thus obtained a measure of specificity sufficient to afford a margin of safety for therapeutic use.

Malignant growths are due to a kind of civil war, in which the in-

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<sup>1</sup>A preliminary paper is published in the *Deutsche medizinische Wochenschrift* for December 21st, 1911, s. 2389.

vaders consist of anarchist members of the community and their progeny, and it might not unreasonably have been supposed that the selective affinities of, for instance, the epithelium of the mammary gland and the cells of a mammary carcinoma would not greatly differ. Nevertheless, the possibility of a rational therapy for new growths rests upon the assumption that sufficient difference exists to enable selective action to be manifested.

Undismayed by the difficulties of the task, the authors undertook the search for a chemical substance capable of such selective action. For reasons which are not now material, their attention was first drawn to the action of salts of selenic and telluric acid. Selenium and tellurium are elements belonging to the same group as sulphur, but the selenates and tellurates, unlike sulphates, are highly poisonous, possibly owing to the ease with which they part with their oxygen within living cells, the selenium and tellurium being reduced and deposited.

The injection of these salts directly into the new growths was followed by their more or less complete destruction, but, as the authors point out, for therapeutic purposes the agent must find its way to the carcinoma cells when introduced into the blood stream. The introduction of selenates and tellurates into the veins was not attended by a satisfactory result.

When injected in sufficient quantities into the blood stream of mice with carcinoma they killed the animals, but smaller amounts had no effect upon the growths; in other words, they exhibited no selective action. Attempts were therefore made to combine selenium and tellurium with an organic substance in the hope that some selective action might occur. Various members of the eosin group of dyestuffs were experimented with, as these possess great power of penetration throughout extravascular areas of the tissues. Some hundreds of different preparations were made and tried without result, until finally a compound of eosin and selenium was produced, and proved to exert a specific destructive effect upon the tumor cells.

The authors give no details of the composition and properties of this substance beyond the statement that it is readily soluble in water and that more than  $2\frac{1}{2}$  mg. is required to kill a healthy mouse. The selective absorption of the substance is strikingly shown by the following experiment: If  $2\frac{1}{2}$  mg. were injected into the veins of a healthy mouse the animal became pink all over, but the same quantity introduced into an animal bearing a tumor produced little coloration of the surface of the skin. When, however, in the latter case, the tumor was examined it was found stained an intense red.

The account given by the authors of the successful cases of the treatment is briefly as follows: After the third injection the tumors were distinctly softer, and after four or five injections became cystic. Further doses, making 6 to 8 in all, led to diminution in size and absorption. In ten days the growth had disappeared. Examination of the tumors at various stages of the treatment showed that the whole structure had liquefied, and in the later stages no trace of the carcinoma cells was to be found.

In animals which had received a sufficient number of injections to cause the apparent disappearance of the tumor no recurrence has yet, after some months, taken place; but in inadequately treated animals, although the treatment was followed by softening and diminution in the size of the growth, rapid recrudescence occurred.

It was not found possible to treat successfully growths of larger size than a cherry. With larger growths the same initial changes occurred, but the animals always died. In the opinion of the authors, these deaths were due to the rapid absorption of the disintegrated contents of the tumors.

Whilst anxious not to raise false hopes, the authors express the opinion—which, considering the reputation as an experimenter possessed by Professor von Wassermann, we believe to be justified—that an important beginning has been made in a direction in which further research may ultimately lead to the discovery of a useful treatment for malignant disease.

Selenium and tellurium are members of the same group of elements as oxygen and sulphur, and resemble the latter in most of their compounds. The atomic weights of these three elements are: Sulphur 32, selenium 79.2, tellurium 127.5, and in most of its properties selenium is intermediate to the other two, thus conforming to the general rule for such groups; for example, selenium is less electronegative, or acidie, in character than sulphur, and tellurium is less so than selenium, and corresponding differences are to be found in their various compounds. Selenium is a widely distributed element, but is only found in small quantities; the chief source is iron pyrites ( $\text{FeS}_2$ ) in which a part of the sulphur is replaced by selenium; tellurium is comparatively rare. Both are non-metals, but, like sulphur, they occur in several allotropic forms, and one form of each has a metallic appearance, and possesses some of the properties of metals. The three series of salts—selenides and tellurides, selenites and tellurites, selenates and tellurates—correspond respectively to sulphides, sulphites, and sulphates; fairly numerous organic compounds of the two elements have also been prepared. Most

of the selenates and tellurates are soluble. The sodium, potassium, and ammonium salts ( $\text{Na}_2\text{SeO}_4$ ,  $\text{Na}_2\text{TeO}_4$ , etc., most of them also containing water of crystallization) are colorless crystalline compounds soluble in water (sodium tellurate only slightly so). The compounds of selenium and tellurium with hydrogen are unpleasant smelling and poisonous gases, hydrogen selenide ( $\text{H}_2\text{Se}$ ) being more poisonous than hydrogen sulphide ( $\text{H}_2\text{S}$ ), and hydrogen telluride ( $\text{H}_2\text{Te}$ ) more so than the selenide. Small traces of selenium and tellurium compounds were formerly of fairly common occurrence in bismuth salts; they were held to be objectionable on account of the formation of hydrogen selenide and telluride in the stomach. The tests ordered in the *British Pharmacopoeia* for bismuth salts include one for proving their absence, and the bismuth salts supplied for medicinal use in this country now practically never contain any.—*B. M. J.*, Jan. 6th, 1912.

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#### DISTRIBUTION OF TUBERCULOSIS AND CANCER IN PARIS.

There has recently been published at Paris a very interesting report to the Prefect of the Department of the Seine, by the chief of the administrative bureau of hygiene, on researches made during the year 1910 relative to the distribution of tuberculosis and of cancer in the houses of Paris.

In 1910 the total number of deaths from pulmonary tuberculosis in Paris was 9,449, as against 9,714 in 1909. For some years it has been the custom in Paris to group such deaths according to the houses in which they occur. Of the deaths in 1910, 8,229 occurred in houses where tuberculous deaths had previously occurred; and of these, 5,686 were in houses that had had less than five such deaths each during the previous five years, and 2,543 in houses that had had more than five such deaths in that period. Houses of the latter group are considered "confirmed foci of tuberculosis." There are now 5,222 such houses in Paris, which alone contributed in 1909, 27 per cent., and in 1910, 26.9 per cent. of the total deaths from tuberculosis in the city. It is the aim of the sanitary officials gradually to bring about the destruction of such houses and their replacement by approved hygienically constructed buildings. Since 1906, 41 houses have been thus demolished and replaced, 4 of them in 1910. It is exceedingly significant that since 1904 no new "confirmed domiciliary foci of tuberculosis" have developed. Cases appearing in houses not previously infected are regarded as purely sporadic.

The greater part of the report is taken up with tabulated statistics of an exhaustive room-to-room inspection of 1,757 of the tuberculous houses, with regard to light, ventilation, heating and sanitary accommodations. The whole represents a systematic effort to eradicate established foci of the disease in Paris.

At the conclusion of the report is a brief account of similar investigations relative to the distribution of cancer. In 1910 there were in Paris 2,992 deaths from cancer, occurring in 2,830 houses, of which 564, or almost 20 per cent., were also confirmed foci of tuberculosis. Taking similar figures for the period from August, 1906, to December 31, 1910, it appears that in this period there were in Paris 12,629 deaths from cancer in 10,952 houses, of which 1,879, or about 18 per cent., were also confirmed foci of tuberculosis. This large percentage, and its striking constancy, seems to indicate that there is something more than a mere fortuitous relation between the two diseases, either in their etiology or in the surroundings which act as predisposing factors in their development.

In this connection renewed attention may be called to the article by Dixon, Fox and Smith, in the issue of the *Journal of the American Medical Association* for Sept. 2, on the "Effect of Tubercle Products on Epithelium." The stimulative effect of such products on epithelial overgrowth, as experimentally demonstrated, suggests the possibility of obscure causal connection between the two diseases. The French report above summarized, which recalls also Green's work on the domiciliary distribution of cancer in Great Britain, is corroborative and striking evidence, which may some day be of contributory value in the ultimate solution of the problem of cancer, the greatest riddle in the present field of experimental medical research.—*Boston Med. and Surg. Jour.*, Oct. 26.

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## LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY

UNDER THE CHARGE OF PERRY G. GOLDSMITH, M.D., C.M., TORONTO.

### PARALYSIS OF RIGHT THIRD NERVE FOLLOWING ETHMOIDAL OPERATION.

R. W., aged 36; first seen April, 1911, with history of nasal polypi for about eight years. Following an intranasal ethmoidal operation on the right side he developed an orbital haematoma and complete right third nerve paralysis. The pupil is now, six weeks after the operation, smaller and reacting, and the ptosis is less, but the condition is otherwise unaltered. Vision of the right eye is unaffected.—Dr. A. J. M. Wright, *Proceedings of Royal Society of Medicine*, July, 1911, Vol. 4, No. 9.

## VACCINES IN EAR, NOSE, AND THROAT CASES.

In the *Edinburgh Medical Journal* of January, 1912, appears a paper by Dr. Fraser and Dr. T. W. E. Ross, dealing with vaccine therapy as applied to diseases of the nose, throat and ear. A very thorough resume of the leading articles so far published is given and their remarks have been summarized as follows:

1. Certain acute cases may be prevented from becoming subacute or chronic by the use of vaccines.
2. The most useful sphere of vaccine therapy is likely to be in subacute cases.
3. In chronic cases, if free drainage has been established, vaccines may occasionally, when other means have failed, bring about a cure.
4. Autogenous vaccines should be used, and in resistant cases should be freshly prepared from time to time. The chief difficulty is the proper isolation of the pathogenic microbe or microbes.
5. Small doses of vaccine, repeated at frequent intervals, have given very good results in several cases.
6. From the cases reported no definite conclusion can be reached as to the particular bacterial infections most suitable to vaccine therapy.
7. In cases of tubercular laryngitis the use of tuberculin may be an aid to local treatment.

