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THE TREATMENT OF PNEUMONIA.*

BY A. MCPHEDRAN, M.B.,

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We have had so many cases of this disease under our observation lately, that I think it well to direct your attention connectedly to the general principles of treatment.

The therapeutics of no disease has given rise to more controversy than that of pneumonia. Formerly, the disease was looked upon as simply an inflammation of the lung, and was treated as other inflammations were treated, viz., by bleeding. About the middle of the century, bleeding was rapidly given up, and treatment by stimulants—often in enormous quantities—was adopted. During this time, the natural history of the disease not being known, recovery was attributed to the treatment adopted, and nature received little credit. Later, observations were made on the natural course of the disease when left to itself, and it was found that, in young and fairly healthy persons, its tendency was to recovery; that its dangers had been greatly exaggerated, and that the worst cases were usually little affected in their progress by bleeding, or alcohol, or the many other like plans that had been adopted. These observations led to the adoption of the so-called expectant plan of treatment, which consists in mitigating symptoms as far as possible, sustaining the strength so that the patient may be able to bear up under the disease, and be in the best possible condition to recover his health as soon as the disease shall have run its course. This, you see, is just what we try to do in enteric fever, measles, etc. This plan of treatment accords too with the opinions now held by the majority of pathologists, that pneumonia is an essential fever, due to specific micro-organisms, of several varieties probably, and that the lesion in the lung is but a local expression of the disease, just as the ulcers in the bowel are of typhoid fever. If an essential fever, it would be of little use to try to abort the disease; anything that would destroy the germs, would injure or destroy the patient also. The late Sir William Gull was not far astray when he remarked that he "knew of no remedy for pneumonia, and that the best method of treatment was to send the patient to a warm bed" No one plan of treatment will suit all cases; we must treat the patient rather than the disease. If he has pain, relieve it; if the temperature is dangerously high, reduce it; if the pulse is strong, full, and bounding, quiet it; if weak, and showing signs of heart failure, stimulate it. There is much to be done, you see; there are few things that will try your judgment more than the judicious treatment of a severe case of pneumonia.

In all cases, absolute confinement to bed from the first, in an airy room, of a temperature of about 65°F., air slightly moist, plenty of easily-assimilated food, mostly liquid, without over-feeding, and good nursing, are indispensa-

*A Clinical Lecture delivered at the Toronto General Hospital.

ble. The bowels should be well evacuated by any mild purgative, as castor oil, or calomel alone, or followed by a saline. To promote elimination by the kidneys and skin, potass. citr. and liq. ammon. acet. may be given with advantage, for, you know, that in all acute diseases, the symptoms are, in a large measure, due to the waste products in the blood. To maintain uniform warmth and prevent chilling, the chest may be wrapped in cotton-wool, covered with flannel. This is much more convenient than poultices, and with mustard or turpentine applied over the seat of pain, does all the good that poultices do, and none of the harm that the latter may do if not well managed. Mild cases of pneumonia require nothing more to be done for them than this. You have seen several such cases lately, and these charts of their temperature, pulse, and respiration, are quite familiar to you.

Severe cases will demand more active interference. We seldom see the patient till after the chill. If a robust man, we may find him with a full, bounding, rapid pulse, showing high arterial tension; with a high temperature, flushed face, and rapid breathing. This is the kind of case in which bleeding gives prompt relief, lowering the temperature, softening and slowing the pulse, quieting the breathing, and easing the pain; apparently, doing all that we could desire for the patient. But he is not cured; in fact, it has not been shown that the course of the disease is either rendered milder or shortened, or the extension of the inflammation in the lung limited, by the bleeding. Then we must remember that pneumonia causes rapid deterioration in the quality of the blood—the patient soon shows signs of anæmia; in view of this, it would seem very undesirable to rob him of any of his blood, which is destroyed by the disease much more rapidly than he can make it. If the patient's condition demands it, there are other means by which we can reduce the high arterial tension, without depriving him of any of his blood, viz., by the administration of a cardiac depressant, as aconite, or veratrum viride; the latter, which is probably the better, is strongly recommended by H. C. Wood. To understand how they benefit the patient, you must remember that while the vessels generally are in a state of high tension, the vessels the inflamed portion of lung are greatly dilated, their walls being completely paralysed by the inflammatory process. The blood is, therefore, forced into them until they become gorged, and the circulation through them almost arrested. To be of benefit, these depressants must, therefore, be given early, to limit as far as possible this engorgement of the inflamed lung. If given, the dose should be sufficient to soften the pulse, and keep it so during the first stage; probably, only during the early part of the first stage. Very few of the cases met with in this city are sufficiently sthenic to call for either bleeding or such depressants as veratrum viride. There has not been one among the fair number we have had in the hospital this year. Such cases are more frequently met with in country practice.

As you are all aware, the chief danger to the patient with pneumonia is from heart failure; or, to be more exact, from failure of the right ventricle; occasionally, also, from congestion of the unaffected parts of the lungs, due to weakness of the heart. To appreciate the danger from heart failure, you must remember that the channel of communication between the right and left ventricles is through the lungs. If, for example, the lower lobe of one lung be consolidated, this channel will be reduced to three-fourths of its dimensions; if a whole lung be affected, or the lower lobes of both lungs, as in the patient in Ward 9, there is only half the channel left, and the work of the right ventricle, in maintaining the circulation through the lungs, will be increased proportionately. This, however, does not account for the whole of the increased labor of the heart. The æration of the blood will be less perfect in proportion to the extent of the pulmonary disease, and, as in all acute diseases, the waste products in the blood are increased. Now, you know that the less pure the blood is, the more difficult is it for the heart to maintain the circulation; the presence of the CO_2, and the waste products, will add materially to the difficulty the heart has to contend with. At the same time its own tissues, in common with the tissues generally, are less perfectly nourished, partly on account of the impurities in the blood, but chiefly on account of the weakness of the circulation. At first its efforts are equal to the

increased labor, and a perfect circulation is maintained; soon, however, the strain becomes too great, and its contractions become excited and imperfect—it fails to empty itself completely at each systole. This condition increases, and the action of the heart becomes irregular. In such a state, the patient is liable to succumb at any moment from arrest of the heart in diastole, or by more gradual failure of the heart, aided usually by congestion of the unaffected parts of the lungs. To prevent such heart failure, or if failure has already set in, to restore the heart's power, so as to enable it to again effectively carry on the circulation, is the chief object of treatment in all severe cases of pneumonia. How can this best be done? This is best answered, I think, by reviewing the treatment carried out in the case of the girl in Ward 9, whom you have observed daily since she entered the hospital. She is 14 years old; has always been fairly healthy. One brother died of pneumonia, a week before she came here, and two of phthisis, within the last three years. Not a very cheering family history, certainly. Her home surroundings have been anything but healthy. When she came here the base of the lower lobe, and most of the middle lobe of the right lung, were hepatized; in a day or two the whole of the lower lobe of the left lung, also the part of the upper lobe overlapping the heart and great vessels, became consolidated. This chart shows well the state of the temperature, pulse, and respiration, and will remind you of her condition. The pulse soon showed signs of failure, becoming weak and irregular; the respiration often reached 60 to the minute; she was restless, sleepless, and showed well marked *subsultus*. Her condition showed imminent danger from failure of the right ventricle. She was ordered tr. digitalis ℥ss., with liq. strychniæ mv., to be repeated every six hours, until the pulse showed that the heart responded to its action. She took three doses a day two or three times; usually, only a dose morning and evening, and sometimes only one dose per day —the quality of the pulse being constantly taken as the guide to its administration. Alcohol was given also, to act as a general stimulant, and to prevent the heart from becoming too slow under the effect of the digitalis. The strychnine was added as being an excellent respiratory, as well as cardiac, stimulant. Her chest was encased in a layer of cotton wool, and over that, flannel, the whole fitting snugly and fixed over the shoulders. Poultices were not used because, in the first place, there was no pain, and, in the next place, because they do little good. They are cumbersome, tire the patient in changing them, and are not more useful than the cotton wool.

There was scarcely any cough; there was some diarrhœa, but not enough to call for interference. Milk was given every two hours as nourishment.

The heart responded to the digitalis, as shown by the fuller and slower pulse. The delirium soon disappeared, as did also the subsultus; she rested and slept better. Her condition was critical for several days, and, as shown by the chart, the fever continued much longer than it does usually in pneumonia, and its termination, though rapid, was not by crisis, doubtless on account of repeated invasion of fresh portions of lung.

In heart failure, from any cause, digitalis is our most effective remedy to restore the heart's power; but it must be given in full doses—full enough to give unmistakable evidence in the pulse, no matter how much is required. It causes the heart to contract more slowly and forcibly, emptying the right ventricle more completely. This gives the left ventricle a fuller supply, and also the arteries, as shown by the pulse; unless you get this effect on the pulse, a fuller and stronger one, your dose has been too small, and does little, if any, good. I have often seen 5, 10 and 15 min. doses given, but cannot recollect ever having seen any appreciable benefit result. Large doses given twice a day will do much more good than the same quantity in the same time in small and frequently repeated doses. The large dose, if the heart responds, will cause a complete contraction of the ventricles, and cause the pulse to come up fuller and stronger. This means not only that the heart itself, but also the nerve centres and tissues generally will receive a fuller supply of blood; therefore, their nutrition and ability for work will be proportionately improved; there will be better sleep, less delirium, larger capacity for nourishment, and increased eliminations by the kidneys. You cannot get

such results from the frequent administration of small doses, because one dose will be partially eliminated before the next is given. This is but repeating much of what I have often said about the use of digitalis in heart disease; in which, as in pneumonia, our object is to enable the heart to cope successfully with work before which it was giving way. But you must remember that in febrile states the heart responds less readily to digitalis, and therefore fuller doses must be given. The effect of each dose should be noted before a second is given. This will require care, and should not be entrusted to any one unable to judge of the character of the pulse.

Unfortunately, in some cases of pneumonia, the heart does not respond to the largest doses of digitalis. I lost one such case a short time ago. Other stimulants must then be depended on.

Ammonia and Sp. Ætheris Co. are useful stimulants when prostration is marked. To get the full benefit of their use, they must be given *frequently*, as their effect passes off quickly.

Alcohol is given very generally. Fagge says that few over forty can get well without it, and that it should be given to bad cases at all ages. It is quite unnecessary in mild cases under middle age, and should not be given to the old, because they are old, but only when indicated by the appearance of prostration. An old woman in Ward 10, who gives her age as 85, has just recovered, you know, from a mild attack, without any stimulants of any kind—she did not require any. Alcohol should, however, be given freely in marked prostration and its effect watched.

