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HYPERCHLORHYDRIA.\*

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TORONTO.

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STRICTLY speaking, hyperchlorhydria cannot be considered a disease, but merely a symptom of many morbid conditions of the stomach, in which the most prominent feature is an increase in the hydrochloric acid and ferments of the gastric juice.

This is so very frequently the most marked symptom of the neurosis which it accompanies, that the name may be properly used to designate the pathological state. It is true that the name does not point to any anatomical lesion, but the fact that the hyperacidity may explain all the subjective disturbances of the patient, and may also form a basis for rational treatment, justifies us in looking upon it as a disease.

During the past fifty years many writers have recognized disorders of the stomach accompanied by hyperacid gastric juice. Pem-

\* Read before the Ontario Medical Association.

berton, Copland, Todd, Budd, Trousseau and others, observed this condition, but Reichmann, in 1882, was the first to study this state with our modern methods, and to him is due the credit of investigating the subject from a scientific standpoint. The publications of Riegel, Reichmann, Jaworski, and Glusinski, Ewald, Mathieu, Einhorn and others in recent years, have given us a great deal of information on a subject which was almost lost sight of, though observed so long ago by Pemberton, Budd, Trousseau and others.

It is the intention of the writer to consider the subject from a purely clinical point of view, calling attention to three classes of cases recognized by recent writers. These are :

(1) Simple hyperchlorhydria, which is present only during digestion, and absent when the patient is fasting.

(2) Hyperchlorhydria occurring in attacks like gastric crises or fits of migraine.

(3) Hyperchlorhydria accompanied by hypersecretion, both during fasting and after meals, and by dilatation of the stomach (Reichmann's disease).

It is very hard to draw the line accurately and say just where normal secretion ceases and excessive secretion begins. Ewald, Einhorn and others say that the normal degree of acidity of the gastric contents in healthy subjects one hour after Ewald's test breakfast is from 40 to 60, and have considered cases in which the acidity was between 60 and 70, or above 70, as pathological. The fact remains that it is impossible to say that some could not have a degree of acidity of more than 70, or even 100, continuously, and not suffer subjective symptoms. If there were no symptoms referable to the stomach, it is unlikely that an examination of the stomach contents would be made, and, therefore, the degree of acidity would not be recognized. From a large experience Einhorn says that though this would be possible the rule is that the greater number of patients with an acidity of 70 are not totally free from disorders of digestion. Generally speaking, therefore, we may conclude that a degree of acidity above 70 is pathological.

*Etiology.* The etiology of the different forms of hyperchlorhydria may be discussed in common. The disease occurs more frequently in adult life. The young are not exempt, and it is not uncommon among the old. Those who are neuræsthenic or neuropathic are often victims. Those given to abuse of alcohol sometimes suffer. It is more common among the wealthy and educated classes, among those who lead an indulgent, lazy life, who eat highly spiced foods, drink alcohol, and retire at unreasonable hours.

It is often found among those who suffer from grief, worry and mental overwork. It is sometimes found among the poor.

#### I. SIMPLE HYPERCHLORHYDRIA.

*Symptoms.* The symptoms of hyperchlorhydria appear gradually and often resemble those of nervo-motor dyspepsia, such as a sense of weight and fullness after eating, malaise, eructations, flatulence, and constipation. The suffering is greater than in cases of nervo-motor dyspepsia. The sense of discomfort increases, and, in from two to five hours after eating, instead of immediately after meals, pain of a severe character supervenes. This pain does not subside until food is taken again.

As a rule these patients soon learn what agrees and what disagrees with them, voluntarily giving up starchy food, and preferring that diet which is rich in albumin, such as meat, milk, and eggs. The ingestion of food of this class, or the administration of an alkali, relieves the pain. The severity of the pain in each individual case depends chiefly upon the nature of the food taken; thus, patients living on a vegetable or starchy diet suffer much more than those who habitually eat meat, eggs, and other albuminoids. In addition to the pain there is often more or less severe headache, or attacks of dizziness, which come on either with the pain or independently of it.

The appetite is usually not impaired, but rather increased, and unless improper or insufficient food has been given, it is not the rule for the patient to lose greatly in weight. During fasting the stomach is empty, or nearly so, not often containing more than 5 c.c. There is neither continuous hypersecretion nor permanent dilatation present.

On examination there is a diffused tenderness over the gastric region. There is not actual pain on pressure, but a tenderness not by any means localized.

Analysis of the stomach contents expressed one hour after the ingestion of Ewald's test breakfast of a half slice of bread and a cup of tea or water without milk or sugar, shows an increase of hydrochloric acid and digestive ferments. The filtrate digests egg albumin very quickly, often in a half-an-hour. Three or four hours after Leube-Riegel's test dinner the microscope will show that the meat has been perfectly digested; but, on the other hand, the starchy substances will be found unaltered, or simply swollen up. Lugol's solution added to the contents will give a blue or dark red color. Usually the increased acidity is due to the excess of hydrochloric acid, the difference between the total acidity and the amount of free hydrochloric acid as a rule being small.

The urine is often less acid than normal, and even alkaline, but not always, for sometimes the degree of acidity of the urine and gastric secretion are found increased at the same time. The writer has observed this in a case which came to his notice about a year ago. At the time of the attack he noticed that the acidity of the urine was markedly increased.

In the early stages there are often intermissions in the course of the disease, the patient suffering for days or weeks, then returning to health, the condition recurring without special cause, or after mental worry, grief, or overwork. The intervals become shorter, until finally the condition is continuous.

*Prognosis.* There is no danger of fatal issue, although, without rational treatment, the patient often lapses into a chronic state of ill-health. As a rule the prospects for recovery are good under judicious management, although in severe cases the condition may continue.

*Diagnosis.* The subjective symptoms pointing to hyperchlorhydria are, pain three or four hours after eating, which is relieved by taking an alkali or food, especially meat or that of an albuminous character, normal or increased appetite, sometimes thirst and generally constipation. There is no marked loss of weight nor cachexia. These symptoms, together with an empty condition of the stomach during fasting, and an increased amount of hydrochloric acid in the gastric contents one hour after taking Ewald's test breakfast, on repeated examination render the chain complete. Other morbid conditions giving rise to similar symptoms are gastric ulcer, biliary colic and permanent hypersecretion.

The pain in gastric ulcer, even if accompanied by increase of hydrochloric acid, does not respond so completely to alkalies as that of simple hyperchlorhydria. In gastric ulcer there is greater wasting from inanition. The vomiting of blood, though not always present in gastric ulcer, is never a symptom of hyperchlorhydria. Biliary colic without icterus or appreciable increase in the size of the gall-bladder may give rise to confusion, but in this condition the pains usually do not bear the same definite relation to the ingestion of food as in hyperchlorhydria, and are not relieved by food or alkalies. The pains in biliary colic are usually referred to the right epigastric or hypochondriac region. In hyperchlorhydria the pain is more likely to be confined to the epigastric region, but sometimes extending more to the right.