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CASE OF MALIGNANT STRICTURE OF THE OESOPHAGUS.

A. P., male, aged 64, had noticed increasing difficulty in swallowing for three or four months, but could not even swallow fluids when first seen by Dr. Watson-Williams on January 10, when oesophagoscopy revealed an infiltrating growth  $10\frac{1}{2}$  in. from the upper incisor teeth. Dr. William Hill, in conjunction with Dr. Finzi, applied radium (150 mg. of radium salt) by means of two tubes inserted "tandem" for fourteen hours on February 4, and this so far relieved the obstruction that the patient was able to swallow meat, potatoes, and any solid food. Since then two more applications have been made by Dr. Finzi, the last time only for eight hours, as the patient drew out the radium tube too soon. The growth is easily seen by oesophagoscopy, but the patient has been enabled to take food regularly and has greatly improved in general condition, as he was being starved before.—Drs. Watson-Williams, Hope and Finzi, *Proceedings of Royal Society of Medicine*, July 1911, Vol. 4, No. 9.

## TONSIL REMOVAL, WITH SPECIAL REFERENCE TO QUININE ANAESTHESIA.

Bryan D. Sheedy, M.D., New York, in a paper in the *Medical Record*, Oct. 21, 1911, writes very favorably on his experience with quinine in tonsil enucleation. After considering briefly the anatomy of the faucial tonsils he enumerates some of pathological states not infrequently associated with diseased tonsils. The common conditions are as follows: (1) Chronic tonsillitis; (2) peritonsillar abscesses, due to infection of the small crypts in the peritonsillar tissues and the interference of proper drainage; (3) enlarged tonsils, with crypts, constantly containing tubercle bacilli and other infectious material; (4) chronic pharyngitis, due to the enlarged tonsil; (5) ear conditions, due to the interference with proper aeration of the middle ear; (6) enlarged glands in the neck, due to the escape of infectious material from the tonsils into the lymphoid channels; (7) laryngeal and lung conditions in children, due to mouth breathing on account of enlarged lymphoid ring; (8) anemia, due to the mouth breathing caused by nasal obstruction; (9) the below par condition of all these patients, due to lack of oxygen on account of mouth breathing; (10) blood conditions, such as rheumatism and heart diseases, due to absorption of the infectious material from decomposing matter found in the lacune of the enlarged tonsils.

The author firmly believes in enucleating the gland and insists that the operation is often underestimated, and it is one that should not be performed in an office or dispensary. Mention is made of the fatalities reported under chloroform and cocaine, and for general anaesthesia he prefers ether.

Injections in and around the tonsil he strongly condemns. By using a 2 per cent. solution of quinine bisulph. injected into the cellular tissue forming the bed of the tonsil, he has been able to secure satisfactory anaesthesia and a satisfactory after course.

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## DISEASES OF CHILDREN

### THE DIETETIC AND GENERAL MANAGEMENT OF TYPHOID FEVER IN CHILDREN.

Dr. Charles Gilmore Kerley said that there was both a science and an art in the feeding of children whether well or ill. The child required food of definite nutritional value in an assimilable form; this was the

science of feeding. It required variety and that the food selected to be agreeable to the senses of the patient; this was the art of feeding. There was no ready-made diet in any illness in a child any more than there is a ready-made diet for the artificial feeding of infants with digestive derangements. At the onset of every illness milk should be discontinued as well as all solid foods, for the reason that in every illness the child's capacity for food was lessened. It was Dr. Kerley's custom to give a laxative sufficient to produce several watery movements. The child was put on a temporary diet consisting of gruels flavored and perhaps one of the dried milk products until the nature of the illness was determined. In typhoid fever the diagnosis was rarely made under a week of observation and when it was definitely settled, the intestines under this regime were free from distension with gas and undigested milk and the patient was less toxic and had a lower temperature than would have been the case had a freer feeding been permitted. It was a mistake to think that the diet they began with must be continued throughout the attack. Food would be tolerated during the latter part of the illness that could not have been taken earlier. Feedings were never given oftener than at three-hour intervals. A diet schedule for a patient five years of age would be something as follows:

6 a.m.—Eight ounces of gruel with sugar in small amount or broth added. Zwieback or dried bread and butter.

8 a.m.—A drink of weak tea with sugar or whites of one or two eggs with sugar in orange juice.

10 a.m.—Farina, cream of wheat, rice, served with butter, and sugar or maple syrup and butter. Drink of weak tea or kumyss or matzoon, or a little dried milk food, such as malted milk or Nestle's food.

2 p.m.—Eight ounces kumyss matzoon, or skimmed milk diluted with gruel. Zwieback or dried bread and butter.

4 p.m.—Orange egg sherbet or a drink of lemonade or tea and sugar.

6 p.m.—Cereal or gruel with sugar and butter or with broth. If skimmed milk was not given at 2 o'clock it might be given with gruel at this time.

10 p.m.—Gruel with sugar or broth or with wine.

This would easily satisfy the caloric requirements of a child of five years, though the diet was not an evenly balanced one, being high in carbohydrates and low in proteids. Fat in considerable quantities was poorly digested by young typhoid fever patients. Proteid in considerable quantities should not be given until something was known of the course of the disease. Milk, scraped rare beef and soft boiled eggs were



not well borne in young typhoid fever patients. Carbohydrates were readily cared for when properly prepared and administered. Dr. Kerley did not advocate a milk diet in typhoid fever. The mixed feeding was not employed more generally for the reason that physicians failed to realize that other food stuffs might be taken care of easier than milk, and because of the fear of lay criticism for departing from an established custom. His favorable experience in intestinal disease with a diet other than milk, together with the teaching of Dr. A. Seibert, led him to use similar diet in typhoid fever patients. His observation had been that milk-fed cases suffered from more severe illness, increasing the danger to live, that the duration of the illness was longer, that emaciation was much greater and that convalescence was more protracted than cases fed as had been outlined. He had learned that in order to have a short, mild case the abdomen must be kept flat; tympanities was an indication of danger no matter how produced. On the mixed diet suggested it occurred only exceptionally. Drugs were of no service except to produce an evacuation of the bowels when there were not two movements in twenty-four hours or to check evacuations when there were more than four in that time. He did not attempt to reduce temperature unless it rose above 104 degrees F. In such instances the cold pack to the thorax and abdomen was employed. The cold pack applied to the head usually would relieve restlessness, irritability and sleeplessness. This method of treatment had the advantage of a milder course, shorter duration, more prompt convalescence, and usually, absence of complications.—*Pediatrics*, Dec., 1911.

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#### THE HIGH DEATH RATE FROM DIPHTHERIA IN THE UNITED STATES.

Eben C. Hill, U.S.A., summarizes the causes of the large death rate from diphtheria in the United States as follows: Late diagnosis; late or insufficient prophylactic measures; lack of faith in antitoxin, and insufficient dosage in severe cases. Cases early diagnosed demand 3,000 to 5,000 units; severe cases may need 10,000 to 30,000 units immediately and more later. All in contact with a diphtheria case should be immunized at once. All statistics indicate that there is no danger to the heart, kidneys or nervous system from large doses of antitoxin; the danger is in too small ones. Illustrative cases are given.—*Medical Record*, April 1, 1911.

## VOMITING OF INFANTS.

H. Lowenrurg, Philadelphia (*Journal A. M. A.*, January 20), says that the causes of vomiting in infancy are somewhat different from those of children a little past that period. Therefore, he describes his subject and considers the vomiting of infancy and that of early childhood separately. In the first six months of life the stomach is almost entirely covered by the large left lobe of the liver, which interferes with its rapid emptying. This, together with the undeveloped valve action at the cardiac end, explains the easy regurgitation at this period. This might be considered physiologic but for the fact that, if untreated, it interferes with nutrition. It is generally due to overfeeding at irregular periods. The capacity of the stomach at birth is approximately one ounce or less, and it is a mistake to allow the child under 1 month of age to take four or five ounces, and vomiting thus induced may pass beyond control. Regularity of feeding is also important and too great frequency is as bad as too much food. Up to 3 months most infants do well on a two-hour interval and after that on three-hour intervals, gradually attained at the end of 6 months. Between 6 and 9 months nourishment should be given three to three and a half hours and after 9 months every four hours. During the first few weeks there may be two night feedings in weak infants. After the second month night feedings should be discontinued. In bottle-fed infants the same general rules apply, but the composition of the food is more important. The ingredients most commonly at fault are the fats and acid, containing yellow curds, and there are also characteristic bowel symptoms which are not here discussed. The remedy is reducing the fats in the food, regulating the diet of the mother in case of a breast-fed infant and the food in bottle-fed ones. Sugar is not often the cause of vomiting, hardly ever in breast-fed children, and is commonly associated with watery diarrhea. The remedy is an initial purge, rarely a stomach washing, a colonic flushing and reduction of sugar in the food. Congenital pyloric obstruction is too rarely diagnosed and it would be well to regard all cases of vomiting resistant to treatment and beginning at birth or shortly after as due to this cause until otherwise demonstrated. There is a kind of regurgitation which is entirely harmless though persistent for awhile, and is probably due to faulty habits or hygiene. As a symptom of infectious or summer diarrhea, vomiting is almost entirely confined to the bottle-fed children. Occurring at the very onset of the disease it saves the stomach from irritation to some extent and is benign, but, continuing throughout, it is of bad prognosis and the treatment is not satisfactory. Lavage to be of use must give speedy

results and not be too long continued. It may be necessary to suspend feeding by the mouth and feed by injection. The more common causes in older children are the acute infectious diseases, dietary indiscretions, poisons, acute abdominal disease, uremia, brain disease, acidosis or cyclic vomiting, so-called reflex causes, and ocular conditions. It is an important initial symptom of scarlet fever, smallpox, meningitis and less so of measles and pneumonia. It is a prominent symptom of pertussis and is purely mechanical, while in the other disorders, except perhaps in meningitis, its cause is toxic. The usual trouble is dietary indiscretion, and Lowenburg advises special care in this respect. The active treatment, after eliminating the cause, consists in an emetic if it can be given early enough and, if the stomach is not too much irritated, gastric lavage. It is of diagnostic importance in appendicitis, nephritis and brain disease, and when every other cause has been excluded the eyes should be examined by a competent oculist.