All these stimulants act on the system generally; they have no special effect on the heart, and are, therefore, much less effective in counteracting heart failure than digitalis.

If, notwithstanding the administration of such general and cardiac stimulants, cyanosis appears with signs of pulmonary congestion and failure of the right ventricle, the abstraction of six to ten ounces of blood from the arm may give such relief to the laboring right ventricle as to enable it to recover itself, and re-establish an effective circulation.

Much more might be said on this subject were there time. My object has been to point out to you what I believed the best plan of treating pneumonia, with the reasons therefor. I hope I have made it plain to you why the great object must be to maintain the circulation. By all means avoid giving expectorants in pneumonia as a matter of routine, they injure the stomach without doing any good to the lungs.

TREATMENT OF NEUROSES.*

BY E. C. SEGUIN, M.D.

In the intervals between the paroxysms of migraine, dietetic measures should be used to correct the gouty and lithæmic diathesis.

Few theories are so injurious in their results as the one that migraine is due to indigestion. This theory finds apparent support in the vomiting of food, and of bilious material. This vomiting is a result, not the cause of the migraine. The presence of the sour bilious material is simply due to the prolonged muscular effort of the act of vomiting.

As has been pointed out by Weir Mitchell, and Stevens, many cases of migraine are due to some ocular defect. I have never seen a case of migraine in which there was not ocular defect, either error of refraction or muscular weakness, particularly of the external recti. In this relationship to ocular defect lies the explanation of the influence of heredity, and of the fact that migraine disappears between the ages of 40 and 50, the period when the powers of accommodation fail.

Cannabis indica and atropine should be administered in large doses. The mydriatics act by paralyzing the third nerve, and thus relieving the strain on the ciliary and internal recti muscles. A good reliable extract of cannabis indica, either Hering's or Squibb's, should be used. The same preparation should be used in every case, so as to secure reliability as to the strength of the dose. Cannabis indica gr. 1/6, arsenious acid gr. $\frac{1}{60}$, may be given in pill form before meals. This dose should be increased by 1/6 of a grain each week, until the patient does not quite reach the stage of semi-drowsiness and dreaminess. In women the maximum dose is from 1/3 to 1/2 grain. This

*Abstract of Lecture delivered before the University of Toronto Medical Society.

treatment should be continued for a year or longer.

During the paroxysm, the routine treatment should be temporarily discontinued, and the patient placed in a quiet and darkened room. Morphia should never, on any consideration, be given. Antipyrin may be given in doses of gr. xv.-xx. to a woman, grs. xx.-xxx. to a man. If there be any cardiac weakness, digitalis may be combined with it. Antipyrin is the most useful drug we have, but may lose its effect. Pure caffein, not the citrate, may be given in doses of gr. ½ every quarter hour, until the pain has ceased, or five doses have been taken. There is nothing to be gained by giving larger doses. This drug often gives striking relief in cases in which optic auræ, such as hemianopia, or hemichromanopsia, are marked. Both antipyrin and caffein should be given, if possible, before the attack, and as soon as the premonitory symptoms come on. It is true that caffein may produce an excited, tremulous condition, but this is to be preferred to migraine.

Guarana I have found very unreliable. Nitrite of amyl is, in my experience, valueless. It does not cut short the attack, and it often causes great distress. The hypodermic injection of hyoscyamia gr. $\frac{1}{50}$, for several hours, often gives good results, and never leads to the formation of a habit. Strong café noir may, in some cases, be efficacious. Cold, heat, menthol, electricity, may be tried. Every therapeutical agent may be tried except morphia.

There is no hard and fast rule as to whether it is better to give up to an attack or not. Each case must be considered on its merits. Strong men may keep up and about; most women do best to retire at once to a quiet, dark room.

As I have said, migraine tends to cease spontaneously between the ages of forty and fifty; often, however, it passes into a constant headache, usually occipital, of unexplained origin, and very stubborn and difficult to relieve.

In cases in which there is general paræsthesia about the head, patient is worse on the street, at the theatre, etc., and has a "fear of places," there are besides errors of refraction, also weakness of the external recti, and general nervousness. In such cases there are sometimes hysteroid attacks. These patients should be given mydriatics, and treated with prisms, or by division of tendons.

No problem in medicine is so difficult as the pathology and treatment of headache. A case of simple headache should never be prescribed for off-hand at the first visit. Palliative treatment may be prescribed at once, but curative only after several visits, when the case has been thoroughly studied. Headache is sometimes relieved by strong black coffee. Caffein is better, because it is less bulky and can be carried about. I may be pardoned if I here digress and speak of the use of coffee in fermentative dyspepsia. The first advice often given to dyspeptics is to give up tea and coffee. This is a mistake. Good strong coffee, without milk, cream or sugar in it, cannot but do good. It is a cardiac tonic, a nerve sedative, and a diuretic. The coffee should be made without boiling, to avoid tannin. In some cases of neurasthenia, in which there is marked morning depression, I give the patient, before he rises, a good cup of café noir, and two grains of quinine. I then have him take a brisk cold bath, and rub well, and go down to breakfast. The result is that he feels vigorous and high-spirited.

Trigeminal neuralgia, or tic doloreux, is either symptomatic or idiopathic. When idiopathic, it is often of many years duration. Surgical treatment, by exsection of nerves or of Meckel's ganglion, is usually followed by relapse. During the last thirteen years, I have cured many cases by the use of Duquesnel's crystallized aconitia. I administer it in a pill, containing $\frac{1}{200}$ of a grain, and use for this purpose the preparations of McKessin and Robbins, or of Schieffelin. Once or twice a year, I test these pills on my own person, in order to be sure that the preparation is of standard virtues. Two pills cause, in me, tingling, chilliness, faintness, and nausea. The whole body is numb, but there are no motor or mental symptoms. Aconitia should be given until we get the above mentioned sensory symptoms. If there is no idiosyncrasy, push the drug. If you wish to succeed, you must give it to the fullest extent. Women should be given small doses at first, as $\frac{1}{400}$ gr. has caused toxic symptoms. Proceed with "cautious temerity." They should commence with one pill twice a day; men with one pill thrice daily; increase, if necessary, to 12 or 14 pills a day.

For several weeks after the pain has ceased, two pills should be taken three or four times a day. On the least return of pain, the large dose should be resumed.

Even when there is no syphilis, a course every second month of the red iodide of mercury, $\frac{1}{20}$ to $\frac{1}{6}$ gr., or the iodide of potassium, 20 to 45 gr., largely diluted, after meals, may be of great use. The patient should be given an abundance of nutritious food, cod liver oil, cream, rich milk, eggs. A little brandy or whisky may be given with the milk. Patients often run down because the pain of eating causes them to refrain from food.

In exophthalmic goitre, I have had good results from the systematic administration of aconitia, 3 to 8 pills a day. I also bandage the protruding eyeballs. I put on a carefully moulded pad of cotton over the eyes. Put on two or three turns of a flannel bandage, using gentle but firm pressure. The pressure should not be too great. The bandage should be left on two hours per day. The physician himself should apply the bandage. At the same time, potassium iodide, iron, and cod liver oil, may be given.

If the diet of the neurotic patient is inquired into, it is almost always found that they dislike fats, eat an excessive amount of the hydrocarbons, drink very little water, and that some of them are never thirsty. The urine is usually of high specific gravity, and contains an excess of uric acid or oxalates. Excessive use of alcohol, rice and starches, give rise to multiple neuritis. This effect of rice is seen in the diseases of the east beri-beri and kakké-kakké. If excess of this kind of food gives rise to gross nervous lesions, is it not rational to think that they will be contra-indicated in the neuroses, for they can only give rise to malnutrition of nerves?

The patient should drink, at least, 3 pints of water daily. He may use apollinaris, or Buffalo lithia, or any other non-purgating water. Let him take a tumblerful three or four hours after meals. He must be made to eat fat food, although there will be considerable difficulty in effecting this. The dislike to fat food is often the result of bad example in early life, the patient having been pampered into the belief that this or that food disagreed with him. He should be made to take fat beef or pork, cod liver oil, butter, and cream.

Cod liver oil I always prescribe pure, avoiding all emulsions. Ninety-nine out of a hundred cases can take cod liver oil, if they will but persevere. I never give it with brandy, unless the liquor is indicated for some other purpose. It may be administered floating on ice water, or with chocolate, or lemon juice. Fat pork is a fair substitute for cod liver oil. I cause my patients to get a square of salt side meat, thick and fat. When this has been boiled, it is kept cool in an ice box, carved very thin, seasoned well, and eaten with a thin slice of bread. I find that patients get very fond of this pork sandwich.

The amount of starchy and sweet foods must be reduced. Bad breakfasts are especially to be avoided. I interdict porridge, grits, and reduce the quantity of bread and potatoes, and cause them to eat meat, poultry, eggs. I never allow them to eat oranges before breakfast, for according to physiological laws, the secretion of gastric juice must be thereby diminished. The only physiological preliminary to breakfast is a glass of cold water; if the patient be dyspeptic, it may be hot.

The question is often asked: "What shall I eat with my meat?" Spinach, lettuce, cabbage, beans, onions, asparagus, and other green vegetables, may be eaten. Most of them digest better when raw than when cooked. Peas and corn may be used, but only in small quantities. I enter into a compact with my young lady patients that they may use pickles, if they will give up candy. Meats should be boiled, roasted, or quickly fried. Stimulants are usually injurious. In a few cases half an ounce of brandy, or a glass of good claret, may be allowed with meals. After careful study of the individual, and of the case, a written diet table should be made out for each patient. Unless in very strong patients, milk should not be given with solid food. A glass, to which a little common salt or bicarbonate of soda has been added, may be taken between meals or at bedtime.

In epileptics the evening meal should be light, and they should never eat just before going to bed.

Phosphorus may be administered in Thompson's solution, one drachm of which is equiva-

lent to $\frac{1}{20}$ grain. I have found this very serviceable in neuralgia, especially in recent cases of tic doloreux, in which, when it is given in drachm doses every three hours, relief is had in three or four days. The phosphorated oil and pills of phosphorus should be given after meals. In my experience, phosphoric acid, the hypophosphites, and hypophosphates, have been of very little use.

It is not necessary that tobacco should be interdicted. A patient may be allowed to smoke one mild cigar daily. I have had some patients, non-smokers, who suffered greatly from the clouds of tobacco smoke in the club-rooms which they resorted to.

Sexual intercourse, and marriage, should never be advised as a remedy in the neuroses. Continence does not cause nervous symptoms, save in the highly imaginative. On married patients I enjoin moderation, two or three times a month. Ungratified sexual excitement is highly injurious. I, therefore, order the patient to occupy a separate bed.