In continuous hypersecretion there is a large amount of fluid in the stomach during fasting, often 1,000 c.c. There is often vomiting, and the most severe pains come on during the night.

## II. GASTRIC CRISES.

In this class of cases we do not include those first observed by Charcot in locomotor ataxia and other cerebro-spinal diseases, but rather refer to a class resembling the gastric crises of tabes, occurring in neuropathic cases and without any anatomical lesion, with however hypersecretion and increased acidity. Rossbach described a condition, *gastroxynsis*, a nervous disturbance of the stomach, ushered in by severe headaches, accompanied by gastric pain and vomiting of very acid secretions. Reichmann described the same class of cases and called them by the name of "*gastro-succorrhœa continua periodica*."

In this condition there is a constant secretion of gastric juice, with attacks of severe pain and vomiting.

The onset is sudden as a rule, the disease being ushered in by a sense of distress in the gastric region, restlessness, followed by pain and nausea. In an hour or two vomiting of the gastric contents supervenes. Relief may follow for a short time but soon the symptoms return. The appetite is lost and thirst intolerable. Vomiting often occurs in the middle of the night or early in the morning during fasting. There is no food in the vomited matter, nothing but clear gastric juice with an excess of hydrochloric acids and ferments (rennet and pepsin), and a small quantity of bile. Although the patient may take neither food nor drink, vomiting of a large amount of clear fluid supervenes in a few hours.

There is insomnia, the pain preventing sleep. An attack often lasts for two or three days, then the nausea and pain subside. Constipation is marked. During the intervals the gastric juice may be normal or there be hyperchlorhydria present, but the stomach is always free from secretion during fasting. The disease may not manifest itself again for weeks, months, or even years, or on the other hand, the intermissions may become shorter and eventually the patient may become a victim of chronic hypersecretion. Between the attacks the patient may enjoy fair health with proper restrictions as to diet.

The following is the history of a case which Dr. J. E. Graham kindly referred to me for examination of stomach contents about a year ago. It may fairly be classed as a type of the cases called by Reichmann "*Gastrosuccorrhœa continua periodica*."

C. D., physician, æt. 52. Has always had a large practice and has worked very hard, giving his undivided attention to the pursuit of his profession, conscientiously denying himself for the benefit of his patients.

Has always been dyspeptic, suffering frequently from pyrosis. For the past ten years he has suffered from attacks of gastralgia of an aching character. During the past five years has had several attacks of acidity. With a few days of rest all acidity would pass and he would resume work.

Family history, nervous and dyspeptic. Habits good, dieting carefully, using no tea, tobacco, nor alcoholic beverages.

During the winter of 1895-96 he suffered from constipation, gastralgia, insomnia, and lost about eight pounds in weight. At times suffered from a feeling of great exhaustion, which would pass away with the action of a mild aperient. Stools gradually became lighter in color than normal, but never actually grey. When the stools were of light color he felt weak and exhausted, when they had a natural color he felt much better. He suffered stiffness and soreness of the muscles, especially in the morning. These symptoms crept on so gradually that he did not appreciate their importance. In June, 1896, after some months of hard work and some worry, he was taken with vertigo, soon followed by vomiting of a clear, odorless fluid, of intense acidity, which continued at intervals for three days and nights. Soon after this he was seen by Dr. J. E. Graham and the writer, who examined the stomach contents after a test breakfast. The total acidity was very high, about four parts per 1,000, due to excess of HCl, lactic acid absent and starch digestion retarded. The symptoms at this time were gastric, distress after eating and also when the stomach was empty, swelling and tenderness in the liver region, intestinal flatulence, constipation and the passage of large flakes or strips of mucous from the rectum.

The nervous symptoms were insomnia, aching and soreness of muscles, cold extremities, asthenopia, and loss of memory.

He was ordered a diet of milk, eggs, and meat, with as little starchy food as possible, complete rest of body and mind, and bismuth and soda to be taken after meals. The albuminoid diet was not fully carried out, the patient thinking that meat caused distress. For the next two months he continued to suffer and to lose weight. He saw Drs. Stewart and Lafleur, of Montreal, who found the same conditions, and again urged him to use a more albuminoid dietary. At this time lavage and the use of milk were the most helpful measures. In the month of October a most serious illness in his family caused severe nervous strain. In two weeks he lost eight pounds in weight, and the gastric distress was so much increased that he was compelled to live on milk alone. After a short time he became able to dispense with alkalies in his milk, and soon began

to take eggs and other albumins. Since that time progress has been slow and intermittent, but on the whole steady. At the present time gastric distress has almost subsided, unless when provoked by too much exercise of body or mind, or by a careless or hasty meal. During the attack the urine was alkaline. Return of normal acidity was associated with diminished secretion of HCl.

*Diagnosis.* The symptoms already described point to the condition present. The secretion of a large quantity of gastric juice between meals or during fasting is determined by passing the stomach tube. Examination will reveal an excess of HCl. It will be necessary to exclude ulcer or old cicatrices in the stomach, pylorus or duodenum, and all other organic lesions, also cerebro-spinal affections which cause similar symptoms of reflex origin.

### III. HYPERCHLORHYDRIA WITH CONTINUOUS HYPERSECRETION.

This condition was called gastro-succorrhœa continua chronica by Reichmann. It is characterized by continuous secretion of highly acid gastric juice even during fasting.

*Symptoms.* The patient suffers for a considerable time from dyspeptic symptoms, which are caused by an excess of HCl in the gastric juice. This is followed by pain, and very soon vomiting sets in. We have, in fact, all the symptoms of the condition described in gastro-succorrhœa continua periodica. At first these attacks occur at considerable intervals, but increase in frequency until the patient may have two or three spells of vomiting every day. Constipation is marked, and in some cases, but not always, the emaciation is great. At a later stage of the disease, when the glandular structure of the stomach has become atrophied, the hydrochloric acid becomes less or disappears. The hypersecretion, however, continues, and the gastric juice will contain a large amount of fixed chlorides, the mucous membrane being unable to elaborate the HCl.

These marked cases of hypersecretion called Reichmann's Disease, after the author who described them clearly in 1882, are attended with dilatation of the stomach and permanent stasis.

Tetany is a symptom very often found in diseases of the stomach. Bouveret and Devic claim that it is more common in hyperchlorhydria than in any other condition.