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## THERAPEUTIC NOTES

### TREATMENT OF HEADACHE.

Lemoine and Gérard recommend the following methods for treatment of headaches, which they divide into four distinct categories.

*The Arthritic Headache.*—Very obstinate and painful, affecting the forehead and temples. Two teaspoonfuls of sodium bicarbonate, or 30 grains of lithium benzoate, should be taken every day in Vichy water. In the morning and at mid-day a cachet of the following:—

℞ Quininae Valerianatis .....	gr. iiij.
Pyramidonis .....	gr. iiss.
Lithii Benzoatis .....	gr. viij.

Misce. Fiat pulvis.

Copious warm drinks should be taken at meals; daily lavage of the bowel; foot-baths, complete baths or hot lotions. In some cases potassium iodide (gr. iiij.) should be combined with the alkalines.

*The Neurasthenc Headache.*—The best treatment is the static electric bath and effluvia, when possible. Frictions behind the ears with an ointment consisting of:—

℞ Mentholis .....	gr. v.
Paraffini Mollis .....	ʒi.

Misce. Fiat unguentum.

Two cachets of the following should be given *per diem*:—

℞ Pulveris Valerianæ,	
Camphoræ .....	ana gr. iij.
“Methylene-blue” .....	gr. ij.
Pulveris Myristicæ .....	gr. j.

Misce. Fiat pulvis.

Attention must be strictly paid to the digestive functions and the bowels.

*The Headache of Arterio-Sclerosis.*—Associated with the condition of the vessels, thickening of the meninges, and cerebral anæmia. Small blisters should be applied now and again behind the ears. For the occipital pain, use points of actuary cautery to the neck lightly and superficially every fortnight. Two to three tablespoonfuls of the following should be given every day:—

℞ Sodii Glycerophosphatis,	
Potassi Glycerophosphatis.....	aa ʒi.
Syrupi Codeinæ .....	ʒiiss.
Tincturæ Nucis Vomica .....	ʒss.
Aquæ Menthæ Piperitæ .....	ʒiv.

Misce. Fiat misturæ.

Also apply compresses moistened with some sedative lotion.

*The Syphilitic Headache.*—Specific treatment must be instituted with the addition of phosphates and arsenic:—

℞ Liquoris Arsenicalis .....	ʒss.
Sodii Phosphati .....	ʒss.
Aquæ .....	ʒx.

Misce. Fiat mistura.

“Two tablespoonfuls to be taken each day.”

For the night headache, a cachet of 5 grains of veronal should be given at bedtime.

In obstinate cases perform a lumbar puncture and remove 10 c.c. of fluid.—*Journal de Médecine de Chirurgie pratiques.*

#### PAIN IN DYSMENORRHŒA.

Blacker gives in dysmenorrhœa, if the pain is not very severe (*Practitioner*, October, 1911):

℞ Potassium bromide .....	℞xv
Potassium bicarbonate .....	grs. xv
Sweet spirit of nitre .....	℞xxx
Tincture of capsicum .....	℞iiss
Compound tincture of chloroform ( <i>British Pharma- ceutical Codex</i> ) .....	℞x
Syrup of ginger .....	℞v
Peppermint water, enough to make .....	℥j

M. S.: This dose to be taken every three hours.

#### ERGOT: A CLINICAL EXPERIMENTAL STUDY.

Sharp makes a report on this topic in the *Proceedings of the Royal Society of Medicine of London* for May, 1911. He first explains how ergot acts in labor, or what one may expect of it, and says:

(a) It collects the small irregular and non-effective pains into larger effective contractions, so that the labor is sooner ended and the uterus saved work.

(b) The drug improves the tone of the muscle-fibres, whereby the uterus gains an advantage in that its musculature is ready at once to respond to further contraction, and thus neither time nor energy is spent in bringing the fibres up to that point at which contraction begins.

(c) By acting on the abdominal muscles and on the muscular system generally, the tissues as a whole are improved in tone. This helps the uterus in its struggle.

The foregoing may be called the immediate benefits, but there is often a more remote beneficial action.

(d) The forcible contractions following the administration of ergot, by expelling uterine contents, such as after-birth, membrane, or other foreign body, relieve the organ of its troubles and set it free to recover itself in the ordinary way of nature.—*Therapeutic Gazette*, Oct. 15th.

#### INTESTINAL ATONY.

For intestinal atony Cramer (*Journal de médecine de Paris*, July 15, 1911) prescribes:

℞ Extract of Indian cannabis .....	0.75 gramme
Ether .....	10 grammes

M. S.: Take three times daily ten drops on sugar.

#### THE TREATMENT OF CHRONIC AFFECTIONS.

For six years Drew (*Medizin. Klinik*) has been using the following formula in chronic skin affections, including psoriasis, and chronic eczema:

- R Salicylic acid, gr. x  
 Chrysarobin, gr. xx.  
 Green-soap,  
 Lanolin, of each, gr. xxv.

To be applied every morning.

It is contraindicated, however, in acute disorders, seborrheic eczema of the head, body, and extremities, ichthyosis, acne vulgaris, pityriasis versicolor, etc. According to the skin affection present, divers therapeutic measures should be resorted to. When above formula does not improve matters after a reasonable trial, the following is suggested:

- R Salicylic acid, gr. ij.  
 Pyrogallic acid, gr. iv.  
 Antheol, gr. x.  
 Lanolin, gr. c.

To be applied every evening to the part affected. The first formula above given can be continued in the morning.—*La Tribune Médicale.*

#### AMENORRHEA.

The *Practitioner* commends the following prescription for amenorrhea:

- R Hydrargyri chloridi corros., gr. iij to iv.  
 Sodii arsenatis, gr. j.  
 Ferri sulphatis exsiccati, gr. xxx.  
 Potassi carbonatis, gr. xv.  
 Extracti nucis vomicæ, gr. v.  
 M. et divide in pilulas no. xxx.  
 Sig.: One pill to be taken before each meal.

#### INFLUENZA.

- R Quininæ sulph., gr. ij.  
 Caffein. citrat., gr. j.  
 Salol,  
 M. et ft. cachet; mitte tales xij.  
 Sig.: One cachet every three hours.—*Prescriber.*

#### ACUTE HEPATITIS.

- R Potassii citratis, ℥iv.  
 Tinct. aconiti, ℥xij.  
 Liq. ammonii acetatis, f̄3x.  
 Syr. limonis, q. s. ad f̄3iij.  
 M. Sig.: Teaspoonful every two hours.

℞ Hydrargyri chloridi mitis, gr. j.  
Sodii bicarbonatis, gr. xv.  
Sacchari lactis, gr. xx.

Div. in pulv. no. vj.

M. Sig.: One every hour, following the last two hours with a Seidlitz powder.—*Merck's Archives*.

The passage of a sound (*Am. Jour. of Surg.*) or catheter into a tortuous or narrowed urethra is facilitated by injecting the urethra full of sterilized olive oil.

#### PALLIATIVE TREATMENT IN HÆMORRHOIDS.

Ointments in some form are a popular remedy for piles, and the number of them which have been recommended for this condition at different times are legion. P. Lockhart Mummery, in the *Practitioner* for October, 1911, recommends:

℞ Tannic acid ointment,  
Stramonius ointment,  
Belladonna ointment .....aa ʒss.

M. S.: For external use.

But some patients prefer suppositories to ointment. The following will be found useful:

℞ Ichthyol,  
Tannic acid .....aa gr. v.  
Extract of belladonna leaves,  
Extract of stramonium .....aa gr. iii.  
Fluid extract of hamamelis leaves .....gr. x.

M. Fiat. suppositorium.

Our author warns against palliative treatment of piles; it should not be tried in the following cases: 1. Where there are severe repeated hæmorrhages or where the patient is anæmic. 2. Where the piles prolapse each time the bowels act and have to be replaced. 3. When the patient is going to travel, or is in the army or the navy. 4. When the patient is unduly worried as to his condition; and this is important, because it is difficult to attach the real amount of significance to some of these cases of piles where the patient details a lot of elaborate symptoms and where he is only suffering from piles. It is not good for these patients that they should spend a lot of time in treating their piles; it encourages them to think more about the condition than is good for them. If we operate upon such a patient he gets over his trouble quickly.—*N. Y. Med. Journal*, Nov. 4th.

## PERSONAL AND NEWS ITEMS

## ONTARIO.

Two cases of smallpox occurred in the Brockville Hospital for the Insane. They were at once isolated by the local Medical Health Officer.

Quite an exciting scene occurred in Ottawa recently. A lady was taken ill with smallpox, and when the Medical Health Officer, Dr. Shirreff, and Dr. Chevrier, chairman of the Board of Health, called at her home to isolate her, she barred the door and refused. They had to send for a policeman. She then consented. When the ambulance arrived she had changed her mind, and the police had to be called in a second time.

In Toronto alone last year there were 102 deaths by violent means. The railways killed 19, the street cars 19, automobiles 6. Drownings were 25, and sadder even is the number of suicides, 26.