In chorea, hysteria, and neurasthenia, absolute rest is invaluable. Isolation, as practised by Weir Mitchell, is in many cases the only thing which will relieve.

In other neuroses partial rest is desirable. I direct my patients, once or twice a day, to retire for an hour or two to a quiet room, to lie down and sleep, or occupy their minds with pleasant thoughts. Let them think of the time when they will be cured. Teach them to ignore paræsthesiæ. Let them indulge in cheerful conversation. If the patient lives in a small house, so that she cannot retire to a private room, let her send the children away or go on a visit to some friend.

Hysterical cases simulating serious disease are often speedily cured by seclusion, the parents and friends being rigidly excluded from the room. A little girl of 13, the daughter of a physician, complained of intense pain in the forearm and hand; the pain was not referred to the distribution of any particular nerve. The child's mother was a victim of various neuroses; the father had been compelled to give up his practice, in order to attend to his wife. I found the child attended by a special nurse, visited by sympathizing playmates, the room filled with flowers, and other gifts of friends. After some effort I persuaded the father to send away the nurse, to prevent any friends, relatives, or playmates, entering the child's room, to intercept flowers and gifts. Not even the servant was allowed to stay in the room, or to ask the child any questions. Her meals were put on a table by her side, and she was left to feed herself. In less than twenty-four hours the child cried out to the servant that her arm was better.

I have great faith in the judicious application of cold water. In neurasthenia, I cause local cold packs to be applied for a half hour to the epigastric region and to the genitals. During the application of the cold douche, the head should be protected by a rubber cap. The water should be dashed on with considerable force, for from five to ten seconds. If there is not a tap available, the water may be thrown from an ordinary cup. With the cold bath, I cause the patient to stand naked, in a warm room, and throw a wet sheet over his shoulders, with which he is rubbed vigorously for two or three minutes. He is then dried, laid on a sofa, wrapped in a blanket, and has massage for 30 to 40 minutes; not longer. In weak patients, the massage is limited to 14 to 15 minutes.

The simple cold sponge-bath should be taken at bedtime, and should not last for more than two minutes. The patient should be well rubbed after the bath. The cold foot-bath for a few minutes, followed by brisk rubbing, is useful in cerebral neurasthenia.

I this connection, I may say that burning extremities are relieved by a short douche, twice a day, of the hottest water that can be borne. Cold extremities are cured by a cold bath for one or two minutes, or by a hard rub, under very cold water, twice a day for two weeks. There is no relief obtained during the first few days. I believe that habitual coldness of the feet is often due to the wearing of woollen socks, which cause perspiration. This perspiration is prevented by the shoes from evaporating, and thus the feet are kept constantly damp and cold. Let such patients wear thread or light cotton hose.

Profuse menstruation, by producing anæmia, is often injurious in neurasthenic cases. To prevent this, I order very hot vaginal injections, to be taken on the third day of the flow.

Neurasthenic patients require more exercise than that resulting from their occupations. There should be systematic use of certain muscles, with a definite object in view. Most such female patients never leave the house from tea time of one day until the afternoon of the next, and are thus cooped up for from twelve to eighteen hours. I, therefore, order them to take a walk immediately after breakfast, merely that they may get some fresh air. Walking is desirable, except in severe uterine or ovarian diseases. They should walk far enough to be slightly fatigued, but not exhausted. Some broth or milk should be taken on coming in, and the patient should lie down for half an hour.

Night and morning the patient should take six or eight forcible inspirations. He should be undressed, standing up, mouth wide open, the closed fists resting on the chest. He should take a deep inspiration, at the same time extending the arms. Systematic gymnastic exercise may be useful, provided it is given under good medical instructors. You should specify in writing what exercises you wish the patient to get.

When patients are unable to leave their rooms, we should cover them well, put on a cap, and open the window. A very good plan is to make the patient sit up, and be dressed as if for going out, and open the window for a half hour or longer. The temperature of the room should never be allowed to go beyond 68°F. These patients are very apt to live in an overheated atmosphere. The constant application of hot bottles to the feet is injurious, as it lessens resistance. In cases of insomnia, a prolonged hot bath at bedtime is often useful.

Alcoholic stimulants tend to weaken the powers of resistance, especially where there is weakness of cardiac or of vaso-motor nerves. Physicians' prescriptions often send patients down the inclined plane of chronic alcoholism. The diagnosis of chronic alcoholism is difficult, especially in women. A good nurse, with tact and shrewdness, will here be a great aid to you. Prescribe alcohol only on the clearest indications, and in stated quantities; give it up as early as possible. In cases of simple emaciation, claret may be given with meals. In gouty and lithæmic subjects, where alcohol is indicated, whisky or gin may be used.

Morphia, and the preparations of opium, are useless in the neuroses. They actually aggravate migraine, hysteria, and neurasthenia. Morphia should never be given in chronic habitual cephalalgia. It may be given for the pains of tabes dorsalis, only when the chloral and sulphonal fail.

In hysteria, morphia should not be used. The peculiar insusceptibility of hysterical patients to morphine should always be borne in mind. Give, instead of it, hyoscyamia gr. $\frac{1}{100}$ to $\frac{1}{50}$, by hypodermic injection. Its effect is just as speedy, and there is no danger of the formation of a habit.

In true neuralgia, intracranial tumors, intracranial syphilis, and some cases of melancholia, morphia may be used if antipyrin fail. In such cases always give the morphine itself, and never let the patient know what you are giving.

Several cases of bromism have come under my observation, which were thought to be cases of intracranial disease. The off-hand advice, "Oh! take a little bromide," has done a world of harm. The bromides, in my opinion, are not hypnotics, for they do not produce an immediate effect. The so-called bromide sleep is really a stupor. There are but two diseases in which the use of bromides is justifiable, namely, epilepsy and sea-sickness.

PRIMARY CARCINOMA OF THE FUNDUS OF THE UTERUS.*

BY JAMES F. W. ROSS,

Lecturer in Gynæcology, Woman's Medical College, and Surgeon to the Woman's Hospital.

Miss E. P., æt. 60. Menses ceased for ten years. In July, 1880, she had a very severe sudden flooding, that left her in a weak condition. The anæmic condition continued in spite of treatment. She was sent to me by my friend Dr. William Oldright, in September, 1889. I dilated the cervix with graduated elastic pressure dilators, and, under chloroform, explored the uterine cavity with the finger. A nodule was felt in the neighborhood of the internal os on the posterior uterine wall, and a mass covered by mucous membrane, and without any evidence of excavation, was found projecting into the

*Reported to the Toronto Medical Society, March, 1890.

cavity of the fundus, with a general thickening and enlargement of the anterior and posterior walls of the fundus.

Vaginal and rectal examination showed the body of the uterus enlarged to about six or seven times what it should have been in an aged virgin, the enlargement feeling "loughy," affecting the left side more than the right. Parametrium apparently quite free. Ovaries normal, as far as could be made out. Complained of constipation, but no bladder symptoms. No vaginal discharge was present at this time, and no odor that would give rise to the belief that the tumor was malignant. From the rapid loss of flesh, the age, previous history of freedom from symptoms, sudden access of hemorrhage, and peculiar feeling of tumors, I felt safe in giving an opinion that the case was one of malignant disease, and not of multinodular fibroid growth. Whether carcinoma or sarcoma was immaterial. Having little faith in microscopical scrapings, as a means of differential diagnosis between these two forms of malignant tumors, and not wishing to produce irritation by scraping through the intact mucous membrane, I did not use the curette.

Tonics were given, and the patient was kept waiting until I deemed her strong enough to undergo the very serious operation of extirpation of the uterus through the abdomen. The operation per vaginam would have been extremely difficult, if not impossible, owing to the narrowness of the vagina, and the size of the uterus.

About the middle of October another severe hemorrhage occurred. She had been free of hemorrhage during the intervening period, but for about two weeks before the onset of the second hemorrhage, a very offensive watery discharge, of a brownish color, had been present. It had the characteristic odor of malignancy.

Although the patient was prepared for any risk, I felt it would be madness to operate, and refused to do so. The growth increased with great rapidity. She was unable to retain her urine, but did not suffer very great pain. The pain was paroxysmal. She gradually became weaker, and died without any special symptoms pointing to any organ outside of the pelvis. Some diarrhœa came on towards the end, and the urinary trouble continued. After death the pelvic organs were found bound down in a mass, so that at no spot could the finger enter the pelvic cavity. The cervix uteri infravaginally was unaffected, but just above the vaginal attachment a nodule, about the size of a small walnut, was found imbedded in the wall, with uterine tissue surrounding it on all sides. The fundus was represented by a thickened mass of necrotic tissue, with a large communication opening into the rectum. The rectum was otherwise unaffected, and its lumen was unobstructed. The bladder was intact, and the ureters undilated. The bladder wall was slightly thickened, and its mucous membrane, as well as that of the rectum, congested. Kidneys were quite normal. The cancerous growth had pushed the peritoneum before it, and the peritoneal cavity was therefore intact. No metastases. The microscope showed the growth to be carcinoma.

Primary carcinoma of the fundus uteri is a somewhat rare affection. Schroder estimated 28 cases out of 812 cases of carcinoma of the uterus, or about 3 per cent. They are so rare that every case should be published, and in such publication the following facts should be particularly stated:

1. Nulliparous or multiparous; married or single.
2. Whether nodular or diffuse infiltrating variety.
3. Result of microscopical examination.
4. Duration of life, with or without operation.
5. Presence or absence of metastases.

The present case ran a more than usually rapid course, death occurring within 9 months after the first hemorrhage. Cachexia, contrary to what is usually found in such cases, developed very rapidly. Death in less than one year occurs in about 16 per cent. of cases. To my mind, the results of complete extirpation of the uterus through the abdominal wall have not been favorable enough to warrant operation, unless the patient is in middle age and fairly robust. I have seen death occur within twelve months after vaginal hysterectomy. In that case the growth was seen in its earliest stage, and one lip of the cervix was alone affected. But with all that, in looking over Professor Leopold's wonderful performance, as given in a paper in 1887, one must be fully convinced that

in all cases of carcinoma or sarcoma of the fundus, where practicable, vaginal hysterectomy should be performed, even though the patient may be thin and weak, and well advanced in years. Among his cases were women 60, 61, and 62 years of age. Two of them, aged 60 and 61 years, recovered from the operation. In carcinoma of the cervix, the matter may be different, that is, other methods may give as good results.

Selections.

THE SURGICAL TREATMENT OF TYPHLITIS.