When we consider that simple hyperchlorhydria, if it continues, is likely to pass into constant hypersecretion, and this condition into gastritis and incurable dilatation, we cannot give the subject too much attention.



*Diagnosis.* Although the symptoms described above point to continuous hypersecretion, a positive diagnosis can only be made by examining the stomach contents after a test breakfast, and by passing a tube into the stomach and withdrawing the contents repeatedly during the fasting condition. After Ewald's test breakfast the amount of HCl is increased, starch digestion is incomplete, in fact, the starch products may be found unchanged, Lugol's solution giving a violet or bluish color. In about half-an-hour a thin slice of hard-boiled egg will be digested by the filtrate. The liquid withdrawn from the stomach during fasting contains no particles of food and no starchy substances. It is usually clear or colored slightly by a little bile. The difference in the rapidity with which albuminates and starches are digested is an important point in diagnosis, and can be determined better after Leube-Riegel's test dinner. In three or four hours afterwards there are scarcely any particles of meat present in the expressed contents, and the starches remain unaltered.

It is necessary in making a diagnosis of continuous hypersecretion to exclude all possible causes of stenosis of the pylorus by organic lesions, and gastric ulcer, which may be accompanied by hypersecretion. In cases of stenosis of the pylorus with dilatation, the liquid which the stomach contains during fasting also contains food particles which can easily be detected. In such cases the hypersecretion is secondary to the stenosis, and they should not be classed with those of primary succorrhœa. If care be taken to exclude all cases of dilatation from stenosis, the number of cases of continuous hypersecretion will be found to be very small. It is very essential that a diagnosis should be made, because of the great difference in treatment of the two affections, that of stenosis being surgical. In a case of ulcer the vomiting of blood or the presence of blood in the stools, together with a small circumscribed spot in the epigastric region, which is extremely painful on pressure, would point to that disease. The absence of these symptoms, and the presence of the symptoms of hypersecretion, would justify one in making a diagnosis of primary continuous hypersecretion.

The comparative infrequency of genuine cases of gastro-succorrhœa continua chronica is sufficient reason for referring to the following case, for the early history of which I am deeply indebted to Dr. Wallace, of Hamilton.

A. B., æt. 46 (born 1837), married, six children all in good health. He was a heavy smoker, but a total abstainer from all alcoholics. He was of a nervous, energetic temperament, a hard

reader, neglecting physical exercise to attend to his professional duties.

Family history good. Father died of typhoid at fifty-four, mother of pneumonia at fifty-seven years of age.

For several years before his illness of 1882 he suffered from flatulent dyspepsia with slightly acid eructations. For two or three years prior to this time, he complained at long intervals of some pain in the epigastrium. He always spoke of it as being of a burning character, and it began two or three hours after taking food. It continued nearly or quite up to the time of taking the next meal, and was usually relieved thereby. In the autumn of 1882, these so-called dyspeptic symptoms increased in frequency and severity. In January, 1883, they became very severe, and vomiting at irregular intervals supervened. The absence of food in the vomited matter was a frequent comment of his own. During the month of March and part of April he was confined to bed, suffering great pain and frequent vomiting. In the middle of April he went to Europe. While there he consulted Drs. Gairdiner and McCall Anderson. Considerable dilatation of the stomach was found by both. Dr. Murray, of Newcastle, also saw him, and on examining the stomach contents found free hydrochloric acid in abundance. During four months in Great Britain, he was confined to bed for four weeks at one time. At other times for one, two or three days. Emaciation was great, weighing 186 pounds in January, 1883, and 117 pounds in the latter half of the same year. On his return home in the fall of 1883 he slowly improved, but had frequent attacks of pain and vomiting. In 1885 and 1886 he became almost well. In the fall of 1886 a fire broke out in the institution of which he had charge, at which he worked very hard. Immediately he was again stricken down, and never again became so well. At times he had fair health, but had even then more or less frequent attacks of vomiting and pain. It was a common thing for him to take three or four glasses of fluid in twenty-four hours and vomit at one time two-thirds of an ordinary wash-basin of intensely acid ill-smelling fluid. Some days he would vomit that quantity, at each of two or three times. As a consequence of this loss of fluid the skin was harsh and dry. The act of vomiting was very violent, the fluid rushing from nose and mouth and the tears streaming down his face. Vomiting occurred very often at night or in the early morning. Thirst was intense and constipation always marked. Before profuse vomiting he would draw attention to the outlines of his distended stomach, and lying on his back would elicit a splashing sound. He consulted Dr. J. E. Graham, who found large percentages of free HCl in the stomach contents.

Dr. Wallace says, "So very acid were the contents that I have several times seen the mucous membrane of the pharynx, mouth, and lips peel off like wet tissue paper, immediately after a severe attack of vomiting. Blood would ooze from the surface, and he would be in a most pitiable state for two or three days." He would have attacks lasting for one, two, or three days or a week, and then be free for a week or several weeks. Sometimes the intervals were so short that the condition was practically continuous.

The patient's widow recalls four or five clearly defined attacks of tetany. Without suggestion she describes the attacks, and they were certainly typical. The elbows close to the side, and the forearm bent at about a right angle, and pronated, the wrist slightly flexed, the thumb strongly flexed and adducted. The characteristic deformity of the hand was present. The muscles of the neck stood out like cords, the corners of the mouth drawn back, but one side more strongly than the other. Any effort to speak was in vain. In one attack opisthotonus was present.

He had a severe attack of herpes zoster extending down one leg. There was a scattered chain of vesicles along the outer side of the thigh and leg, along the outer side of the foot, and some red and painful spots on the outer side of the planter surface, which would not disappear on pressure. The usual severe neuralgic pains of zoster were present.

In this case the occurrence of tetany and herpes zoster are of special interest. The contractions in the attacks of tetany were not confined to the muscles of the extremities as is the rule, but those of the back, face, and tongue were also involved. Einhorn says that tetany makes the prognosis bad in these cases, more than 70 per cent. proving suddenly fatal. The interesting feature in this case is recovery and fair health for six or seven years before death, which took place in the year 1896 from an apoplectic seizure.

#### TREATMENT.

In the first place the habits of life must be corrected. No rule will apply for all cases. Business and professional men who have been overworked, and who have suffered a great deal of mental worry should be sent to quieter surroundings, where the brain will have a chance to rest. Those who have been given to dissipation, late hours, and social functions should lead more abstemious lives. The wealthy and indulgent, with nothing to do, and who are inclined to pay too much attention to their health, should be provided with some kind of work. Some systematic bodily exercise should be

enjoined, also cold bathing, and an outdoor life as far as possible. In addition to ordering a suitable daily life for the patient there are other principles of treatment to be observed.