Dr. John Silverthorn has been appointed coroner for the County of Norfolk, and Dr. Paul Poisson an associate coroner for the County of Essex.

There were 146 cases of scarlet fever last month in Toronto, as compared with 107 in December last. However, the list was considerably lower than in January, 1911, when it was 331. The diphtheria cases last month numbered 164. In December, 1911, there were 172 diphtheria cases, and in January, 1911, 117 cases. Typhoid fever was reported in only eleven instances last month, as against thirty-three in the previous month, and thirteen in January, 1911.

Eighty-three cases of tuberculosis were reported in Toronto last month, as against forty-five the previous month. Dr. Hastings, City Medical Health Officer, attributes the large increase to the fact that tuberculosis cases are now being reported much better than a month or two ago, not to an actual increase in the number of cases, as the figures would indicate. Special nurses employed by the department are searching out tuberculosis cases, and many physicians are acting on the Medical Health Officer's advice and sending in reports.

The coming back to work at night of members of an office staff probably saved London from another serious fire recently. Shortly after 9 o'clock one of the bookkeepers of the London Foundry Company, on Thames Street, detected smoke. The fire was found in the blacksmith shop, and here the firemen, after two hours' work, were able to confine it, with the result that the loss will not be more than a few hundred dollars.



Throughout Ontario the local Boards of Health will give place to an experienced medical officer. The province for this purpose will be divided into several districts.

Dr. John Caven has been spending some time in Louisiana, near New Orleans. His health is reported as much improved.

South Ontario and West Durham Medical Association elected the following officers:—Hon. President, Dr. J. T. Fotheringham, Toronto; President, Dr. D. Farncomb, Newcastle; Vice-President, Dr. W. Beith, Bowmanville; Secretary-Treasurer, Dr. J. F. Finigan, Oshawa; Executive Committee, Dr. R. Belt, Oshawa; Dr. Proctor, Whitby, and Dr. McCullough, Orono.

A party by the name of McDonald was bitten by a rabid dog in Fort William. Mr. J. E. Swinburne, a lawyer, and Dr. Roy Parkhurst, both of the same place, were bitten by a rabid dog and came to Toronto for treatment.

The deaths in Toronto from contagious diseases were:—January, 1912, smallpox 0, scarlet fever 8, diphtheria 25, measles 2, whooping cough 3, typhoid 3, tuberculosis 46, as compared with January, 1911, smallpox 0, scarlet fever 21, diphtheria 14, measles 0, whooping cough 0, typhoid 5, tuberculosis 18.

The local Council of Women for Toronto are urging that some adequate provision be made for the care of feeble-minded women. In this class 53 illegitimate children were born at the Haven during the past year.

An active movement has been started for the purpose of securing a hospital for the east end of the City of Toronto. It is proposed to continue the present General Hospital after the new General Hospital has been opened.

Mr. Justice Middleton gave out judgment a few days ago to the effect that Toronto may retain its site on Bathurst Street in York Township which was purchased as a site for the Isolation Hospital. The Township of York has, however, refused its consent to the erection of the buildings. It would seem that the victory of the city may be barren of any good, as there does not appear to be any way of compelling the township to grant its consent.

Miss G. M. Dickson, lady superintendent of the Toronto Free Hospital for Consumptives, has been visiting institutions in the United States, with the view of gaining information for the proposed hospital at Weston for tubercular children.

Dr. J. W. S. McCullough, the secretary of the Ontario Board of Health, has been investigating the outbreak of typhoid fever in Sarnia.

It appears that at the time of the visit 97 out of 99 cases had been using the town water.

Fred Johnson, a druggist, at 171 King Street, Toronto, diagnosed a case over his counter, which was practising medicine without a license. Through the Ontario Medical Council, represented by J. Walter Curry, K.C., he appeared in the Police Court, pleaded guilty and was fined \$30 and costs.

Dr. A. McKay, of Woodstock, was elected president of the Oxford Medical Association held at Ingersoll on 27th January. Other officers elected were:—Vice-President, Dr. McGougan, Thamesford; Secretary, Dr. Brodie, Woodstock; Executive Committee, Drs. Ruttan, McKay, A. McLay, of Woodstock, and Dr. McDonald, of Ingersoll.

The annual meeting of the Hamilton Health Association was held on 22nd January in the Board of Trade rooms. The reports presented were highly satisfactory and showed that the institution is doing an excellent work. When the population of the city was 50,000 the deaths from consumption numbered 87 a year. Now that the population is 80,000, the rate is down to 64. The expenses last year amounted to \$25,728, and the per diem cost per patient was ninety-four cents, which it is claimed is the lowest of any similar institution in the country. The work of the dispensary had been very successful, 764 patients having been treated. The report of the medical superintendent showed that during the life of the sanitarium 559 patients had been treated, of which 138 had been entered last year. The percentage of cures was 44. The old officials and directors were re-elected.

The Royal College of Physicians, London, has admitted William Ecclestone and R. E. Hurst, Toronto, as new members.

At a meeting of the trustees of the Toronto General Hospital on February 7th Messrs. D. A. Dunlap, R. J. Christie, and J. L. Englehart were elected honorary governors of the hospital.

Hon. W. T. White, Minister of Finance, has resigned his seat on the Toronto General Hospital Board as representative of Toronto after nearly four years of service. He will be succeeded by Sir Edmund Osler.

The Daughters of the Empire in Picton, Ontario, have raised \$1,500 towards a county hospital.

It is rumored that the asylum, which has been so long located on Queen Street, Toronto, is to be removed to a large farm of over 600 acres, near Whitby, with a good lake frontage.

The late John Helm, of Port Hope, has left \$100,000 for a hospital for the Counties of Durham and Northumberland. These counties must

erect and equip the hospital, after which the bequest will be handed over. If the offer is not accepted the money is to be divided among Toronto institutions.

Dr. G. A. Bingham, Toronto, brought an action against Louis Goodman to recover fees for attendance upon Mr. Goodman's child. Mr. Goodman said that the attendance was to be free, and so Judge Morson ruled out the bill. This is an easy way of paying bills.

A small fire in the Hospital for Incurables, 150 Dunn Avenue, Toronto, caused considerable excitement at that institution about 11 o'clock on the morning of 19th February. The blaze was discovered in some waste paper at the rear of the building, and the prompt arrival of the Cowan Avenue reels in response to a phone call prevented a fire which might have had disastrous results. The damage was very small.

Local sanitarium for the treatment of tubercular patients is the idea now in the minds of those taking an interest in the treatment and prevention of tuberculosis. It is claimed that much better results can in this way be secured than by a few large sanitarium far apart from each other. It is hoped the Commission of Conservation will co-operate in this movement.

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### QUEBEC.

Four new cases of smallpox were recently reported in Montreal. At the same time there were sixteen cases under treatment.

A ruling that infected vaccine, administered by one of the civic vaccinators, was responsible for the condition of inertia produced in the arm of the vaccinated child, a jury recently condemned the City of Montreal to pay a total of \$6,000 damages, \$2,000 to the boy's mother for medical expenses, treatment, etc., and \$4,000 to the youngster, as indemnity for injury and disability.

As the result of an investigation that has been quietly carried on by officers of the Provincial Board of Health for Quebec, under the direction of Dr. Elzear Pelletier, secretary, and Dr. Beaudry, chief inspector, startling revelations have been brought to light, showing the careless disregard with which the municipalities in outlying districts in various parts of the province treat smallpox outbreaks. Often no precautions are taken to isolate the sufferer, and disinfection of patients and belongings is practically unknown. As a consequence the disease spreads rapidly, and scores of cases have been located by the provincial inspectors.

Letters from residents of St. Anne de Laparade and Ste. Casimir de Portneuf, two small towns between Quebec and Three Rivers, brought inspectors from the Provincial Board of Health hurrying to those municipalities. The letters aver that smallpox is raging, and that the local authorities are taking no precautions to stay the spread of the disease. The local visiting inspectors have found very many cases, and report that there is great disregard of the most essential precautions. The college there has been placed under quarantine, as cases of the disease were found there. During the past month no less than 56 municipalities throughout the province have made open declarations of smallpox, while there are doubtless others that have been hiding the presence of the disease.

Black smallpox and hemorrhagic smallpox have broken out in the Province of Quebec. The epidemic of mild cases which was allowed to take its own course practically has been followed by the virulent disease, which swept the province 20 years ago, causing 6,000 deaths in Montreal alone in one year. The outbreak is at present confined to the Quebec district.

Medical reciprocity between the different provinces of Canada was approved a few days ago by the Legislature of the Legislative Assembly of the Province of Quebec. It is the application of the Roddick Federal Bill to the Province of Quebec. It will be remembered that the Roddick Bill is not to come into force until the Legislatures of all the provinces have enacted legislation accepting its provisions. The new provincial law will provide that any person coming from any other province, and duly registering in the Canadian Medical Register, that shall be established in pursuance of the Roddick Bill, shall be entitled to a license to practise medicine, surgery and obstetrics in the Province of Quebec.

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#### WESTERN PROVINCES.

Fire broke out before daylight on 2nd February in one of the lower wards in the new Children's Hospital on Main Street, Winnipeg, directly beneath where twenty little patients were sleeping, and furnished a demonstration of pluck and presence of mind on the part of the nurses in charge. The fire gained such headway that before it was got under control three thousand dollars' damage was done. But while the fire was being fought, the nursing staff quickly and without flurry wrapped up the little ones in blankets, it being more than twenty below zero, and carried all to safety. The fire started at 5.45 o'clock, and was under control in an hour.

Castor, Alberta, has erected a new hospital. It is under the charge of the Sisters of Mercy. The cost was \$25,000.

Dr. Walter S. Verrall, formerly resident surgeon at the Toronto Orthopedic Hospital, has located in Phoenix, B.C.