In a paper on this subject by Mr. Lawson Tait (*Birm. Med. Rev.*) we find reports of 24 cases of typhlitis which he had treated. From them we select the following:

1. The first case, and the worst, was that of a young man, aged 19, who had gone through a relatively mild attack of the fever, and was practically convalescent and getting about. He was a collier, and, like all his class, especially in Yorkshire, fond of good feed. I had warned him against indiscretion, but a big joint of roast beef, Yorkshire pudding, and celery, were too much for him to resist. In two days he was in bed again with all the symptoms, as I thought, of a relapse. I found him in bed with his legs drawn up, intense abdominal pain, and a swelling over the cæcum which he could not bear to be touched. There was no diarrhœa, and the patient himself made rather light of his condition. On my third visit to him I found the cæcal swelling emphysematous, and next day, to my surprise, he died. I made a *post mortem* examination, and found the cæcum and some inches of the ileum and of the ascending colon completely gangrenous, and the abdominal walls over this mass infiltrated with putrid pus. I had mistaken an acute typhlitis for a relapse of typhoid; but the lesson was not thrown away; and the mistake was perhaps a pardonable one in a youth of two-and-twenty concerning a case where the complication followed so swiftly on the steps of the original disease. I argued with myself that I ought to have interfered with the knife; but I doubt if my interference would have been successful in a case so acute. But my argument was successful in the future, as the remaining seven cases will tell.

3. A girl, about 14 years of age had typhoid in September, 1867, and a well-marked attack of typhlitis beginning February 2nd, 1868. I opened the swelling on February 3rd, and found about a t blespoonful of pus just outside the peritoneum, so far as I could judge. The symptoms were immediately relieved, but the wound healed slowly and complete recovery did not take place for nearly seven weeks.

7. A mill hand (female), aged 19, was attended for a mild attack of typhoid about September, 1867. I was called to her in the Christmas of 1868, and found her with the characteristic cæcal swelling. I was told that it had been coming on steadily for nearly a fortnight, that she had been similarly attacked twice since the time I had attended her for the typhoid fever. In the first of the attacks the illness was so evanescent that no doctor was called in. In the second she was attended by Mr. Secker, and from him I subsequently obtained such information as to leave me without doubt that the di ease was recurrent typhlitis. I immediately opened the swelling by a free incision, but nothing came out save a few teaspoonfuls of discoloured and very offensive fluid. This case was dressed with carbolic putty and tin foil. She was greatly relieved, and for a few days all went well. Then she got into the typhoid state, and large sloughs began to come away. At one of my visits I was horrified to see the vermiform appendix lying bare in the wound, and I thought death was inevitable. Unfortunately for me I told her people so, and I was therefore summarily dismissed; and I had the dissatisfaction of learning afterwards that she made a complete recovery in other hands. My satisfaction now about the case is greater, and my knowledge of the way to deal with patients has correspondingly increased.

8 My next case was a boy, who was a surgical curiosity. At the age of 9 he had a leg amputated on account of a lark with a reaping machine; at 10 I cut him for stone; four months after, he had typhoid fever; and before he was 11 he had typhlitis. He had complained of occasional pains over the cæcum all the time which had elapsed since the typhoid, and he had occasional outbursts of severe diarrhœa. The poor child

had no mother, and he was allowed pretty well to grow up as he liked by his father, who was a collier. Serious notice was not taken of his complaint till it was found that he had a large swelling in the groin, and for that he was brought to the Dispensary. I thought the swelling was a glandular abscess, and I opened it then and there. He was brought back in a week with a fæcal fistula. I put him under chloroform, enlarged the opening, and found, after a little search, that the fæces were coming from an aperture just at the insertion of the appendix into the cæcum. The cæcum was large and hard, and gave me the impression there was something in it. I laid it open, and removed a hard concretion like an almond. I dressed the wound with carbolic putty and sent him home. No persuasion could keep him in bed (I remember that the day after I cut him for stone I found him out in the cottage back yard—"Fair down stawed o' liggin i' bed," as he said), and the wound had to take its own course. Yet in less than a fortnight he was perfectly well and the wound healed. The concretion was simply hardened fæces. I often wonder how this boy has grown up, and how many other surgical calamities have fallen to his lot. I have tried to trace him, but have failed.

10. The next experience that I had in typhlitis was shortly after I settled in Birmingham. I was called to a young lad, who was the son of a market gardener, and was engaged in his father's business. He was about 19 years of age and very strongly made. He had complained of uneasiness for a day or two in the region of the cæcum, and the morning I saw him had been wakened early by violent pain completely localised over the cæcum. I could detect vaguely a sense of fulness, but nothing very definite presented itself. Two days after the tumour was most marked, and the characteristic constipation had resisted every reasonable effort that I had made to overcome it. At the request of the parents, the late Dr. Russell was called into consultation, and he agreed with me that it was a case of typhlitis, but, much to my regret, did not agree with me as to the advisability of and necessity for immediate operation. We met in consultation for several days, and at each meeting I urged my views upon my colleague, but without success, till one morning there was a condition of collapse, and it became evident that it was too late to do anything, and the patient succumbed without any operative interference being undertaken. I made a *post mortem* examination, and found a very characteristic post-cæcal abscess.

12. E. S., aged 40, came under my care on June 13, 1879, with a large œdematous swelling over the cæcum and complete œdema of the right leg and thigh. An incision was made over the mass and three or four ounces of fœtid pus removed. The patient made a tedious convalescence, but by the end of August was getting about. I have seen her repeatedly since, and she remains well.

21. E. T., admitted to hospital on March 4, 1886, with well marked acute typhlitis. I made an incision about four inches long over the tumour, and then dissecting carefully downwards for another two inches I opened the abdomen, at the bottom of which I found the cæcum and appendix laid bare. The appendix seemed to me to be the source of the trouble, it was so very much swollen, so I removed it, and tucked in the stump, as in the previous case of the same kind. I stitched the inverted surfaces of the peritoneum carefully together. The patient made a very easy recovery, and went home on 5th April perfectly well, and I have seen her since. She has regained her health, and was very well the last time I saw her.

24. Early in August of this year I was asked by Dr. Leslie Phillips to see with him in consultation a patient of his, aged 27, who had suffered from recurrent attacks of typhlitis since last Christmas. They were of more or less severity and duration, and occurred on the follwing dates in this same year:—From February 1st till April 4th, from May 8th till about the 12th, July 11 till August 16th, the last attack being the most severe. In each case the characteristic egg-shaped tumour was present, and increased during the acute stage of the attack, and diminished during the quiescent period. When I saw him it was in its quiescent condition, but distinctly marked. I entirely agreed with Dr. Phillips' diagnosis of typhlitic suppuration, and concurred with his recommendation that it should be dealt with by operative interference. On August 20th the patient was

put under an anæsthetic by Dr. Leslie Phillips, and, assisted by Drs. Arthur Johnstone and Robert O'Callaghan, I made an incision over the cæcum, about three inches long and about an inch from the anterior superior spine of the ileum, dissecting carefully down till I opened a suppurating cavity on the outside of the cæcum. This I thoroughly washed out with plain water, and then, in tracing the indurated mass into its elements, I discovered the vermiform appendix swollen to about three times its normal size and very hard. Dissecting the adherent tissue from its base, I became impressed with the belief that it contained a foreign body close to the opening into the cæcum. I slit open the vermiform appendix about half an inch from its free end, and gave exit to small quantity of purulent fluid. I then passed a celluloid catheter, about No. 6 size, through the opening in the appendix as far as it would go. I found it was arrested just at the point where it seemed to me the canal was occupied by a foreign body. Gentle manipulation, with a little presssure, forced this foreign body into the cæcum. I left the catheter in the canal of the appendix. During the dissection the peritoneal cavity had been opened, and the next thing was to close this by stitching the free margin of the cæcum to the edge of the peritoneum at the rent. I then placed a piece of drainage tube in the deepest loculus of the abscess, and closed the wound round the drainage tube and the catheter. The catheter was removed by Dr. Phillips on the 23rd of August, and the drainage tube on the 26th. The wound healed rapidly, and the patient made an admirable and uninterrupted recovery. I have twice in cases similar removed the vermiform appendix, finding it thickened, swollen, and suppurating; but, though both my cases recovered, I am disposed to think that the risk of the operation is somewhat increased by this detail, and the satisfactory result in the present instance leads me to believe that it may be altogether unnecessary. Certainly I shall continue to follow the new plan of opening the appendix and draining it independently until I find some reason to revert to my former practice of removing it. I may say that the foreign body, which I believed had been contained in the vermiform appendix, was never found, although carefully looked for.

CONCLUDING REMARKS.

I have now placed on record the total of my experience in the surgical treatment of typhlitis, numbering 24 cases, the largest which I think has yet been accomplished at the hands of one surgeon. I think from it the conclusion is inevitable, that the earlier the operative interference is employed, the better for the patient. Even the cases where resolution is likely or possible, such an incision as is made can do no harm, or the likelihood of its doing harm is extremely small, and the likelihood of the disease permanently ending in resolution is extremely small. The general impression amongst practitioners is that more than half of these cases end by resolution, but this is probably only true of the individual attack which they have under observation, whereas the risk of delay of surgical interference is enormous, seeing the extreme difficulty there is for purulent formation to reach the surface by any process without involving wholesale destruction of important organs. As I have already said, the diagnosis of the three varieties in the inception is impossible—a differential diagnosis in fact is impossible—till such mischief in the graver cases resulted as to be practically irremediable. The risk, therefore, of an incision, which might have been unnecessary, is so slight, and the risk of a delayed incision, which was necessary, so enormous, that I am disposed to lay down an imperative rule that, as soon as diagnosis of typhlitis is established, no attempt should be made by delay to ascertain which variety it belongs to, but that a surgical operation in search of pus should at once be made It will be seen in several of my cases where no pus was found, the relief of tension alone was sufficient to benefit the patient enormously; and in not one of the cases, so far as I have been able to ascertain, has any harm arisen from the healed incision.

THE TREATMENT OF TUBERCULOUS DISEASES OF BONES AND JOINTS BY MEANS OF PARENCHYMATOUS INJECTIONS OF IODOFORM OIL.—By Dr. Wendelstadt (Bonn). At the suggestion of Dr. Heusner, in Barmen, who for the past four years has successfully treated a number of tuberculous joints with injections of iodoform oil, Professor Trendelenburg has employed this

method in a number of cases in his clinic, and had very gratifying results.