(1) Remove as far as possible all causes which stimulate gastric secretion.

(2) Neutralize the excess of HCl by alkalies, and if possible prevent the increased formation of HCl in order that the mucous membrane may be spared from its irritating effect.

(3) A diet depending upon the chemical condition of the stomach should be ordered.

(4) Treat the gastro-intestinal atony and the phenomena resulting therefrom.

(5) Pain not relieved by the ordinary measures for the removal of the excessive acidity should be treated with remedies directed to the relief of that symptom. It is not often, however, that morphia or other opiates are required.

Combat the neuræsthenic condition by correcting the habits of life.

The patient must give up all kinds of food, drink and medicines which irritate the already hyperæsthetic mucous membrane. Highly spiced foods, alcoholic beverages, high meats, strong cheese and some drugs, as iron, naphthol, bromides and iodides, are injurious.

Slow and proper mastication should be enjoined. The habit of eating rapidly and bolting food should be interdicted. The diet should consist largely of albuminous substances, meats, eggs, milk and the like. Starches should be limited. Some bread, not fresh, preferably toasted, and custards may be allowed, but potatoes, green peas, spinach and other vegetables should be interdicted in the beginning, and taken very sparingly as improvement advances. It is generally better to give five meals a day instead of three. In this way less may be taken each time, and the excess of HCl neutralized by the ingestion of proteids, thus sparing the mucous membrane of the stomach.

Mathieu gives some valuable suggestions as to the administration of alkalies. By estimating the degree of acidity, and as far as possible the amount of gastric juice secreted during the hours of digestion, he determines the excess of HCl which should be neutralized. Knowing the chemical equivalent of HCl and bicarbonate of soda to be as 1 to 1.48, he estimates the amount of the alkali required to neutralize the excess acid, and gives it in divided doses during digestion. The amount of gastric juice secreted after each meal being estimated at four or five litres, with an acidity of 3 parts to

1,000, there would be from 12 to 15 grammes of HCl to be saturated. This would require from 20 to 25 grammes of bicarbonate of soda. Sometimes large doses of bicarbonate of soda cause pains in the kidneys and vesical irritation. This was very marked in case No. 1 reported in this paper. In hyperchlorhydria, bicarbonate of soda should never be given in small doses on an empty stomach, for given in this way it has a tendency to stimulate the secretion of HCl. The amount of bicarbonate of soda may be lessened by giving prepared chalk and calcined magnesia in combination with it. This should be given just before the gastric pains are wont to appear, and repeated often enough to prevent gastric distress. The principle is that alkalis should be given in doses sufficiently large and frequently enough to neutralize the HCl in the gastric juice secreted during digestion.

In cases of hyperchlorhydria with continuous hypersecretion, larger doses will be required than in simple hyperchlorhydria.

Ewald and Hayem claim that sulphate of soda diminishes the rate of secretion of hydrochloric acid. Hayem says that Carlsbad and Vichy waters given in doses which contain about one drachm of this salt every morning before breakfast sometimes leads to the disappearance of the HCl entirely. The writer has tried it, but cannot say that such a result has followed. Indirectly it may act by helping to remove the constipation, improving the general condition of the patient, and thereby relieving the neurasthenia upon which the hyperchlorhydria depends. In cases of simple hyperchlorhydria, treatment by rest, alkalis, nitrogenous diet, and avoidance of all things which irritate the gastric mucous membrane is sufficient if persevered in until the secretions become normal.

When there is hypersecretion more rigid measures must be taken. Rest in bed, especially during attacks. The dietary confined to small quantities of milk taken frequently and with sufficient doses of alkalis to prevent pain. In a short time this may be followed by meat and eggs, and starchy food interdicted until the stomach is found to be nearly empty in the morning.

Lavage in the morning before breakfast is of great service. After washing the stomach out, it may be sprayed or washed out with nitrate of silver, 1 or 2 to 1,000. In washing out with the nitrate of silver, pass the stomach tube and pour in about 300 c.c. of the solution, allow it to remain for about five minutes and then syphon off.

Notwithstanding the fact that electrization has been supposed to stimulate the gastric secretion, some cases seem to respond to

the galvanic current especially when applied directly with one electrode in the stomach. Einhorn's "Deglutable Stomach Electrode" is the most recent of the many which have been devised.

The constipation should be treated by enemata, massage and electricity in preference to using purgatives very frequently, as they have a tendency to increase the secretion of the gastric juice.

In obstinate cases which do not improve by milder measures, certainly the spraying and galvanization should be resorted to. Just how electricity acts is not understood, why it should relieve symptoms which appear to be opposites is paradoxical. It may be that it helps to remove the innervation which forms the foundation for the gastric disturbance.

## A CASE OF INTRA-LARYNGEAL MYCOSIS.\*

BY PRICE-BROWN, M.D.,

TORONTO.

**M**YCOSIS FUNGOIDES, a comparatively rare disease, when it does occur usually affects some portion of the fauces, and is termed mycosis pharyngeus, mycosis tonsillaris, mycosis ligualis, etc., according to the situation of the mucous membrane affected by it.

The term mycosis, from the Greek word *mykes*, signifying fungus, indicates the character of the growth. It consists of a deposit upon the surface or within the crypts of the mucous membrane, of the spores of leptothrix mycosis. These gradually develop into plants of larger or smaller growth, shooting out above the epithelium and sometimes broadening, umbrella or mushroom-like, upon its surface.

The original source of the fungus is still a matter of question. The microscopical examinations of Toeplitz, Wagner, Damaschino, and others have proved, however, that the leptothrix is very frequently found in the mouth; and that a condition of impaired health would appear to be all that is required to secure the attachment and growth of the fungus within the pharynx. The peculiar feature is that, although the bacteria are prevalent in such large numbers in the oral cavity, they should so rarely find a nidus for development there, and should prefer the faucial region. Possibly the intense muscular activity of the mouth may act as a deterrent to leptothrix development.

Bosworth tells us that the leptothrix belongs to the schizemycetes group of fungi, a term applied to a variety of vegetable organisms found in drains, garbage, bogs, etc. They are also found in milk, urine, and watery solutions containing organic matter. The microscope reveals the thread or rod-like cells of the leptothrix, imbedded in amorphous granules. If treated with Lugol's solution, these

\* Read before the Ontario Medical Association, Toronto, June, 1897.

bodies assume a bluish tinge, indicating the presence of starch. The cells vary in form according to the anatomical region from which they are removed. When the cryptogam grows on the surface of the mucous membrane, it may be either purely superficial or be inserted in a wedge shaped manner into the parenchyma. In the one it is simply attached *en masse* to the flattened epithelium, and is homogeneously striated in appearance. In the other, where it penetrates deeply into the epithelium, the growth is denser and more granular; and the microscope sometimes fails to demonstrate the rod-like cells. Heryng believes that this obliteration is caused by the pressure.