Lord Stratheona has given \$2,500 to the Canadian Public Health Association.

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### MARITIME PROVINCES.

The Nova Scotia Hospital for the Insane is erecting a new building. It can accommodate about 70 patients. This addition will cost \$80,000.

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### FROM ABROAD.

At the recent meeting of the German Congress of Neurologists, held at Frankfort, the use of tobacco was discussed at length. It was laid down that the smoke should be held in the mouth as short a time as possible, the cigar and cigarette holders should be used to cool the smoke, that nicotine soon precipitates when the smoke cools, that cotton wool should be placed in the holder, and that a small quantity of perchloride of iron should be added to it. The speakers were all of the opinion that nicotine causes arterio-sclerosis.

There are many in Canada who will have learned with pleasure of the recovery of Sir Charles Tupper, M.D., from his recent illness in England, where he is now living. His services to this country were many and great. He did much to unite the profession as he did to unite the provinces.

Professor Frederick Cheever Shalluck has resigned his chair as Jackson professor of clinical medicine in Harvard Medical School, to take effect 1st September, 1912.

Dr. Sun Yat Sen, who has figured so prominently in the Chinese troubles now going on, studied medicine under Dr. Kerr, a medical missionary. He is the first graduate from Hongkong College of Medicine. He afterwards studied in Edinburgh and obtained a degree in medicine there. He is now 44 years of age, and for ten years has devoted himself to reforms in his country.

Mr. John Thompson, of Aberdeen, left by will \$10,000 to found some lectures to be given annually in that city on "Information to young persons on the health and growth of the body and the evils of intemperance."

Dr. Algernon Coolidge died at his residence in Boston on January 4th, in his 82nd year. He was born in Boston in 1830, being a great-grandson of Thomas Jefferson on the spindle side, and received his preliminary education abroad. He graduated from Harvard Medical School in 1853, took part in the Civil War, and was a member of the Sanitary Commission, subsequently becoming surgeon to the Chesapeake Hospital, the Portsmouth Grove, R. I., Hospital, and the Massachusetts General Hospital, whence he resigned in 1873. He is survived by a widow and several children. He received the degree of A. M. from Harvard in 1869.

The Owen Bill at Washington proposes to unite in one department the public health and marine service of the Treasury Department, the Bureau of Census and Vital Statistics of the Department of Commerce, and the Bureau of Chemistry of the Agricultural Department. It is urged that this would secure greater efficiency in the promotion of the health of the people.

The Western Reserve University of Cleveland has secured an endowment of \$1,000,000 towards medical education. There were a number of donors. Messrs. Rockefeller and Hanna gave each \$250,000.

Romaine Pierson, publisher of the *Practical Druggist*, of New York, has purchased from Dr. Alfred Kimball Hills the *Medical Times*, a publication just closing its fortieth year. Dr. H. S. Baketel will be the editor-in-chief. The address for mailing to will be 108 Fulton Street, New York.

Odilon Marc Lannelongue, of Paris, died recently. He was one of the most distinguished of the surgeons of France. He was born in 1840. He held many important appointments in Paris, and was an industrious and careful contributor to the literature of surgical subjects.

Sir Charles O'Grady Gubbins, M.D., a Senator of South Africa, died last December in Newcastle, Natal. He was born in Ireland in 1855, but spent his working years in South Africa, where he took a deep interest in the political development of the country. He was a capable surgeon and rendered excellent service to the army.

Prof. E. A. Schafer, M.D., F.R.S., has been awarded the de Lyon prize, worth £120, by the Academy of Science of the Royal Institute of Bologna, for his work on the ductless glands.

Mr. Edgar Jones, M.R.C.S., Eng., and J. P. of Great Burstead, in Sussex, recently celebrated his 103rd birthday.

Prof. Robert Soundly has resigned his position as senior honorary physician to the General Hospital, Birmingham. He was tendered a very cordial vote of recognition of his services for the past 27 years.

Dr. W. H. Harvey, late of Toronto, and for some time at Cambridge, has received one of the Beit Memorial Fellowships for medical research.

There is a growing feeling among the younger members of the medical profession in New York that they should advertise. It is contended that the older practitioners are advertised by means of appointments and prominent cases they may be called upon to attend. The younger members of the profession are shut out of such means of becoming known.

Dr. Bernard Fränkel, of Berlin, a distinguished laryngologist died a short time ago in that city. He had attained a very high position in nose and throat work.

Mrs. Moyer Libman has given \$100,000 to Mount Sinai Hospital, of New York.

Dr. G. Armeur Hansen, the biologist, and discoverer of the bacillus of leprosy, is dead. He was the head of the Leper Hospital at Bergen, Norway.

By a practically unanimous vote the members of the Detroit Pastors' Union passed a resolution pledging themselves not to marry the guilty party to a divorce in which adultery was alleged, to investigate the cases of persons desiring to be married, and not to marry the physically or mentally unfit.

Dr. Nelson Walsh, formerly Conservative member for Huntington, P. Q., is in the running for the office of Veterinary-General of the Dominion. This is the post which Dr. Rutherford is giving up, having lately repeated his application of some months ago to be allowed to retire. The chances of Dr. Walsh are said to be good. He is a McGill man and has been in practice for twenty-two years.

Word comes that at the King Institute in Madras the discovery has been definitely made and confirmed that kala-azar, or black fever, is caused by a variety of bedbug. It is called in India dum-dum fever. It has been regarded as a peculiarly fatal form of ague. The death rate is sometimes almost 100 per cent. It was epidemic in Assam a few years ago and destroyed almost the entire population of many villages.

There is very much dissatisfaction in the ranks of the medical profession of Great Britain regarding the terms of the National Insurance Act. There is no doubt about it that the medical profession has not been well treated in this important legislation. There is a strong feeling throughout the profession to take no part in carrying out the provisions of the Act until the reasonable demands of the medical men have been met.

The British Medical Association will meet this year on 19th, 20th, 21st, 22nd, 23rd, 25th, and 26th of July in Liverpool, under the Presidency of Sir James Barr. An excellent programme of addresses and papers is being arranged. It is expected the meeting will be largely attended.

The hospitals in Australia are in a bad way. The rich have not been so generous of late years, and the result is that the hospitals have much difficulty in financing their way. This has led to a movement for the nationalizing of the hospitals. This, again, the medical profession fears would lead to poor work in the matter of attendance. The contention is put forth that the real remedy is for the wealthy once more to come to the aid of the hospitals.

Dr. Sajous has been appointed to the position of supervising editor of the New York Medical Journal.

Professor Odilon Marc Lannelongue, of Paris, the celebrated surgeon, died 20th December, 1911. He was born on December 4, 1840, at Castora-Verduzan, in the department of the Gers.

Dr. Jelley, who practises in Hackney and its district, is said to have a clientele of 80,000 persons. He has a large district to himself.

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## OBITUARY

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### J. M. HAYMAN, M.D., C.M.

Word was received by the McGill authorities recently of the death in Rhodesia of Dr. J. M. Hayman, who took his degree of comparative medicine at that institution. At the time of his death he was in charge of a survey for the Chartered Company of Rhodesia, surveying lands suitable for settlement, cotton-growing and rubber. The deceased had taken a course at the Guelph Agricultural College as well as a course in medicine at McGill, and had won his diploma for agricultural science at Cambridge. He was a son of Canon Hayman, rector of Oldrington, Eng., one-time headmaster of Rugby.

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### ROBERT ASTLEY CORBETT, M.D.

Dr. Robert Astley Corbett, of Port Hope, died at Ocean Park, Cal., where he was sojourning. He had a large practice and was president



of the Port Hope Electric Light and Power Company. He graduated in 1860 from the University of Victoria. In the same year he obtained the provincial license, and became a member of the College of Physicians and Surgeons of Ontario in 1866. He had been at the time of his death fifty-two years in practice.

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C. H. BRITTON, M.D.

The death of Dr. C. H. Britton occurred 31st January at his residence on Danforth Avenue, Toronto, after an illness of over a year's duration. Dr. Britton was a graduate of Toronto Medical School, and had practised in Toronto for 25 years. He was an elder and a prominent worker in Emmanuel Presbyterian Church. The funeral was conducted by the Rev. H. Rogers.

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J. A. ANMONT, M.D.

Dr. Anmont died in Montreal in the early part of December last. He was born in Oswego, but located in Montreal, where he practised his profession. He was in his 42nd year.

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F. A. COX, M.D.

Dr. Cox was the son of Dr. Cox, of Upper Stewiache. He graduated from Dalhousie University, having studied medicine at the Halifax Medical College. He was carrying on his practice along with his father at the time of his death.

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WALTER TAYLOR, M.D.

Dr. Walter Taylor died at the age of 41 in St. Catharines. He was born in Dunnville, graduated in Toronto in 1899, and received his F.R.C.S. degree in Edinburgh.

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## BOOK REVIEWS

## GROWTH OF BONE.

**The Growth of Bone—Observations of Osteogenesis. An Experimental Enquiry into the Development and Reproduction of Diaphyseal Bone.** By Sir William Macewen, F.R.S., Glasgow. James Maclehose & Sons, Publishers to the University, 1812. 10s net.

Sir William Macewen has done the medical profession a distinct service in giving it the full benefit of his long and careful investigations on the growth of bone. Sir William opens his book by stating that "in the foetal shaft diaphyseal ossification proceeds through cartilage." The nuclei of the cartilage cells divide, become osteoblasts, and the cartilage disappears. Diaphyseal cartilage would seem to be a phase of bone formation. In the adult bone regeneration is through a transition stage of cartilage or by division of the bone cells into osteoblasts. When the conditions are favorable osteoblasts are formed directly from the bone cells; where the conditions are not favorable the formation of bone is through cartilage and slower. When cartilage exists the cell may free itself from its envelope and rapidly proliferate. The nuclei thus set free are like the neighboring osteoblasts, and play the same rôle. The osteoblast is the free form of the bone cell.