Injections of iodoform in ether, glycerine, or olive oil, have long been practised by Mikulicz, Billroth, Verneuil, and Burns, in cases of tuberculous abscesses, and in view of the clinical results obtained by them and many other surgeons, iodoform must be regarded as a prominent factor against the tubercle bacilli. That the presence of iodoform prevents the growth of giant cells in granulations has been proven by Marchand, and the fact that the abscess membrane of tubercular cavities injected with iodoform contains no bacilli has been demonstrated by Bruns and Nauwerk.

In the clinic at Bonn injections of iodoform ether 5% were at first employed, but although no toxic effects were produced on account of the small quantity of the drug used, severe pain was caused, and in three cases sloughing of the skin resulted. The ether was then replaced by olive oil. the proportions being 5:25, this latter was found to be free from disagreeable effects.

It is to be remarked, that the iodoform is to be mixed with the oil shortly before use, as otherwise iodine is rapidly developed, which may be recognized by the brownish-red color of the mixture.

After thorough disinfection of the skin in the neighborhood of the diseased part, 2 to 3 cm. of the mixture are injected into the tissues by means of a Pravaz syringe, having a fairly wide and sharp needle. The injections are to be repeated every eight days. If abscesses are present their contents are to be drawn off and the iodoform oil injected. If fistulæ have formed, it will be found more advantageous to inject into the surrounding tissues, rather than in the fistulous tracts.

After the injections have been made, a dressing of sublimate gauze is applied. In injecting fungoid masses, or the tissues in the proximity of fistulæ, considerable force must be used to empty the syringe. The number of injections required until improvement is obtained varies considerably; in some cases signs of improvement are visible after 3 or 4 injections, in others many more are required. The pains usually become less severe after the first injections, and the swelling gradually subsides, becoming harder and firmer. Fistulæ are very obstinate, the secretion gradually diminishes, but complete closure only takes place after protracted treatment. The movements of the diseased limb are restored to a certain extent, especially if cautious passive movements have been practised. Complete fixation of the joint is only necessary if the pain is very severe.

The above described favorable results are only observed in certain cases; many patients are much improved, but not cured, and resort must be had to the knife. In general, the injections have a very favorable effect.

The best and most rapid results from injections of iodoform oil are obtained in cases of recent development; especially when the disease began acutely. In a large number of cases the injections were preceded by opening of abscesses, or the curetting of the diseased parts, and recovery in these cases was more rapid than in those in which no injections were made. In several instances elevations of temperature were observed in the evening, or on the day following the injections, and was probably due to the fact that the oil was not perfectly sterile. It is, therefore, advisable to sterilize the oil before use.

The danger of iodoform poisoning is not to be apprehended because the quantity of the drug injected is small, and because little absorption takes place in the diseased parts. In one case a considerable quantity of unchanged iodoform was discharged from an abscess three weeks after injection.

Patients not too severely diseased are treated in the out-door service, the injection being repeated every eight days.

Thus far Trendelenburg has treated 109 cases by this method, of which 28 were operated on in addition, 36 were cured, 38 were discharged improved, and 12 were unimproved. Of 24 patients still under treatment, 14 show considerable improvement, and in the others the injections have not been used long enough to permit any judgment to be passed.—*Centralblatt f. Chirurgie.—Annals of Surgery.*

DANGER OF FLUSHING THE PERITONEUM WITH SUBLIMATE.—Of all recent innovations in abdominal surgery, flushing or irrigation of the peritoneum is undoubtedly the most popular in the best sense of the word. Operations for

the removal of diseased uterine appendages, electrolysis for fibroids, and complicated manœuvres in the region of the gall bladder, duodenum, stomach, or kidney, are seldom taken in hand except by experts. Every surgeon, however, may be called upon to open the peritoneal cavity, and one of the best safeguards against the dangers of intraperitoneal operations is flushing of the peritoneum, judiciously performed. The success of this practice has urged many surgeons to seek yet higher success by various modifications.

Mr. Lawson Tait uses fresh water, and others can claim high success, where the peritoneum is flushed, by the same unsophisticated fluid. But the antiseptic school of operators have largely adopted this practice. Of necessity, they had to take a great physiological problem in consideration: How much of the antiseptic must be mixed with the water poured into the peritoneum so as to ensure asepsis without poisoning the patient?

The merits of the antiseptic and the opposite school are not to the purpose in the present argument. Surgeons of the former school believe that an antiseptic agent should be mixed with the water, so they are right to estimate the virtues and dangers of that agent. Dr Gellé has shown that sublimate is a perilous compound for flushing. He describes three cases of ovariotomy where a 1 in 10,000 solution of perchloride of mercury was employed. In the first case, violent abdominal pain and vomiting took place during the night after operation. On the next morning a scarlatiniform rash appeared on the face, trunk, and arms. No rise of temperature or salivation occurred. By the third day all bad symptoms disappeared. The second patient died from exhaustion through diarrhœa, fifty-two hours after the operation, where the walls of a dermoid cyst were sewn to the edges of the abdominal wound. Interstitial nephritis was discovered. In the third case, parovarian cysts were removed. Obstinate vomiting lasted for two days. How far the sublimate was to blame, especially in the second case, which was incomplete, it would be hard to determine. Dr. Delbet's important researches must not be overlooked. He has shown that a large amount of the water first poured into the peritoneum is actually absorbed, especially if it contain a little table-salt. In fact, the process is a true transfusion, more likely to act as such on the circulation than Dr. Münchmeyer's practice of injecting water into the subcutaneous cellular tissue, as a substitute for transfusion of blood in hæmorrhage after labour. Transfusion, however, is not what is wanted in flushing the peritoneum. What is especially to the point is another fact discussed by Delbet. After a certain amount of water has been poured into the peritoneum, no more can be absorbed; then strong antiseptic solutions can be added without fear of absorption, provided that they be displaced by a final injection of pure water. This process might have prevented the serious results in Gellé's cases. Unfortunately, though a very pretty physiological experiment, Dr. Delbet's method is complicated. The second flushing with an antiseptic solution, followed by a third with pure water, is hardly in accord with the principles of the strict antiseptic school, for, according to them, the third would undo all the good done by the second. Carbolic acid is almost as likely to irritate as sublimate, if injected in a sufficient amount to counteract sepsis. No wonder, therefore, that the majority of antiseptic surgeons prefer, we believe, sterilisation of the water by prolonged boiling.

Flushing of the peritoneum has, in short, been widely adopted in abdominal surgery, with excellent results. Like all other surgical proceedings, it requires to be done carefully. It certainly displaces clots and noxious solid or fluid materials. It also checks, if it does not actually stop, hæmorrhage. It counteracts shock due to chilling of the viscera, whatever M. Pollailon's experience may show to the contrary. Lastly, the transfusion of water into the blood, though not aimed at by the surgeon, is no doubt beneficial. Judging from the experience of "non-antiseptic" surgeons, pure water answers all purposes with safety. The question was the subject of instructive correspondence in the *Journal* last autumn. If, however, it should some day be shown that some antiseptic should be added, that agent will not be sublimate.—*Brit. Med. Jour.*

A very old pharmacy is the Apotheke "Zum Mohren," in the city of Nuremberg, Germany, which in 1889 celebrated the 400th anniversary of its establishment.

THE

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TORONTO, APRIL 1, 1890.

REGISTRAR-GENERAL'S REPORT FOR 1888.

From this interesting blue-book we learn that August and March are the two months in which the most deaths, November the fewest, take place. More men die in March than in any other month; more women in August. During the year, some twenty-one centenarians died, the oldest, a blacksmith, being 110. Of these, ten were of Irish, two of Canadian birth; six were farmers, and three farmers' wives. Of those who died between the ages of 60 and 100, Ireland again claims far more than her share.

During the year, twenty-seven physicians died, of whom twenty-two were under fifty-five, and but three over eighty. The average age at death of professional men was 50.8 years; of doctors, 47.

The mortality among children from diphtheria is most appalling. Counting as diphtheria the deaths ascribed to croup, we have over 37 per cent. due to this cause. Nevertheless, during the past four years the total number of deaths due to this cause has been steadily decreasing. The counties of Carleton, Dufferin, Prescott and Russell, returned the highest death rate from diphtheria. Prescott and Russell had the high death rate from diphtheria of 1.2 per 1,000 living, yet in the previous year it was 2.1 per 1,000.

Typhoid is still the most fatal of the fevers, although there is a slight decrease in the number who died from it. More deaths are reported from fevers at the ages between 20 and 30 than at any other period in life.

THE UNIVERSITY OF TORONTO.

The recent disaster to our provincial University has proved in many respects a veritable "blessing in disguise." It has evoked the kindest and warmest expressions of sympathy from all parts of the civilized world. It has stirred the generous instincts of the friends of higher education, at home and abroad. It has shown the proud position which the institution holds in the hearts and affections of Canadians, from ocean to ocean. It has exemplified the sturdy loyalty, devotion, and love, of her graduates for their *alma mater*. It has shown the wonderful vitality, energy, and capacity, of the Canadian people. It has demonstrated the eminent fitness of her authorities to rise equal to the occasion, and provide the remedy for one of the worst calamities that has befallen this country.

The University will be restored—more than restored—in a short time. While the building was still burning, the general plans for the restoration were completed. The work that was accomplished in a few days was simply marvellous. The Vice-Chancellor started from Ottawa while the fire was still raging. The Chancellor soon followed. Colonel Gzowski and the architect inspected the building, to ascertain the amount of damage, while stones, mortar, and cinders, were still falling. The Provincial Government, Board of Trustees, Senate, and various faculties, worked together with a will. Amidst that throng of noble workers one figure was ever conspicuous, showing the strength of a giant, and the wisdom of a Solon—Sir Daniel Wilson, the venerable and worthily beloved President of the University. He was here, there, and everywhere, working early and late, with ceaseless activity, ever displaying superior judgment, rare tact, marvellous energy, and wondrous powers of physical endurance, all of which excited the admiration, the respect, and the wonder of his co-workers.

Sir Daniel, while a professor, saw the grand structure, in its erection, grow from its firm foundations to its beautiful pinnacles. As a professor, and as President, the work of his life, the work he loved so well, the work which has borne rich fruit in the past, the work which will endure for generations to come, all lay within

its walls. Who can describe his feelings as he witnessed its speedy destruction by the relentless, devouring flames? Perhaps he himself could, with his wondrous command of the choicest of the Queen's English, but we doubt it. Who will attempt to describe the interest which he is likely to take in the restoration of the building, and the additions which are to be made? May his life be spared for many years to witness the completion of the work at present contemplated, and the increased success of the institution after such completion!

NURSES AND DOCTORS.