When the mycosis enters still deeper into the crypts, the latter become dilated and filled with the fungus growth and degenerated epithelium. Staining with iodine clearly brings out the thread-like bodies colored blue, and also the masses of amorphous matter.

When situated in any portion of the fauces, mycosis is almost without subjective symptoms. It produces no inflammatory action, and is rarely attended by soreness or pain. The symptoms, if any, are almost entirely mechanical. As the plant increases and becomes scattered over a larger area, the movement of the pharynx may become somewhat restrained, the muscles slightly stiffened, and partial dysphagia may be the result. Occasionally, too, a slight irritable cough may be produced, but these symptoms are never very marked.

The disease sometimes occurs in persons possessed of ordinarily good health; although Damaschino says that impaired general health is a predisposing cause. The most frequent site of mycosis, and where it presents the largest development, is in the crypts of the faucial tonsils, next in the lingual tonsil, and next in the pharyngeal tonsil. Siebenmann and Schubert both recite cases in the latter region; but the growth in their cases was *aspergillus* instead of *leptothrix*.

In reference to its occurrence in the larynx I have only been able to find one case recorded. This was exhibited at the meeting of the London Laryngological Society in April, 1895, by Havilland Hall. It occurred in a man fifty-two years of age, and was situated on the left arytenoid cartilage. It was said at the meeting to be the first case on record.

Mycosis when examined presents small milk-white, opaque masses, projecting above the mucous membrane. They are soft and moist in appearance, though not easily removed. Usually a number of the plants are scattered over the area affected, varying in size from a pin's head to a millet seed or larger. There is no inflammatory areola around them.



The cheesy masses frequently found in the crypts of the tonsil differ from mycosis in being more fatty, yellower in color, and more easily removed ; while in the latter, tearing the growth away is invariably followed by slight hæmorrhage.

Mycosis left to itself, while it develops slowly, is a continuous disease, and often lasts for years. Bosworth says it might persist for a life time. While in the pharynx it develops no positively dangerous tendencies, except the gradual extension of the disease and the resultant depressing effect upon the general health. When in the larynx, however, it may be both formidable and dangerous if allowed to pursue its course unchecked.

The treatment consists in the eradication of the plant. In a few recorded cases this has been done with facility ; but in the majority careful and vigorous treatment has been required, and this has had to be persisted with in many cases for a long time before complete cure has been obtained. Tr. iod., tannic acid, arg. nit., sol. bichlorid., calomel insufflations, have all been used with more or less efficiency. Cauterization with chromic acid has its advocates and also curettage ; but the galvano-cautery carefully applied to each fungoid deposit is generally acknowledged to be more positive in its results than any of the other methods of treatment.

Personally, during a period of nine years devoted to throat practice, I have only seen two cases of faucial mycosis. One patient was a man aged fifty years. The disease was situated upon the right tonsil and base of the tongue, and it took nearly a year to eradicate it. After running the gamut of nearly all the methods of treatment, it finally succumbed to repeated applications of the galvano-cautery needle. This occurred about four years ago, and there has been no return. The other patient was a woman aged about forty years. Hers was situated on the right tonsil and pharyngeal wall. A cure was effected in a much shorter period by repeated applications of the nitrate of silver points.

The case of intra-laryngeal mycosis, which is the title of this paper, as it presented many points of interest, may be worthy of detail.

On April 2, 1897, Mr. H. B. C., a high school student, aged 19 years, of healthy parentage, was kindly referred to me by Dr. Nichol, of Cookstown. He was quite well until January last, when he took cold, which settled in his throat and lungs. Has been coughing more or less ever since, chiefly night and morning. Would often cough for half an hour or so continuously. Commenced to lose his voice about six weeks before the time mentioned. There

was a good deal of expectoration during the twenty-four hours, but not nearly as large an amount as would be expected from the amount of coughing done. Has severe pain in larynx after coughing, but no pain in swallowing, although sometimes there was slight dysphagia. Sleeps poorly, appetite poor, no night sweats.

Examination : At 11 a.m., pulse, 100 ; respiration, 19 ; temperature, 99.2° ; weight, 140 pounds ; spirometric pressure, 150 cubic inches. Had irregular hæmorrhagic septum and elongated uvula. The vocal cords and arytenoids were hyperæmic, probably owing to the continuous coughing. On the left ventricular band, near the centre and posterior end, there were several white spots projecting above the surface. One appeared to be as large as a small grain of wheat. There was also one white spot on the right ventricular band, in front of the arytenoid. Repeated and careful laryngological examinations, at different sittings, failed to find similar spots in any other locations. There was no areola round any of the spots, neither could I find any other lesion of the mucous membrane. The patient attributed the laryngeal pain to the rasping effect of the continuous, harsh coughing ; and there was little doubt that the cough itself was produced to some extent at least by the irritated effect of these intra-laryngeal growths. Although the patient had a long neck, the larynx as a consequence being deeply seated, laryngological examination was not difficult, and the spots seemed to be exactly similar to those in the cases of faucial mycosis I had previously seen.

Examination of chest : Right anterior thorax flat, left round and full. Prolonged expiratory murmur over right apex anterior and posterior. Percussion sound on right side dull, left normal. Basic rales over both lungs anterior and posterior.

The following day I had the sputum examined by Dr. Anderson. He reported it loaded with streptococci, but without tubercle bacilli.

The lung treatment that I ordered throughout consisted in the administration of creosote and cod liver oil internally, together with menthol and creosote inhalations twice daily at my office.

After removing a portion of the uvula, the throat treatment for several days was by sprays only. The cough was slightly relieved, but there was no change in the spots. On the fourth day, after applying cocaine, I rubbed them with a 50 per cent. solution of lactic acid. This was repeated three days later. Neither application was attended, however, by any perceptible result.

On the ninth day I fused chromic acid on the end of an alumi-

nium laryngeal applicator, and after applying cocaine, cauterized several spots with it. Two days later this treatment was repeated; but on examining the larynx on the morning of the thirteenth day, I found the spots of mycosis much the same as they were on the first day of examination.

I next tried the effect of brushing them with a 10 per cent. solution of Arg. nit. Here again the result was nil. Whatever effect the various applications might have had upon the surface for the moment, the leptothrix seemed to develop a greater vegetative power by the stimulation it received.