Cartilage exists in the epiphyseal plates. There is freedom from pressure at the epiphyseal lines, and the osteoblasts have an opportunity to grow. "The periosteum keeps it within the confines of the shaft." When the cartilage at the epiphyseal plates has disappeared proliferation is retarded or disappears. The conditions regarding increase of osseous structure at the epiphysis and the diaphysis become the same. If a portion of the shaft of a bone be removed the ends will form new bone tissue and fill in the space. If the epiphyseal cartilage be removed the length is not solely limited to the epiphyseal cartilage.

Bone is living tissue and, as such, is undergoing constant change as absorption and repair. When a bone is stimulated the cells in the interior escape into the Haversian canals and find their way to the surface of the bone under the periosteum, where they find room to expand, and proliferate. Pressure on bone causes its absorption to become much more rapid than when there is no such pressure.

On the influence of the periosteum in the formation of bone the author takes the view that it is very little if at all present. There

are scarcely any or no osteoblasts in the periosteum. This structure when removed and transplanted does not reproduce bone. The periosteum is of value in carrying vessels to the bone and aiding in its nourishment. The real cause of regeneration of the bone is the osteoblasts that are brought to the surface of the bone from within the bone and find space to grow and proliferate in the loose subperiosteal tissue. When bone is stripped of its periosteum osteoblasts will appear in the injured area. These osteoblasts will infiltrate into the loose tissue of the adjacent muscle. All this goes to prove the minor part played by the periosteum in the formation of bone. When periosteum finds its way between separated portions of bone it prevents bony union and fibrous union results. The presence of the periosteum limits the growth and spread of the osteoblasts. In the case of a fracture, with separation of the periosteum freely, the callus will form abundantly, and invade muscle, tendon, or other tissue.

If a ring of periosteum of an inch in extent be removed from a bone and the uncovered bone be encircled with a silver ring, in time the ring will be embedded in new bone. This proves that the bone without its periosteum can form bone. This ring experiment, with the periosteum on the bone, was formerly thought to prove that the periosteum formed the bone. The foregoing sets this view aside.

Small portions of bone without periosteum will grow in muscle and tendon. This shows that the bone is regenerated from osteoblasts in the bone itself. In the ends of bones the growth is from the cartilage, with its osteoblastic cells. It would thus appear that the growth in the diaphysis and epiphysis is of the same nature. In young animals, with a plentiful supply of cartilage in the bones, the formation of osteoblasts is free and rapid.

The illustrations are numerous and excellent. There are 61 full-page plates. We can most heartily recommend this book as the outcome of much patient study, clinical observation, and experimentation. The author merits high praise for his work on this subject.

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#### WELLCOME TROPICAL RESEARCH.

Second Review of Some of the Recent Advances in Tropical Medicine, Hygiene and Tropical Veterinary Science. Being a supplement to the Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum. By Andrew Balfour, M.D., B.Sc., F.R.C.P., Edin., D.P.H., Camb., Director; Captain R. G. Archibald, M.B., R.A.M.C., Pathologist and Assistant Bacteriologist; and Captain W. R. O'Farrell, L.R.C.P. and S.I., R.A.M.C. Published for Department of Education, Soudan Government, Khartoum, by Bailliere, Tindall & Cox, 8 Henrietta Street, London, 1911.

This is a large volume, packed full of information on the etiology, symptomatology, and treatment of tropical diseases. There is a wealth of reference to the recent literature on tropical diseases that at once appeals to the imagination of the reader as showing the care that has been given to the preparation of this volume. The authors have gone through the diseases in alphabetical order from Amoebic dysentery to yellow fever. Every page of this volume is full of information. The very latest work on these diseases is found here. Though most of the diseases mentioned are rarely met with in this country, still it would well repay anyone to give some attention to this report. It should find a place in public libraries for the use of those who might have occasion to consult its pages.

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#### DIETARY LAWS.

Jewish Dietary Laws from a Scientific Standpoint. A study by N. E. Aronstam, M.D., Detroit, Mich. Included in the exhibit of the Historical Section of the International Exhibition of Hygiene, held at Dresden, Germany, 1911. New York: Block Publishing Company, 1912. Price, 25 cents.

This is an interesting pamphlet on the "Jewish Dietary Laws." It gives the foods that are interdicted according to these laws and the reasons why they are placed on the forbidden list. Dr. Aronstam has given an intelligent study to this subject, and the outcome of it is that he has been able to state the Jewish usages clearly, though in a brief form. There is enough matter in the pamphlet to repay one well for a study of its pages.

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#### WELLCOME REPORT.

Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum. Vol. A, Medical. Dr. Andrew Balfour, Director Department of Education, Soudan Government. Balliere, Tindall & Cox, 8 Henrietta Street, London, 1911. Also Vol. B, General, by the same author and publishers.

Volume A takes up the medical questions and discusses many of the tropical diseases, as Sleeping Sickness, Animal Trypanosomiasts, Human Spirochaetosis, Kala-azar, Fevers of the Sudan, Diphtheria in the Tropics, Tropical Sanitation, Water Supply, Human Botryomycosis, Coccidiosis of the Intestines, and some other interesting subjects and diseases.

Volume B contains a report from the Chemical Laboratory on some drugs and water supplies, analysis of arid soils, on gums and their

chemistry, report on insects, report on birds, report on mining, on some of the cults and the divine kings, on tribal customs, municipal engineering problems, and many other questions of much importance.

These volumes are got up in splendid form and superbly illustrated. They contain a vast amount of information on the diseases of the tropics and the sanitary problems of these regions. Such information is of the utmost importance and will go a long way to enable authorities to regulate conditions throughout the Sudan and Egypt, etc., so as to render these countries sanitary and safe to the British subject. The Wellcome Laboratories are doing a great work, and we congratulate all concerned in these excellent reports.

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#### DIRECT LARYNGOSCOPY, ETC.

Direct Laryngoscopy, Monchoscopy, Oesophagoscopy. By Dr. W. Brunnings. Translated and Edited by W. G. Howarth, M.A., M.B., B.C., Camb., F.R.C.S., Eng., Surgeon in Charge of the Throat Department at St. Thomas's Hospital and the Queen's Hospital for Children; Surgeon Laryngologist to the City of London Hospital for Diseases of the Chest, etc., etc. London: Bailliere, Tindall & Cox. Price, 15s net.

This somewhat new phase in physical diagnosis is well written up and very fully illustrated. The author has devoted much time to the study and practice of this method, and gives the medical profession the benefit of his researches. For the specialist and the hospital this is a valuable addition to the methods already in use. The book goes into every possible detail with regard to the instruments and the manner in which they should be employed. This is very essential, as it is comparatively only a few who may have had the opportunity of observing an experienced person at work. Dr. Howarth has given the reader a free and readable translation. The publishers have done their part well in every respect. The book merits unstinted recommendation.

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#### GENITO-URINARY DISEASES.

A Compend of Genito-Urinary Diseases and Syphilis, including their Treatment and Surgery. By Charles S. Hersch, M.D., formerly Assistant in the Genito-Urinary Surgical Department, Jefferson Medical College Hospital; Consulting Physician Social Service Hospital and Juvenile Protective Association, Philadelphia. Second Edition, with 74 Illustrations. Philadelphia: P. Blakiston's, Son & Co., 1012 Walnut Street, 1912. Price, \$1.

This volume is one of that well-known series of books, the Quiz-Compend. These volumes must have been popular, for they have had a wide sale and have found a place in many a library. The facts in this

volume are briefly but clearly set forth. The author is entitled to his full share of praise for his efforts to bring so much useful matter within such a small compass. One is pleased to note with what clearness the author is able to state his views and yet maintain the condensed form of description. "Brevity is the soul of wit," said Polonius. The printing, binding, and illustrations are all up to the expectations of the most exacting. We can speak confidently of the merits of this little volume.

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#### W. B. SAUNDERS' NEW BOOKS.

This firm has just issued the following:—Davis' Operative Obstetrics, Church and Peterson on Nervous and Mental Diseases, Schomberg on Diseases of the Skin, and Musser and Kelly's Therapeutics, third volume.

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### MISCELLANEOUS MEDICAL NEWS

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#### DR. ORR AT VARSITY.

Dr. J. Orlando Orr should make an excellent member of the Board of Governors of the University of Toronto. He has been appointed by the Government to replace Hon. W. T. White, who became ineligible to serve on an educational board when he joined the Borden Ministry.

Dr. Orr should do great things for Varsity. He will inspire the Governors with the enthusiasm of the showman. "Now, gentlemen," he will say, "the fact that we have a university in this city—should no longer be kept a secret. I move that this bunch gets a hustle on."

And he will have the Governors hustling before they know it. He possesses so lively an energy that even a professor could not associate with him without becoming infected with it, and we may expect to see the university take on an activity never seen there before. The professors will begin saying things as they do at Chicago, and when it is announced that one of them is going to speak, people will open their windows to listen. What has been needed is a live wire, and Dr. Orr is it. Next fall at the Canadian National Exhibition the university should have a building in which the people of Ontario could be shown what higher learning is doing for them. There could be on view a plucked freshman and one full-feathered, and a process display illustrating the means whereby a green and uncouth youth is, in four short years, transformed into the graceful and brilliant graduate. But leave it to Dr. Orr. He puts life into everything he touches.