One of the most important products of modern medical teaching is the trained nurse. Florence Nightingale's noble work, in nursing the soldiers in the Crimean war, did not cease when the sick and wounded had recovered. The number of good women who show a disposition to follow her example is increasing from year to year. Training schools for this purpose have been established in connection with large hospitals in various parts of the world. The growth of such schools in efficiency, as well as in numbers, has been marvellous. Among the most successful of these is the training school connected with the Toronto General Hospital. The high standard attained by the pupils of this institution is well shown by the results of the examinations which they are compelled to undergo before receiving their diplomas. This satisfactory condition of things is largely due to the assiduity and ability of Miss Sniveley, who has charge of the school.

In an excellent article which recently appeared in the *New York Medical Journal*, a comparison is instituted between the trained nurse and the recent graduate in medicine, in which the latter is made to appear at a certain disadvantage. The following sentences are worth quoting in full: "Take a case of typhoid fever, for example. The young doctor has read more, he understands the pathology better, and very probably can repeat the list of complications (learned at a quiz-class) more glibly than the nurse can. But he has never watched a case from beginning to end, he has not had an opportunity himself of intimately observing all the ins and outs of the disease, the peculiarities of the patients, the frequency of the occurrence, and significance of complications. In short, he is worried and perplexed over his case and cannot help showing it, while the nurse is at her ease and feels at home in her work. This is soon perceived by the anxious friends, and dependence soon comes to be placed upon the words and opinions of the trained nurse, while the reputation of the doctor gradually wanes. The fact is, the educational system is at fault. The nurse spent all her pupilage in the wards, the doctor spent all his time in the lecture-room. He learned science, she learned art; and patients like and admire art, while they, at the time of their sickness at least, do not appreciate the beauties of science. Bedside experience was not required of him as a student, but nothing else but bed-side experience is required of him as a practitioner. A dissecting-room and dead-house experience and training afford no comfort to a living patient."

The writer of this article is probably referring to the courses in some of the New York Medical Colleges. We in Ontario are in a much better position in this respect than the profession of the United States. Our council demands attendance on four full sessions of six months each, while many of the degree conferring bodies across the line require only two or three. As a consequence, our students have a bed side experience which is extremely serviceable. We have made great advances in our methods of teaching in recent years, and still there is not enough time spent in laboratory and hospital work. The greatest obstacle now is the excessive number of didactic lectures which is required by the council and most of the universities.

We must acknowledge that a large proportion of our students neglect the art of medicine and surgery, to a certain extent, while cultivating science. Under the old apprentice system, the students had certain advantages which should not be overlooked. Our teachers, as a rule, fully appreciate this fact, and are making vigorous efforts to give thorough bed-side courses to their pupils. The hospital authorities are pursuing a wise course in assisting the teachers by placing the best possible facilities at their disposal. If the student possesses less knowledge than the trained nurse in the proper manage-

ment of a case of typhoid fever or pneumonia, it is to a large extent due to his own carelessness or negligence The system of holding clinical examinations, which is now in vogue, is doing much to show mere book-worms the folly of paying attention to theory at the expense of practice. All honor to those who are working so faithfully in the work of educational reform. We believe that their efforts will soon be crowned with success, and that in the near future the medical students of this province will have an opportunity of receiving a combined scientific and practical training which will be admirable in all respects.

Meeting of Medical Societies.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated meeting, 4th March, 1890.

The President, Dr. J. W. Rosebrugh, in the chair.

Dr. A. E. Malloch:

PARTIAL EXCISION OF SUPERIOR MAXILLA FOR EPITHELIAL EPULIS.

Mrs. F., æt. 58; consulted on 20th Sept., '89, by Dr. Mullin's request, regarding a growth of the hard palate.

The mucous membrane over the greater portion of the hard palate of the right side, and over the central portion of the left side, is raised, forming a flattish tumor of some consistency with ill-defined borders, presenting about its middle a scar. With the exception of the central incisors and left molars, the alveolar processes were destitute of teeth.

The swelling was first noticed in July, '89, when it burst, giving exit to some stinking pus; two teeth were then removed. Subsequently, in August, all the teeth from the right side, with the exception noted above. Later on the swelling was lanced without getting matter; the wound bled very freely. No history of specific disease. The glands under the jaw are unaffected.

Dr. Mullin and I agreed that the disease was an epithelial epulis, and advised operation. On 25th September, after chloroform anæsthesia the tongue was controlled by a strong ligature, passed through it a little distance from its tip; the upper lip divided in the middle line up to, but not into the nostrils. The cheek and lips were freed from the bones, from the posterior extremity of the right alveolar ridge to the canine tooth on the left side, and the nostrils separated from the bones from within. A deep groove was made in the right maxilla parallel to the alveolar process on the right side, at a level slightly above the floor of the nasal fossæ; the bony nasal septum was then divided with bone forceps, and the left maxilla was sawn through from the left nasal fossa to the side of the canine tooth, and backwards and inwards through the hard palate. The soft palate was then separated from the hard by the knife, and the piece of bone severed by bone forceps, cutting in the groove first mentioned, and connecting its posterior extremity with the opening between the hard and soft palates. The bone was then depressed by bone forceps, and completely separated by cutting a few shreds of soft tissue.

Subsequent treatment.—Well douching the parts with warm water frequently. She was sitting up on the third day, when two of the stitches in the lip were removed and plaster strip substituted. The three other stitches were removed two days later. By the 20th October the mouth was solidly healed and has remained so eversince. Microscopic slides from the tumor showing epithelial nests were exhibited by Dr. Olmsted.

The patient was shown to the members of the society. There appeared little or no disfigurement, and everything nicely healed as above described.

Dr. Algernon Woolverton:

LEAD POISONING.

J. S., æt. 26, of strong and muscular development, with good family and personal history, was first seen by me on the evening of the 20th December last. He was moaning and tossing himself about, and complained in distressing tones of an agonizing pain, chiefly referred to the upper half of the abdomen. He said the pain was continuous, but had frequent exacerbations, when it was almost unendurable. His face had a drawn anxious expression; the skin was cool; respiration thoracic, and a little increased in frequency; the pulse quite slow and soft, about forty-six per minute. On inquiry, I learned that he worked in a factory where lead was manufactured from the refuse material derived from the

distillation of coal oil. He had been working but a few days prior to the attack, the furnace having been shut down on account of a fire having taken place in the factory. Prior to the fire he had been working at the business for some months, and had never felt any ill effects from the work. Preceding the attack he seemed as well as usual, and showed none of the symptoms of lead poisoning. He worked during the whole night, but had to give up in the morning on account of severe pain. It is somewhat peculiar that the symptoms usually preceding lead poisoning were not present in his case. There was no constipation, loss of appetite, colicky pains, or emaciation; but the attack seems to have developed almost suddenly. Upon examining the mouth, the characteristic blue trail was pencilled along the gums. I found the bowels had not been opened that day. Upon inspecting the abdomen, there was no retraction of the walls, which is said to be characteristic of lead poisoning, but rather a slight distension accompanied with very marked rigidity of the abdominal muscles, which continued most persistently until after all the other symptoms had abated. This symptom I think worthy of your particular attention, for it impressed me more forcibly than all others, on account of its persisting and unyielding rigidity. It was as tense as that characteristic of peritonitis, but was not accompanied with pain and tenderness on pressure. Relief of the pain demanded first consideration. I injected one-half grain of morphia hypodermically, and left several half grain powders to be given at intervals of two hours if the pain persisted. I also ordered two ounces of castor-oil to be given at once, to be followed by two ounces of mag. sulph. if the bowels should not act. I also directed hot fomentations to be applied and to be frequently changed. On visiting the patient next morning I expected that there would have been some abatement of the pain, but found that such was not the case, nor had the bowels been opened. He had taken two and a-half grains of morphia during the night. I then directed that injections of hot-water and soap suds should be given and that the morphia be continued. Two or three of these injections were never returned per anum, having become absorbed, being retained on account of spasm of the sphincter.

The temperature still remained normal and the pulse slow, until the evening of the third day, when the pulse rose to 110°, and the temperature to 100-½° F. There was also at this time some vomiting, the bowels remained obstinately constipated despite frequent doses of mag. sulph. and copious injections thrown up through a long tube. The pain still persisted, although the pupils were contracted to pins' points, showing the patient was thoroughly narcotised. He was in a stupid, dazed state, but would answer on being questioned. When the temperature and pulse began to rise, I became anxious as to the result and requested a consultation. Dr. Miller being called in, we decided to give chloroform to relieve the intense sufferings, and to, if possible, overcome the great rigidity of the abdominal walls. We also passed a long tube along the rectum, and injected as much water as we could, but nothing came away with the injection. Chloroform was given until the conjunctivæ were insensible to the touch and the muscles of the extremities became flaccid and unresisting, and yet the abdominal muscular spasm did not yield; chloroform narcosis being kept up until a two-ounce vial was exhausted. When the effects of the chloroform wore off, the pain was as bad as ever. The prognosis at this time began to look unfavorable. We decided to substitute hydrate of chloral for the morphia, and obtained much better results. I do not think it would have been possible to have relieved the pain with morphia unless you had killed the patient; it almost seemed to aggravate the pain, and caused a feeling of great oppression in the head. Thirty grain doses of chloral, repeated every two hours, gave some relief and some sleep, and that drug was continued more or less frequently as long as the pain persisted. The next day, after the substitution of the chloral, the pulse again became slow and the temperature normal, but the bowels still refused to act, though no purgatives were given at this time on account of the vomiting, for I considered them useless, if not injurious, as long as the great rigidity and spasm of the bowels continued. It was not until the sixth day that the spasm of the bowels was overcome to such an extent that a passage from them was secured, from which time improvement set in. On the tenth day he was able to be up and about, considerably re-

duced in flesh, but otherwise not much the worse for the attack. At no time was there albumen in the urine. This is the severest case of lead colic that has ever come under my notice, and was especially interesting to me on account of the persistency of the spasm. Although the mortality is stated to be only from two to three per cent., I at one time feared a fatal termination to this case. The conditions for lead poisoning must have been very favorable in the factory, as all the employees, four or five in number, were attacked with more or less severity at the same time. One man had been employed at the business for twenty years, and had heretofore had no trouble from the lead. The method of procuring the lead is, briefly, as follows :