At last I resorted to the galvano-cautery. After applying a 15 per cent. solution of cocaine, the larynx was under complete control, and the epiglottis standing erect and not interfering with vision, the galvano-cautery needle, at a bright red heat, was passed into three of the spots. Several days later this was repeated on the remaining spot on the left ventricular band and the solitary one on the right. The spray treatment was continued as usual; and in a few days the sloughs from the operations disappeared. The patient remained in the city for several weeks afterwards, and up to that time there was no return of the mycosis. The temperature became normal; the cough ceased, and likewise the hoarseness. When he left for home three weeks ago he had gained six pounds in weight, and his spirometric pressure had increased from 150 cubic inches to 215.

One reason I have for reporting this case is the striking resemblance it bore in many ways to combined laryngeal and pulmonary tuberculosis. The age of the patient, the persistent cough, the aphonia, loss of weight, loss of appetite, increasing debility, continued fever, all pointed to tubercular disease as the probable condition. The absence of tubercle bacilli on first examination of sputum, even when tuberculosis is undoubtedly present, is not by any means unusual, and therefore cannot be taken as an infallible guide. In this case a second supply of sputum could not be obtained, as the amount of expectoration diminished rapidly after active treatment commenced, although the cough remained with little change. The consequence was, that laryngoscopic examination was the only thing that could reveal the true nature of the disease; and nothing but direct surgical treatment could remove the disease when found.

The lesson that this history teaches is but a re-affirmation of the well-known clinical truth that all cases of laryngeal cough, more particularly when attended by hoarseness or aphonia, should be submitted to a thorough laryngological examination. This examination should in a large measure be a guide to future treatment.

NOTE.—A letter received to-day from the boy's father states that his son is quite well again, and has returned to school.

# Selected Articles.

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## THE VICTORIAN ERA.

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### THE QUEEN AND THE PROFESSION.

In issuing this special number of *The Practitioner*, which is intended to be an abstract and brief chronicle of the advances made in the art of healing during the reign of Queen Victoria, I venture to add my humble tribute of congratulation to those which the whole Empire, and, indeed, the whole world, is offering to her Majesty on this unprecedented occasion. No class of the community has better cause to celebrate the glory of the Queen's reign than the medical profession, whose work has so largely helped to make it glorious. The success of that work has been materially promoted by her Majesty's enlightened patronage, and by the unfailing exercise of her influence in the cause of progress. The profession has been loyal to her, and she on her side has been loyal to it, and among its members she has found some of her most trusted advisers and most valued friends. At a very early period in her reign she gave a striking proof of her staunch loyalty to a faithful physician in defiance of popular clamour, and throughout her life she has been remarkable for the constancy and fulness of her trust in the medical counsellors whom she has honored with her confidence. Her Majesty has, in fact, always been in all respects, as the late Dr. John Snow said of her, "a model patient." In the mouth of a doctor this is the highest praise that can be given, for it implies qualities, not only of character, but of intellect, which are rare in any station in life, and which one hardly expects to find in the occupant of a throne, accustomed to be waited upon with bated breath and whispering humbleness, to have every wish gratified and to be humored in every caprice. It is not the least among the many proofs which the Queen has given of her fitness to rule her subjects that she has at all times been obedient to her doctors. The profession, however, unites with the nation in the heartfelt hope that it may be long

before her Majesty has occasion to practise this particular virtue more than is needful for the preservation of her health.

#### MEDICINE IN THE VICTORIAN AGE.

Queen Victoria's reign has already extended over two generations of men as the mere lapse of years is reckoned. Measured by the growth of human knowledge that has taken place within that period, these six decades are more than all the countless centuries before them. Medicine in particular has passed from the darkness of chaos and old Night into the dawn of a quickly-brightening sunrise. It is not a mere enlargement of the realm of Medicine that has occurred, but a revolution. With such swiftness has the change been accomplished that there are still among us men whose span of professional life bridges over the whole gulf between the past and the present. Sir William Jenner became a qualified practitioner of medicine in the very year of the Queen's accession; Dr. Wilks's reminiscences, published in this number of *The Practitioner*, go back to a time when medicine was as little of a science as metaphysics, and surgery was a rude and very ungentle art; Sir James Paget had been in practice for several years before anæsthesia was discovered; Lord Lister, Mr. William Cadge, of Norwich, and Dr. William Squire, of London, witnessed the first operation performed on a patient under the influence of ether in this country; and Dr. George Keith, of Edinburgh, took an active part in the first experiments with chloroform. So rapid has been the development of medical science that to men who left the schools twenty or even fifteen years ago, and have not since kept themselves abreast of the scientific movement, much of the language of modern writers is unintelligible; if they "walked the hospitals" once more, they would find themselves in a new world. So recent, indeed, is the birth of much of our knowledge that several of the most important advances indicated in the following pages are recorded by men who largely helped in their accomplishment.

#### MEDICINE 'TIS SIXTY YEARS SINCE.

To appreciate the progress which has been made in every branch of the healing art during the Queen's reign, the reader should try to carry himself back in fancy to its beginning. Only a few of the main points can be indicated here. In 1837 physicians were almost without instruments of precision. The stethoscope had, indeed, been born into the scientific world some years before, but it was still in its infancy, and was, indeed, chiefly used by superior

persons who had been to Paris, like "the young man in Boston town" of Wendell Holmes's ballad. But the thermometer, the laryngoscope, the ophthalmoscope, the sphygmograph, as yet were not; the microscope was but a toy; pathology could hardly be said to exist, and physiological chemistry was but a dream. The floors of hospital wards and out-patient rooms were slippery with blood shed by the lancet; and John Abernethy's eternal blue pill and black draught constituted the greater part of therapeutics. Of nervous diseases nothing was known; diseases of the heart were only beginning to be recognized; and a large number of diseases which have now been differentiated were grouped together under designations of learned length and thundering sound, but signifying nothing. A patient with a growth in the larynx had to resign himself to death by gradual suffocation. A man would carry in his bladder a stone weighing half a dozen pounds rather than submit to the surgeon's knife. Hospitals were ravaged by pyæmia, septicæmia, erysipelas, and gangrene; the operating theatres were in appearance, and too often in reality, little better than shambles. That this picture is not too highly colored is shown by the following extract from the introduction to Liston's "Practical Surgery" (second edition, London, 1838):

Were the recommendations given above better followed, we should have presented to us fewer of those scenes so shocking to humanity, which have been well described by one of the most interesting writers on surgery: the operators are there represented as agitated, miserable, trembling, hesitating in the midst of difficulties, feeling in the wound for things the position of which they had not understood, turning round to their friends for that support which should come from within, holding consultations amidst the cries of the patient, or even retiring to consult about his case whilst he was bleeding, in great pain, and awful expectation.