## MR. COSMAN'S GIFTS TO CHARITY.

James Cosman, a merchant of Meteghan River, Digby, N.S., died some time ago and left an estate of about \$500,000. After certain comparatively small legacies were paid the will provided that the capital should be invested and the income allowed to accumulate for 100 years. At the end of that time the accumulated funds, principal and interest, are to be divided, one-half going to charities in Ireland and the other half to build a hospital in every county in Nova Scotia. The will provided that the Archbishop of Halifax should appoint three trustees of the estate. His Grace has named Mayor J. A. Chisholm, of Halifax, Judge Wallace, and T. W. Murphy.

Cosman was a widower and had not children.

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## NEEDLESS LOSS OF LIFE.

Mr. G. T. Somers, in his address at the annual meeting of the Board of Trade for Toronto, said:—

“I would ask the hearty co-operation of the board to encourage legislation seeking to influence corporations and individuals to exercise far greater respect for life and property. A recent article in the *Monetary Times* pointed out that in four years 36,710 people have been killed or injured in Canada in accidents on steam and electric railways, at fires, and by industrial accidents. This is at the rate of 9,177 per annum, in other words, every day during that period 25 persons have been killed or injured. I think the board can help to minimize this appalling record, so far as Toronto is concerned, by assisting to improve traffic rules, automobile speed regulations, the abolition of level street railway crossings in congested areas, and in many other ways easily apparent.”

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## OFFICERS OF THE CANADIAN HEALTH ASSOCIATION.

President, Dr. C. A. Hodgette, of Ottawa; Vice-Presidents, Dr. M. M. Seymour, of Regina; Dr. J. W. S. McCullough, of Toronto; Dr. E. D. Fisher, of Fredericton; General Secretary, Dr. Major Lorne Drum, of Ottawa; Treasurer, Dr. G. D. Porter, of Toronto. Toronto was chosen as the place of meeting for 1912.

## USE OF ALCOHOL IN FRANCE.

“Despite hygienic and other agitation for temperance in France, statistics show that the consumption of alcohol increases steadily. In 1910 it was 110,000 greater than it was in 1907. In four years there was an increase of ten per cent. The actual consumption in 1910 was about 37,000,000 gallons. The actual consumption last year was 3.59 litres of pure alcohol an inhabitant, in place of 3.46 in 1909, and 3.31 in 1907. Comparing the cities with the rural district, it is found the average consumption an inhabitant in the former was 4.96, against 2.97 for the countryman.”

## CANADIAN HOSPITAL ASSOCIATION.

The next meeting of the Canadian Hospital Association will be held in the Parliament Buildings, Toronto, on Thursday, Friday and Saturday, April 4th, 5th and 6th.

Dr. H. A. Boyce, superintendent of the General Hospital, Kingston, is president, and will deliver the annual address.

## THURSDAY, APRIL 4TH, 8 P.M.

The meeting on Thursday evening will be open to the public, and addressed by Mr. Monro Greer, representing the General Hospital, Niagara Falls, Ontario; Dr. Helen MacMurchy, of Toronto, and Dr. Edward Stevens, Hospital Architect and Specialist, of Boston, Mass. Dr. MacMurchy will deal with the subject, “The Relation of the Public to the Hospital.” Mr. Stevens will give an illustrated address on “What the Home Can Learn from the Hospital in Regard to Construction.”

## GOOD FRIDAY.

“A Round Table Conference and Question Drawer” will be conducted by Dr. Bruce Smith, Inspector of Hospitals for Ontario.

A special exhibit of hospital apparatus and devices will be made, the uses of which will be explained by Dr. W. J. Dobbie, physician-in-chief of the Weston Sanatorium for Consumptives.

Mr. W. W. Kenny, superintendent of the Royal Victoria Hospital, Halifax, will present a paper on “Hospital Maintenance.”

Dr. E. H. Young, assistant superintendent of the Rockwood Hospital for Insane, Kingston, will give an address on “The Hospitalization of Asylums.”

“European and American Hospitals Contrasted” is the topic of a paper by Dr. J. N. E. Brown.



Mr. H. E. Webster, superintendent of the Royal Victoria Hospital, Montreal, will give a paper on "The Construction of Small Hospitals."

Mr. J. S. Parke, general manager of the General Hospital, Montreal, will present a paper on "Hospital Annual Reports."

Dr. James Third, professor of medicine in Queen's University, will deal with the question, "The Hospital from the Physician's Standpoint."

Dr. Theodore MacLure, superintendent of the Solway Hospital, Michigan, will read a paper, "Problems in the Management of Small Hospitals."

Dr. C. K. Clarke and other prominent hospital workers will also present paper, among which will be one on "Hospital Housekeeping."

SATURDAY MORNING.

The leading feature of the morning session will be an address by Miss Charlotte Aikens, one of the foremost hospital workers on the continent. The subject of her address will be "Hospital Publicity Methods, Wise and Unwise."

Hospital trustees and superintendents are eligible for membership.

The question of amalgamation with the Association of Training School Superintendents will be discussed.

Members and all other persons interested in hospital work wishing to attend will be able to take advantage of the Easter reduced railway rates; and a large attendance is looked for from all parts of the Dominion.

A number of hospital boards are arranging to pay the railway expenses of their superintendents in order to have their hospitals represented at the meeting.

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#### SIXTEEN SANITARIA FOR NEWFOUNDLAND.

The princely offer to erect and thoroughly equip sixteen tuberculosis sanitarium as a gift to the Government of Newfoundland has been made by Messrs. Reid Bros. and the Reid Newfoundland Company, heirs of the late Sir Robert Reid, and Premier Sir E. P. Morris has accepted the offer. The benefaction will comprise a large sanitarium, costing \$50,000 to build and equip, to be erected at St. John's, and one smaller institution, complete, in each of the sixteen outport electoral districts. The island will thus be encircled and hubbed by consumptive hospitals as a safeguard to the public health in arresting the ravages of a plague that is proving more deadly in Newfoundland than any

other disease. The gift, all told, will amount to over \$100,000. Its timeliness is expressed in a letter of acceptance, which the Premier addressed to the chief donor, Mr. W. D. Reid, president of the Reid Newfoundland Company.

When the Morris Government took office, a little over two years ago, one of the first steps was to appoint a Commission of Public Health, consisting of leading physicians and others, and to appropriate to this body the sum of \$4,000 a year, to be expended as the judgment of the commissioners suggested, towards stamping out the plague. Latterly, however, the commission found the work increasing too rapidly for them to adequately cope with, and the commissioners were about to resign.

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#### DEATH UNDER CHRISTIAN SCIENCE TREATMENT.

The coroner's inquest in the case of Kathryn Mosbach, the five-year-old child who died from diphtheria, under Christian Science treatment, at Tremont, in the Bronx, on Nov. 30, was not held until Jan. 5 because a sister of hers had contracted the disease and the family residence was quarantined by the Health Department. The jury, which was composed entirely of Bronx business men, found that the child's death resulted from failure to call in a licensed physician, but that the mother, who had been held on a charge of homicide, was not wilfully guilty, inasmuch as she was believed to be ignorant of the serious nature of the child's illness. The verdict went on to say: "We recommend that the district attorney be requested to press with all diligence the cases against the Christian Science practitioners now pending in the courts, and if the laws are not adequate to reach persons so practising, that the Legislature of the State be appealed to to enact such laws as will protect the community of this State and prevent the recurrence of similar cases."—*Boston Med. and Surg. Jour.*, Jan. 11.

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#### COST OF THE CONTROL OF TUBERCULOSIS.

According to a statement issued on Jan. 1 by the National Association for the Study and Prevention of Tuberculosis, a total sum of \$14,500,000 was spent in the United States during the year 1911 in the effort to control and eradicate tuberculosis. Of this, \$11,800,000 was spent for the care of consumptives in hospitals and sanatoria, and the remainder for anti-tuberculosis organizations, dispensaries, boards of health and other agencies.

## DEATH RATE FOR 1911 IN THE UNITED STATES.

Preliminary mortality statistics, issued on Jan. 1 by the United States Census Bureau, indicate a death rate in the year 1911 of only 14.4 per 1,000 living in the registration area, as compared with 15 per 1,000 in 1910. The area from which complete returns are now received includes 22 states and 45 cities outside these states, representing a total population of 57,237,697. Every one of the eight cities of the United States having a population above 500,000 shows a lower death rate in 1911 than in 1910.

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## McKINLEY HOSPITAL SEALS.

The William McKinley Memorial Hospital League, which is planning to erect a \$7,000,000 hospital in New York in memory of President McKinley, announces that the McKinley Memorial Hospital seals will be put on sale on January 29th. These seals will cost one cent each, and will be put on letters, packages, etc., after the fashion of the Red Cross Christmas seals.

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## TUBERCULOSIS AND WHAT THE ONTARIO GOVERNMENT HAS DONE.

That the death rate from tuberculosis was lower in Ontario than in England, United States, Germany, Norway, Ireland, Servia and Austria, was stated by Hon. W. J. Hanna in the Legislature recently, when he replied to enquiries of Mr. J. McQueen, North Wentworth, concerning the Government's action towards preventing the spread of tuberculosis in the province.

Not only did the Provincial Secretary's reply show that the Government had responded to appeals from various localities, but that the efforts put forward had resulted in a decrease in the annual death toll since 1905.

Mr. Hanna stated that petitions had been received from twenty-six municipal councils and four cities.

The grants made by the Ontario Government for the past ten years to assist local sanitarium in caring for tubercular patients, and to provide facilities for their treatment were:—For the five years, 1900 to 1905, \$20,438.60; for the five years, from 1905 to 1911, \$160,073.05; total, \$180,511.65. In addition, the Government in 1907 appropriated the sum of \$1,000 for the purpose of a tuberculosis exhibit. The value of this

appeared to be so great that in 1908 the amount was increased to \$4,000, which has been continued each succeeding year. In 1911 the Government further appropriated the sum of \$1,000 for a public health exhibit, which is shown in connection with the tuberculosis exhibit, and this appropriation was renewed for the years 1912 and 1913.