In distilling coal oil, three pounds of litharge (oxide of lead) is used for each barrel of oil. This is deposited in the black tar-like refuse which is collected after the distillation of the oil. This refuse is burnt in some open place, a brown, flakey, dry substance remains. This residue is put in a crucible furnace and a very strong heat applied, which causes a large portion of the lead to flow in a molten state from the furnace. while a considerable part is also driven off in a state of fumes, carried into pipes under ground, where the lead is deposited as a white oxide. The workmen are constantly inhaling these fumes, and as no great precautions are taken to prevent lead absorption, it is surprising that poisoning does not take place more frequently. The amount of lead taken in these cases must have been excessive, but harmful results are not always proportionate to the quantity of lead taken in. Small amounts, even 0.0015 per cent., if long continued, have been known to cause lead poisoning, and, on the other hand, large doses have been given for weeks with seeming impunity. Lead may be introduced into the system in a variety of ways, and it is often a difficult matter to discover the *fons et origo* of the poison. Sometimes it is due to the water in lead pipes or cisterns, especially when the water is soft; sometimes from drinking cider and beer and soda-water kept in lead utensils ; also from eating fruit kept in badly glazed vessels, and sometimes from canned fruit, the acid of the fruit acting upon the solder. It is well known that various trades and occupations are favorable to lead poisoning, such as plumbers, potters, type-workers, enamellers, painters. The colica pictonum must not be confounded, as is often the case, with the colica pictorum (the colic of painters). The former is a name given to a form of colic common among the people of Poitou, which is probably due to impure wine. Lead poisoning was known to the Greeks and the Arabians, who recognized the arthralgia and paralysis which sometimes follow this disease. In modern times Tauguerel des Plauche's (1830) work remains an authority upon this subject. It would seem that lead poisoning was more common sixty years ago than at present, as no less than 1,217 cases came under Tauguerel's observation. In every one of these cases colic was present—arthralgia in 755 cases, paralysis in 107, encephalopathy in 72, 17 of these latter cases were fatal. One attack predisposes to another, and many occur years after the first attack. Tauguerel relates the case of one painter who, for nine consecutive years, had attacks of lead-colic and other symptoms of lead poisoning, although he had ceased to follow his trade. Cats, dogs and horses have been known to have symptoms of lead poisoning, produced experimentally and from living in lead-infected atmosphere, or from drinking lead-contaminated water. Horses working in lead factories have had tracheotomy performed on account of paralysis of the larynx. Tauguerel was the first to point out that the blue line seen along the edge of the gums was due to a deposit of sulphide of lead in the substance of the gums, the decomposition of food affording a supply of sulphuretted hydrogen, which combined with the lead and caused the dark discoloration which extends in some cases to the whole mucous membrane of the mouth. The three most common sequelæ of lead poisoning are the arthralgia, paralysis, and encephalopathia. The last is the severest form of lead poisoning, and is found only among workers in lead. It may come suddenly with violent headache, and sometimes with amaurosis or severe convulsive attacks. Post-mortem appearances in these cases only give negative results. Lead paralysis may occur as early as the third day after exposure, or not till after years have elapsed. It affects chiefly the upper extremities and the extensor muscles, especially the extensor communis, then the triceps, and then the deltoid. This is in singular

contrast to the arthralgia, which chiefly affects the lower extremities and the flexor muscles. The paralysis may be confined to a single muscle, as the extensor of a finger, or involve the whole limb, or by gradual extension even the whole body. Sensibility is not usually affected, though there may be some circumscribed areas of anæsthesia. But the most characteristic changes take place in the nutrition of the paralyzed muscles. In a few weeks the muscles become very much wasted and atrophied, in marked contrast to the surrounding muscles, which retain their normal development. The prognosis is, as a rule, proportionate to the extent of the paralysis and of the atrophy. Post-mortem examinations show but few pathological changes, except in the affected muscles and peripheral nerves, and negative results in the central nervous system, thus rendering it very difficult to afford a satisfactory explanation of the various symptoms of the disease. Different investigators have described different pathological changes in the cord and medulla and brain, which is presumptive evidence that no definite pathological lesion has yet been discovered which may be stated to be characteristic of the disease. It was at one time thought that the lead acted upon the muscular fibres, especially the unstriped variety, but Heubel shows that this is not the case. He states that lead exists in the blood and all the organs in chemical combination with albumen. He says that lead cannot be detected by chemical tests prior to the destruction of the organic substances containing it. The amount of lead found in the system is comparatively small, not amounting in the average to .02 per cent., too small a quantity, one would think, to produce such grave results, and it probably can only be accounted for in some such manner as chronic alcoholic poisoning, that the circulation of a foreign poisonous material in the blood causes an abnormal nutrition of the whole system, but why it should cause colic (which is supposed to be a neurosis of the intestinal plexus) in one case, arthralgia in another, and encephalopathy in another, is not yet understood. I will not dwell upon the general treatment of this disease, for I believe time is the chief element in it, but the general indications are the relief of the pain and the overcoming of the obstinate constipation, and my experience points to chloral as being the drug best adapted to accomplish this purpose.

INGERSOLL OLMSTED,
Secretary.

Pathology.

BACILLUS TUBERCULOSIS *V.* GASTRIC JUICE.

Zagari (as reported in the *Centralblatt für Bakt. und Parasit.*) has recently performed a number of experiments for the purpose of determining the action of gastric juice upon the bacillus of tuberculosis. After feeding dogs with excrementitious matter from tuberculous patients, and also with the organs of those dead of tuberculosis—both being proven to contain bacilli in abundance—he found that so far from suffering damage from their unwholesome diet, some of the animals even became fat upon it. The excrement of the dogs on examination proved to contain bacilli in perhaps greater numbers than that fed to them. Inoculations with these sufficed to infect guinea pigs with tuberculosis, showing that the bacilli had well resisted the action of the gastric and intestinal fluids. This is the more noteworthy, since the acidity of the gastric juice of the dog is high.

Zagari also submitted tubercle bacilli to the action of gastric juice outside the animal organism, with the following results:—

After 3-4 hours exposure at 38° the bacilli still possessed their full virulence.

After 18-24 hours, their virulence was completely lost.

After 6-8 hours exposure, their virulence was somewhat diminished, the disease following inoculation of guinea pigs very slowly.

After 7-9 hours a *local* tuberculosis alone could be established.

Acidity of gastric juice of dog=0.159%; of consumptives whose excrement was used=0.0675%; of juice used in subsequent experiments=0.1652.

These results of Zagari agree very well with those obtained by Straus and Wurtz, who exposed various pathogenic organisms, amongst others, that of tuberculosis, to the action of gastric juice, having the same object in view as Zagari. The experiments were all made outside

the animal organism. Gastric juice was taken from dogs, men, and sheep, and the bacilli were exposed to it at a temperature of 38°C.

After 6 hours exposure, they found the bacilli to be still active, producing both local and general tuberculosis in rabbits and guinea pigs inoculated.

After 8-12 hours, an abscess was produced at the site of inoculation, and that healed rapidly without general infection.

After 18-36 hours, the bacilli had completely lost their virulence.

Judging from these results, we must come to the conclusion that so long as the gastric juice retains a sufficient degree of acidity, tuberculosis of the alimentary canal will be unlikely to occur. The practical application is not far to seek. We must, by some means, keep the gastric juice of tuberculous patients in its normal condition as regards acidity, or even increase it, so far as compatible with good digestion.

Clinical Notes.

A CASE OF INTESTINAL OBSTRUCTION.

BY ANTHONY OCHS, M.B., HESPELER.

I was called to see Mr. M., æt. 55 years, about 2 a.m., suffering from severe abdominal pain, which was paroxysmal. There was no tympanites or special pain on pressure. A hypodermic eased this pain and put him to sleep. Next day he was about, but began to feel very sick, and towards evening vomiting set in, at intervals at first of 5 hours, later of only 1½ to 2 hours. There was also a slight return of the pain. Mild purgatives were administered in tablets of aloin, bellad., and strych.; but without any result.

The following day, a copious enæma brought away a lot of hard masses, but without alleviating the nausea. In fact the vomiting became worse, and in the course of the next 24 hours, 12 large round worms were vomited; sometimes two at a time. The vomited matter became more and more offensive, until it was altogether fæcal. On the following morning another enæma was used, but only brought with it a small amount of slimy matter tinged with blood. Another enæma was again used, and in connection with friction over the seat of ileo-cæcal valve, succeeded in bringing away, as a first result, the 13th worm, with immediate relief.

There is no doubt that the obstruction was at the valve, and was caused wholly by the worms. It is worthy to remark here, that the patient had previously suffered (years before) from an obstruction, which was pronounced inflammatory, and it is probable there was some thickening or narrowing in its calibre.

EPILEPTIFORM CONVULSION PRODUCED BY EXALGINE.

BY GEO. ACHESON, M.A., M.B., TORONTO.

Believing I have had, to say the least, an uncommon experience with exalgine, I am tempted to relate the case, in the hope of eliciting further information in regard to the possible untoward effects of this drug from those who have used it more extensively, and to draw attention to the dangers of the indiscriminate use of the newer analgesics.

L. T., a young lady, aged 18, consulted me on the 25th of January last, during the prevalance of the influenza epidemic, suffering from the initial symptoms of a severe "cold," the most pronounced of which were pains in the head, back and limbs, feverishness, and sense of oppression in the chest. She was anxious to get immediate relief, and, having a solution of exalgine with me, I gave her at once a dose of somewhat less than 4 grains. About two minutes after she had taken it she complained that she felt "very funny," and she repeated this expression once or twice. Within five minutes she had a well-marked epileptiform convulsion lasting about two minutes, during which the tongue was bitten, and there was complete loss of consciousness. Consciousness gradually returned in about twenty minutes, with nausea and vomiting. On coming to herself she said the pains were all gone, and beyond a stupid feeling for some hours, no bad effects seemed to have followed the fit.

I have used exalgine as an analgesic in single 4-grain doses on several occasions, both before and since this case, and at no other time, has it produced any but the most satisfactory results.

The convulsion in this instance may perhaps be explained by the history of the patient. Her family history and her own temperament are highly neurotic; and about puberty she suffered from hystero-epileptic attacks, though for the last three or four years there has been no evidence of such a condition. At the time the drug was administered she was in a state of over-wrought nervous excitement, and resistance was at a minimum. Further, the stomach was empty, and the drug in alcoholic solution was completely absorbed almost at once. The nerve centres, therefore, in a condition of unstable equilibrium, were overpowered and lost their balance.

I may add that the exalgine used was manufactured by Brigonnet & Naville, and was made up according to the following formula:

℞.—Exalgine, gr. xxxij
Tr. Aurantii recentis,
Syr. Aurantii aa. ℥i
M.

Dose—℥ij.

PERITYPHLITIC ABSCESS.

BY J. SPENCE, M.D.