This was in hospitals where the surgeons had all appliances then believed to be necessary, and plenty of skilful assistance. Of country surgery we get a curious picture from "The Memoirs of Dr. Blenkinsop," written by himself (London, 1852), describing the first time in which he had to go to an amputation with his principal. He relates that the latter said to him as they were riding across country:

In this kind of practice it is necessary to have our instruments well secured; you see I have mine strapped fast around my body. I lost them once when I was going to amputate an arm; but I sharpened a cheese knife and borrowed the carpenter's saw, and got through it pretty well.

The nursing of the sick in private practice as well as in hospitals was left to women of a type which is scarcely caricatured by Dickens in his *Sairey Gamp* and *Betsy Prig*. In the matter of sanitation darkness was upon the face of the deep. Few physicians had given attention to the means of preventing disease, and by the profession as well as by the people plagues and pestilences were looked upon as something mysterious and altogether beyond man's control. It was not until some time after the beginning of the Queen's reign that the idea of checking the spread of disease and bettering the health of the people by legislation took practical shape.

#### OUR PROFESSIONAL FORBEARS.

The practitioners of medicine in 1837 were, for the most part, of a type that is now utterly extinct. If many of the physicians, such as Sir Henry Hallford, Sir Henry Holland, and Dr. John Elliotson (Thackeray's "Dr. Goodenough") were men of high culture and considerable practical knowledge of disease, the majority of them appear to have been little better than pompous pedants. The surgeons were, as a class, rough in manner as well as in speech. Dr. Wilks gives a graphic picture of them in his article in the present number of *The Practitioner* (see p. 586). It would be impossible at the present day for a hospital surgeon to exhibit the skull of an ape in the operating theatre with the object of suggesting a resemblance between the cranial conformation of the animal and that of a colleague, as Liston is said to have done behind the back of Syme when he was lecturing. Operators of the type of "Mr. Slasher" are as much things of the past as the amputating knife like a sword which Professor Lizars used to flourish. The medical student of the present day is almost as different from the Bob Sawyers and the Ben Allens of the Thirties as a High Church priest is from Parson Thwackum.

In justice to our professional forbears, it must be remembered that they had not the manifold advantages which we at the present day enjoy. The ancillary sciences were little cultivated, and hardly any means of research were available. The practice of medicine, as distinguished from "physic," was just emerging from the condition of a trade. Only twenty years before the Queen's accession very few general practitioners had any diploma or technical qualification whatever. Teaching, where it was to be had at all, was for the most part more ornamental than useful. Examinations were a farce. Of the educative and stimulating influences so abundant at the present day there were few. There were but three medical societies of any

importance—viz., the Royal Medical and Chirurgical, the Medical, and the Westminster Medical Societies. The British Medical Association existed only in embryo, in the form of an obscure and numerically insignificant union of provincial practitioners. The proceedings of the Royal Medical and Chirurgical Society were not reported till 1836, when the Council somewhat unwillingly sanctioned the publication of abstracts of the papers read before it; these abstracts were, however, condensed to the point of uselessness. Of some of the discussions which took place at these societies an idea may be formed from the fact that in the course of a debate on cholera one learned Theban announced the discovery that the disease was referred to by Shakespeare. In proof of this he said:

“When I was at the theatre last night and saw the play of the ‘Taming of the Shrew,’ Petruchio says to Katharine, ‘You are choleric,’ and to convince myself that the actor had made no mistake, I referred to the works of Shakespeare when I got home, and I found that the word had been rendered correctly.”

Medical journals were not only few in number, but, excepting in the matter of personalities, dull and indifferently illuminating. There was a general dread of publicity on the part not only of individuals, but of corporations and societies; in these circumstances the diffusion of knowledge by journals was very difficult.

#### THE DAWN OF A NEW ERA.

The accession of Queen Victoria marked the dawn of a new era. The voice of reform had, indeed, been making itself heard more and more clearly for some years before, but with little practical result. The University of London, which had with difficulty survived the perils of a particularly afflicted infancy, had begun its great work in the betterment of medical education; resident appointments in hospitals which had gone by favour—or by fee—were thrown open to competition, and throughout the medical world Napoleon's principle, *La carrière ouverte aux talents*, was coming to be recognized as essential for the progress of science and the credit of the profession not less than for the safety of the public. The spirit of scientific inquiry was everywhere quickened; the standard both of the general and of professional education was gradually raised; and men had to give some proof of fitness to practise before they were let loose on a defenceless public.

#### ANÆSTHESIA.

Then came the discovery of anæsthesia, which has been the most powerful single factor in the progress of the healing art during the



Queen's reign. Ether and chloroform made a transformation scene of the completest kind in the operating theatre ; where all was shrieking, struggling, confusion, and hurry, there now reigned quiet, order, and deliberation. Arms were no longer amputated at the shoulder while the operator counted, " not very slowly," *one ! two ! three !* but, on the other hand, procedures which could not have been thought of before came within the sphere of everyday surgery. Anæsthesia further made experimental research possible, and hence to it we are indebted for the greater part of the enormous advances that have been made in physiology, therapeutics, and other branches of medical science.

It is fitting that on this occasion we should gratefully recall the fact that the example of the Queen had a great influence in popularizing anæsthesia. In 1853 she allowed herself to be placed under the influence of chloroform at the birth of Prince Leopold. The anæsthetic was given on a handkerchief in fifteen-minim doses, and the administration lasted nearly an hour. The services of Dr. John Snow were afterwards greatly in request by ladies who, like the courtiers of Louis XIV., were anxious to have the same experience as their Sovereign. In reply to a lady of a particularly inquiring mind, who insisted on being told exactly what the Queen said when she was taking the chloroform, he replied : " Her majesty asked no questions until she had breathed very much longer than you have ; and if you will go on in loyal imitation, I will tell you everything." The patient showed her loyalty in the way suggested, and when she recovered consciousness the discreet Snow had vanished. It may be said without flattery that only a Queen of the most enlightened spirit would have ventured to submit to the administration of chloroform at a time when it was being denounced by fanatical divines as " a decoy of Satan." It may be added that it needed no ordinary courage to undergo a procedure which many doctors then considered extremely dangerous.

#### BACTERIOLOGY AND ANTISEPSIS.

Another discovery in the strictest sense " epoch-making " belongs to the Victorian age. Bacteriology has revealed to us a new world ; and the work of Lord Lister, so well set forth by Mr. Watson Cheyne in his paper published in this number of *The Practitioner*, has, so to speak, shown us how to achieve the conquest of that new world. *Vixère fortes ante Agamemnona* ; there were great surgeons before Lister. It is, nevertheless, the fact that scientific surgery begins with Lister, whose work will be remembered as the greatest

achievement of this reign of unexampled intellectual fruitfulness, when our wars and our political reforms, our laws and our literature, are forgotten.