On account of the efforts made to educate the people of Ontario regarding the nature of tuberculosis and the successful means which may be adopted for its prevention, the death rate in Ontario is year by year growing less. The following figures, which were gathered with every effort to secure accuracy, were presented at the last International Tuberculosis Exhibition. They show the proportion of deaths for every 100,000 of population annually:—Austria, 350; Servia, 275; Ireland, 215; Norway, 276; Germany, 185; United States, 167; England, 121; Ontario, 102.

The death rate from tuberculosis in Ontario in the year 1905 was 120 per 100,000 inhabitants. In Ontario last year's record was considerably the best of any year in the past.

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#### A CHALLENGE RE PASTEURIZED MILK.

27 West 72nd Street,  
New York, Jan. 31, 1912.

To the Editor,—

In the efforts that are being made to protect the babies from milk-borne diseases, such as tuberculosis, typhoid and scarlet fevers, diphtheria, sore throat and summer complaint, the well-considered policy of the Public Health Service and of the foremost health officers of the country is seriously hindered by attacks based upon ignorance.

The statement is repeated with assurance, without proof, that the use of pasteurized milk causes rickets, scurvy and anaemia. People are scared by these outcries into exposing their babies to infectious diseases, and the lives of helpless little ones are forfeited.

It does not undo the harm by showing that the Public Health Service, after exhaustive investigation, declared that "Pasteurization prevents much sickness and saves many lives," and proved that the process does not impair the taste, digestibility or nutritive qualities of the milk.

It does not protect the babies from reckless misrepresentation for me to point out that in feeding 25,000 babies with pasteurized milk through my infant milk depots in New York City alone, never has one case of scurvy or rickets developed. Nor does it still the voice of mis-

chief to cite the experience of Dr. Variot, in Paris, who fed 13,000 babies on sterilized milk without causing these diseases.

Several years ago, when a famous physician who opposes anti-toxin and vaccination, raised this cry of scurvy and rickets, I publicly challenged him to produce one case caused by pasteurized milk, and he subsided.

But the mischief of this warfare on the babies goes on, and many lives are sacrificed. If it could be known how many babies perish through their parents being misled by such statements made through recklessness or ignorance, editors would close their columns to such outbursts as they generally do to the tirades of fanatics who oppose vaccination.

In order to bring this issue to an end, I offer through you \$1,000 for any case of scurvy or rickets or anaemia caused by feeding a baby with properly pasteurized milk.

If any such case is alleged in answer to this challenge, I will leave the determination of the facts to Dr. Rupert Blue, surgeon-general; Dr. M. J. Rosenau, professor of hygiene and preventive medicine at Harvard, and Dr. John F. Anderson, director of the hygienic laboratory at Washington, or any jury that they may choose.

Very sincerely yours,

\_\_\_\_\_ NATHAN STRAUS.

#### LUNACY IN IRELAND.

The report of the Inspectors of Lunatics for 1910 shows that the number of insane persons per 100,000 of the estimated population of Ireland is 558, and that there is a total annual increase of 250—an increase, however, which is less by 78 than the average for the preceding ten years. Any increase is serious. In Ireland, where for the last five years the population is decreasing at the rate of 4,000 a year, the report shows for that time in each year an annual increase in lunacy of 5 per 100,000.

Of assigned causative factors heredity is by far the most frequent, insane heredity chiefly, and, to a much lesser degree, alcoholic. Direct abuse of alcohol ranks next to heredity, whilst the drug habit is responsible for only a very few cases.

#### MEDICAL EXPERT TESTIMONY AGAIN.

In midsummer of this year a vicious youth of seventeen gained access at night to the apartments of an old man of inoffensive habits for

the purpose of robbery. Expecting to find his victim abed, he took with him a bottle of chloroform, with the intention of deepening the unconsciousness of sleep so that he could pursue his scheme of robbery unmolested. The robber met with unexpected resistance and the room of the victim gave evidence of a desperate struggle. The old man fought hard. The bed and walls of the room were splashed with blood and the carpet was soaked. The victim was found dead by the police with finger marks on his throat, three cuts on his head; his jaw dislocated and a rag soaked in chloroform jammed down his throat.

Two medical men were found by the defence who were willing to go on the stand and testify that the old man died of natural causes and that the assault was not the cause of his death. One of these experts, described as an elderly physician by the press (*N. Y. Times*, August 31st), admitted that he had not made an autopsy in thirty years. His name is not to be found in the forthcoming "Green Book." From what depths of obscurity he was dragged by the defence does not appear in the evidence. The other physician, although not a member of the County Society, is a graduate of sixteen years' standing of a reputable institution. In the face of the evidence that the old man had three cuts on the head, a dislocated jaw and a chloroform soaked rag thrust down his throat, this "expert" testified that he was positive that death resulted naturally from myocarditis, the position of the body in death proving this to his complete satisfaction. He was also certain that a person could not die of asphyxiation and at the same time have bleeding wounds. He persisted that he would remain of this opinion even if the chloroform soaked cloth which the murderer had shoved down the victim's throat had shut off his breath.

It is not often that we are confronted with so atrocious an example of the evils of our present system of expert testimony. Medical men are unfortunately too apt to look favorably on the side which summons them to testify, but it is very seldom that they do not have at least a colorable excuse for their testimony. The evidence of these two witnesses was a joke, a sorry joke, a most humiliating joke, absolutely unique in its grim humor and grotesqueness. The old man was savagely assaulted and choked to death. Yet, after all, two medical men were found by the defence who were willing to make themselves ridiculous and disgrace the profession in the eyes of all men by insisting that the poor strangled victim of a murderous young thug died of natural causes. The mind revolts at such perversion and the blush of shame rises to the cheek of every man to whom the honor of the profession is dear. But what is to be done? Is there no remedy for such a

flagrant abuse? Are the members of the medical profession satisfied with a condition of things in which such an abuse of privilege is possible? As a profession we deserve all the rebukes which are leveled at us from the bench, all the gibes of the press, as long as we permit this state of things to continue. More. We have to clean house ourselves. The medical profession may as well make up its mind to expect no assistance from the bar or the legislature. Not that the lawyers do not recognize the evil; not that they have not, of late, at least, been willing to co-operate, but because it seems impossible under our system of jurisprudence to draft a law changing the present practice which will not be declared unconstitutional by the courts. The sooner the medical profession recognizes that the cure of this crying evil rests with it and it alone, and that it is useless to expect reform from bar or legislature, the sooner shall we be rid of the disgrace. If we continue our present attitude of helplessness and supine content we shall, as a profession, deserve the contempt of the public and get it.—*New York State Journal of Medicine*, October, 1911.

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#### CANADA'S CONSUMPTION OF WHISKEY AND CIGARS.

Canada's consumption of liquors and tobacco shows a marked increase for the past fiscal year. The per capita consumption of spirits was decimal 859 gallons, against decimal 815 gallons in 1910. That of beer was 5,434 gallons, as against 5,276 gallons; that of wine decimal 104 gallons, against decimal 097 gallons, while the tobacco used grew from 2,940 pounds per capita to 3,011 pounds. The total quantity of tobacco smoked was 18,903,322 pounds, against 17,961,279 pounds in 1910, and 17,210,710 pounds in 1909.

The cigarettes smoked reached the enormous total of 585,935,370, against 451,095,138 in 1910, and 356,756,130 in 1909.

The cigars smoked numbered 227,585,692, as compared with 205,820,851 in 1910, and 192,105,371 in 1909.

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#### MEDICAL PREPARATIONS, ETC.

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##### A DISTINCTIVE PIECE OF LITERATURE.

"Here is something different." This is apt to be the first thought of the physician upon breaking the wrapper of Parke, Davis & Co.'s new brochure on bacterial vaccines and tuberculins. And the external

appearance of the book is in no wise misleading. The "difference" applies to the printed page, as well as to the handsome cover in artistically blended browns and gold. The brochure contains forty-eight pages in addition to the cover and thirteen full-page engravings in colors.

The work is divided into three parts or sections. Some of the subjects considered in the first section are:—"What is the Difference Between Bacterial Vaccines (Bacterins), Serums and Toxins?" "How Are Bacterial Vaccines Prepared?" "Therapeutic Action of Bacterial Vaccines"; "When Should Serums be Used, and When Bacterial Vaccines?" The second section treats of the origin and nature of the bacterins, the relative merits of "stock" and "autogenous" vaccines, the opsonic index, and the best method of using the bacterins, together with a description of each vaccine, including references to preparation, therapeutics and dose. The third section is devoted to a consideration of the tuberculins, with dilution and dose tables, descriptions and illustrations of the various diagnostic tests, etc.

Briefly stated, the booklet is a concise review of the essential facts relating to bacterial-vaccine therapy, containing precisely what the seeker after this kind of information wants. It is not padded with clinical reports—in fact, it contains none. We understand that Parke, Davis & Co. will be pleased to send a copy of this unique and valuable brochure to any physician requesting it. Address them at Walkerville, Ont., specifying the "new booklet on bacterial vaccines," and mention this journal.

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#### WHAT THE BRITISH MEDICAL JOURNAL SAYS OF BOVRIL.

The *British Medical Journal* of September 16 devoted some six pages to giving a detailed account of the recent experiments, in which it was shown that in the case of human beings the body-building power of Bovril was "even more marked" than had been previously shown in the experiments with animals. A further article has just appeared in the *Medical Times*, and that journal points out that the results of these experiments "were simply startling."

"It was found that in all cases the administration of the extract (Bovril) caused an immediate increase of weight."

One important point brought out by these experiments is the fact that this increase in weight is in tissue and muscle, and not fat, showing that Bovril must therefore be regarded as a true nutrient, and an essential part of the diet of every man, woman and child.