Case 1. Thos. C., æt. 40, married. Street-car driver. Has a fine physique; healthy, florid complexion, and six feet high; 200 lbs. weight—is the very picture of health. Has been driving a street car this forenoon, 7th Sept., 1889. Has been home to dinner. On his way back to work, after eating a hearty meal, he does not feel well, and calls at my office to consult me. He complains of a slight pain in the right iliac region; has felt some uneasiness here since last night, when he walked home from the Toronto Street Railway stables, a distance of about three miles. Temperature, normal; pulse, full and regular, about 70; tongue, clean and moist. A tumor, about the size of a hen's egg, or a little larger, situated midway between the anterior superior spinous process of the ilium, and the linea alba on the right side, is discovered. The upper margin of swelling is on the same level as the crest of the ilium. It is hard, non-fluctuating, and immovable. He does not complain of much pain when it is handled. The bowels are regular; once a day as usual. There is no distress in passing urine. Owing to the absence of the usual sequence and characteristic symptoms and signs of perityphlitic abscess, namely, pain, pyrexia, and swelling, etc., there is considerable difficulty in the way of a positive diagnosis. However, perityphlitic abscess is suspected as the most probable disease. Prescribed absolute rest in bed, and gave a grave prognosis if absolute rest were not secured and maintained. I also gave a dose or two of castor oil, to make sure that the bowels had really moved, and were not impacted with fæces.

Sep. 8th. I find, instead of going home to bed, my patient went down to report himself at the office. The pain had increased very much, and he had some difficulty in getting home, on account of its severity. His temperature now is 103°, pulse 85. His bowels have moved freely several times. He does not complain of much more pain than on the 7th, though the tumor has enlarged.

9th. No change in his condition worthy of note.

10th. At 6.30 a.m. I was called in a great hurry. Patient is suffering intensely; pains extending all over the abdomen. There is great tenderness. Pulse rapid, feeble, and almost imperceptible. Profuse perspiration. Greatly distressed countenance. Temperature has fallen to a little above normal. Complains of pain in the bladder, extending into the testicle. Perforation, or rupture of abscess, is diagnosed. Morph. sulph. is given in sufficient doses to quiet the pain.

I ask for an immediate consultation, with a view to operating, or considering its advisability. Consultation takes place in the evening. Consultant is satisfied that the case is one of perityphlitic abscess. Does not think abscess has ruptured into the peritoneal cavity, though he thinks inflammation has extended over peritoneum. Is opposed to the operation in the meantime, believing in "the policy of delay and palliation," which is sound doctrine, according to some excellent authorities, *e.g.*, Sands, Pilcher, and others. — N. Y. Surgical Society, Dec. 6, 1886. *Annals of Surgery*, Dec., 1889.

11th. 7 a.m. Patient is vomiting terribly—has been since 4 a.m. Vomit is hot and acrid, excoriating his tongue and lips; is dark and

grumous-looking; has a feculent odor. His distress is dreadful. He died at 4 p.m.

Drs. Hunter, McConnell, and myself, conducted the *post mortem.*

Autopsy.—On opening the abdominal cavity, a dark brown sanious, sero-purulent fluid gushes from the opening. The peritonitis has been diffuse, as the whole peritoneum is engorged. On reaching the right iliac region, a great quantity of yellow but offensive pus is found, between the coils of intestines, such as are not glued together with lymph, for in this region the intestines are for the most part bound together with lymph, and can hardly be separated. The abscess cavity comes in contact with the intestines but at one point, and that is the cæcal termination of the ileum. Here it is in close contact with the anterior wall of the intestine, its transverse diameter being about an inch and a half. The lymph, which surrounds the abscess cavity, extends to the cæcum on the right, but comes in contact with the bowels at no other point. The exudate has entirely surrounded the right ureter. The opening of the abscess into the peritoneal cavity is from its anterior wall, which is nowhere in contact with the anterior wall of the abdomen. No ulceration or gangrene of the mucous membrane of the vermiform appendix, cæcum, or ileum, is found on careful examination.

Remarks.—The pathology of this case is obscure. Yet the numerous and sudden stops of a street car, with their hand-breaks reaching to a level with the abdomen, supply the conditions of an exciting cause in any perityphlitic case in a Toronto street-car driver. But just why the peritoneal covering of the ileum should be selected as the point upon which or from which an abscess should develop, and not the vermiform appendix, which is considered by some, McBurney, and others, in their recent additions to the literature of this subject, and emphasized by L. S. Pilcher in his editorial on the same, as "the primary and essential condition of typhlitis, perityphlitis, or paratyphlitis," I cannot tell. Yet it is evident the vermiform appendix played no part in the pathology of this case.

Treatment.—I believe that Fitz's treatment, viz., an operation not later than the third day, would, very probably, have saved this patient's life. An immediate operation would have been better.

Case 2. John Mc., æt. 19, single; occupation, conductor on Toronto Street Railway.

History: Had crampy pains in the bowels, beginning on the 25th of Sept., 1889. Did not think them of sufficient importance to consult a physician for two or three days. Bowels were loose at first, afterwards constipated. Took "salts" repeatedly, but vomited everything. Consulted Dr. Ross, Sherbourne Street, on 28th. Says Dr. Ross "gave something to relieve the pain, and something to move the bowels." Bowels moved on the 28th; vomiting continued. Pain was very severe all over the abdomen. Was in a boarding-house, and wished to move to an uncle's on Stafford Street, in the west end of the city. Was allowed to move in the ambulance. As he was now too far away for Dr. Ross to give the attention required, the doctor advised the patient to secure the services of a neighboring physician. Dr. Ross diagnosed "acute peritonitis." Dr. Hunter first saw the patient on the 1st day of October—six days from the onset of the disease. I was called in consultation on the 2nd Oct., at 2 o'clock p.m. Found a patient with a pale, pinched, anxious, and distressed face. Hiccoughs were troublesome. Vomiting frequently. Bowels have not moved since the 28th, though he has been taking saturated sol. of salines, mag. sulph. and soda sulph. every 4 hours. Dr. Hunter says patient has been sinking fast since the 1st—even since he saw him in the morning. Complains of very great pain in right iliac region. We have no difficulty in mapping out a tumor, both by palpation and percussion. The upper margin of the tumor was more than an inch below an horizontal line meeting the anterior superior spines of the ilia. The maximum dulness was about two inches and a half internal to the anterior superior spine of the right ileum. Dr. Hunter and myself diagnosed a perityphlitic abscess. I introduced a hypodermic needle in supposed centre of tumor, but drew off no pus. Determined on operation; assisted by Drs. Hunter and Burt, I operated. Made an incision two inches and a half long, parallel to Poupart's ligament, over the point of maximum dulness; scratched a small opening into the peritoneal cavity, and introduced a finger carefully to feel for abscess. At once, without my being aware that the abscess was touched, the pus came welling out

of the abdominal incision. The abscess had burst within the peritoneal cavity, and the pus spread over the adjacent coils of intestines. The abscess cavity and appendix were examined; no perforation was found. We washed out the abdominal cavity, and abscess cavity, with hot carbolized water, in large quantities, till the water returned as clear as it was before entering the peritoneal cavity. Introduced a single drainage tube, and stitched up the wound.

9 p.m. Pulse, 140; temperature, 101°; resting fairly well.

Oct. 3rd 8.30 a.m. Temperature, 99°; pulse, 108-112 a minute. No hiccough or vomiting. Has passed flatus, and the bowels have felt like moving. Washed out the wound and tube with hot carbolized water, 1 in 40.

9.30 p.m. Bowels moved freely during the day. Pulse, 100; temperature, 99.5°; tongue moist; general appearance favorable.

4th. 8.30 a.m. Looks well; bowels moved four or five times in the night. Pulse, 92; temperature, 99.6°. Has been taking ice water and ice milk, also a saturated solution of salines. Temperature, 98.5°; pulse, 85 a minute. Feels hungry. From this date he progressed, without an unfavorable symptom, to complete recovery. He suffered severe tympanitic pains for about two weeks and a half. These were relieved by castor oil. No pus escaped from the abdominal cavity through the drainage tube.

Remarks.—1st. The prompt operation saved this patient's life, as the abscess would have ruptured within a very short time, or immediately, on any exertion.

2nd. Pus bursting within the abdominal cavity is not necessarily fatal, but our plain duty is to remove it as soon as possible, and make provision for the escape of any which may form afterwards. Treve's suggestion, "not to cut over the point of maximum dulness," could not have prevented the rupture of the abscess into the peritoneal cavity, because the abscess was not adherent to the anterior wall of the abdomen, and any effort to bring it forward to the abdominal incision would have ruptured it within the peritoneum.

Books and Pamphlets Received.

Tenth Annual Report of the State Board of Health of Illinois.

Atti della Società Toscana di Scienze Naturali residente in Pisa. Memorie, Vol. x.

Miscellaneous.

The following additions have been made to the Faculty of the New York Post-Graduate Medical School and Hospital: Charles B. Kelsey, M.D., Professor of Rectal Diseases. Charles H. Knight, M.D., Professor of Rhinology and Laryngology. Reynold W. Wilcox, M.D., Professor of Clinical Medicine. Dr. S. Lustgarten, formerly Privat Docent in Vienna University, Instructor in Syphilis and Dermatology.

Professor DaCosta, in treatment of *delirium tremens*, depends largely upon alimentation. Tincture of capsicum is of value not only as a stimulant, but increases the appetite. As to stopping the whisky, this should be done in all cases where possible, depending largely upon the amount of food taken by the patient. To give rest and sleep, ten grains each of chloral and potassium bromide, given every two hours (if indicated), is far preferable to opium for this purpose.

ONTARIO MEDICAL COUNCIL ELECTIONS.—The returns from recent elections show some changes in the *personnel* of the Council. Among the territorial representatives there will be at least two new men—Dr. A. Jukes Johnson, of Toronto, for Midland and York, in the place of Dr. Burns, and Dr. Rogers, of Ottawa, in the place of Dr. Cranston, of Arnprior. Dr. Russell, of Hamilton, the former member, was successful in his contest with Dr. Miller. There was an exciting contest in Malahide and Tecumseth between Dr. MacArthur, of London, the former member, and Dr. Sloan, of Blyth. Dr. MacArthur was declared elected, but we understand a protest will be entered, with a fair prospect of changing the result. In the collegiate representation Dr. Brettin will replace Dr. Buchan for Toronto University, and Dr. Thorburn will replace Dr. H. H. Wright for the Toronto School of Medicine. There will be two new homœopathic representatives in the place of Drs. Husband and Vernon, resigned—Drs. Luton, of St. Thomas, and Oliphant, of Toronto.