Of the new possibilities in the domain of therapeutics that have been opened up by the discovery of antitoxins and the use of certain organic extracts I need say nothing, as the state of our knowledge on the subject is clearly described by Professor Leech in an article which will be found at p. 689. For my own part, I am inclined to believe that, although the results of these two methods have so far, on the whole, been rather disappointing, we have in them the germ of a medicine of the future which may give man a mastery over disease undreamt of but a few years ago.

#### SANITARY BETTERMENT.

Amongst the chief glories of her Majesty's reign must be counted the acceptance by rulers and statesmen of the great truth that the care of the health of the people is one of the first duties of a government. The gradual awakening of the political conscience to this duty and the results of this new spirit in practical legislation are shown by Dr. Seaton in another part of this issue of *The Practitioner*. The sanitarian is abroad nowadays. Statesmen have found *Sanitas sanitatum* a useful party cry. Hygiene is taught in board schools, and even vestrymen and guardians have ideas about drainage and ventilation. It should not be forgotten, however, that for all that has been done for the prevention of disease and the improvement of the public health the country is indebted primarily and chiefly to the medical profession. There is surely nothing on which we may more legitimately pride ourselves than this. The great wave of sanitary reform which began to rise soon after Her Majesty came to the throne has added largely to the wealth of the country, but it has swept away many profitable sources of revenue to the medical profession. Vast and flourishing industries have been called into being by the labors of men like Chadwick, Simon, Buchanan, and Thorne, but doctors have not been enriched thereby. The medical profession may, indeed, claim the unique distinction among all occupations that it does its utmost to make its own existence unnecessary. Yet the people, so far from being grateful, are instinctively suspicious of medical influence, and resentful of anything that seems to tend to increase it. It is a mad world, my masters!

#### THE WORK OF THE QUEEN'S SUBJECTS.

It has been said that her Majesty's influence has always been exercised for the furtherance of progress. It is on record also that

Prince Albert, whose enlightened mind naturally made him interested in the development of the healing art, played a prominent and useful part in the reform of medical education, and in the promotion of sanitary legislation. It must, therefore, be especially gratifying to her Majesty that in the great advance of medical science during her reign her own subjects have always been in the forefront. One need only mention the names of Bright, Addison, Graves, Charles Bell, Simpson, Spencer Wells, Lister, Parkes, and Hughlings Jackson, to appreciate how conspicuous a part our countrymen have played in the establishment of the new order of things. It is not too much to say that the work of these men and of others of less note, but scarcely of less merit, is the special glory of the reign of Queen Victoria.

#### MEDICAL SERVANTS OF THE CROWN.

Of all her Majesty's servants, none have deserved better of their country and of mankind than the medical officers of the Navy and Army. At the beginning of the Queen's reign our sailors and soldiers were ill-fed, ill-clothed, ill-lodged, and generally ill cared for; and diseases due to these causes were rife among them. Now they live under conditions as healthy as any class of her Majesty's subjects. The credit of this altered state of things belongs almost wholly to the medical officers; they have set an example to those of other countries which has borne fruit in an immense improvement in the physical and moral condition of civilized armies and in the mitigation of horrors of war. The fact may here appropriately be recalled that on the death of Edmund Alexander Parkes it was said by the great Austrian military hygienist, Baron Mundy, that "all the armies of the Continent should on parade lower their standards *craped*."

#### HER MAJESTY'S MEDICAL ATTENDANTS.

I have thought it would be interesting at this time to give a list of all the members of the medical profession who have during the Queen's reign held appointments at Court. Such a list has never before, as far as I know, been published. It will be found at p. 572. I may state that it is published with the sanction of Her Majesty, who was graciously pleased to give instructions to the officials, in whose keeping the records of such appointments are, to give me every assistance. It is only right to state, however, that without the help of Sir James Reid, Her Majesty's Physician-in-Ordinary, the list would not have been so complete or so accurate as it is. Sir James personally took a great deal of trouble in the matter, and I

take this opportunity of tendering him my warmest thanks for his kind and efficient assistance, and for much valuable information.

It should be added that most of the appointments are merely titular. Of the three Physicians-in-Ordinary appointed at the Queen's accession, Sir James Clark was the only one who had medical charge of Her Majesty. This duty he performed for many years. Sir William Jenner, who was appointed Physician-in-Ordinary in 1862, gradually took over the duties of the office before Sir James Clark's death, and he continued to be the acting Physician-in-Ordinary till Sir James Reid succeeded him in that capacity in 1889. Before Sir James had personal charge of the Queen, Her Majesty and the Royal Family were frequently attended for minor ailments by Mr. Brown at Windsor, and by Dr. (afterwards Sir William) Hoffmeister at Osborne, who were respectively the Surgeon-Apothecaries at those places. For a few years before Sir James Reid's appointment the Queen had a resident medical attendant, the late Dr. William Marshall, who acted under Sir William Jenner. Dr. Marshall was not, however, on the list of the Queen's physicians. Of the long list of surgeons on the list Her Majesty has not, I believe, had occasion to consult any but Sir James Paget, except once when she was attended by Sir Joseph Lister. In all her confinements the Queen was attended by Sir Charles Locock; Sir James Clark and Dr. R. Fergusson were present on each of these occasions, but took no part in the management of the case. On the last two occasions (1853 and 1857) the late Dr. John Snow administered chloroform. It will be seen, therefore, that although the list of Her Majesty's nominal medical advisers is a formidable one, she cannot be said to have suffered many things from many physicians. — *Editorial Comments, The Practitioner, June, 1897.*

#### A LIST OF PHYSICIANS AND SURGEONS, ETC., WHO HAVE HELD COURT APPOINTMENTS.

This list is, with the Queen's sanction, supplied officially by the Lord Chamberlain's Office, and has been corrected and supplemented from other sources; but, as the records of the Court medical appointments were not accurately kept during the earlier part of Her Majesty's reign, there may be some minor inaccuracies about that period. In all essential respects, however, the list is correct.

Asterisks are placed against the names of the present holders of the various offices.

*Physicians-in-Ordinary.*—1837-1870, Sir James Clark, Bart., K.C.B., M.D. 1837-1844, Sir Henry Hallford, Bart., M.D. 1837-

1852, William F. Chambers, M.D. 1852-1873, Sir Henry Holland, Bart., M.D. 1861-1862, William Bayly, M.D. 1862-1897, Sir William Jenner, Bart., G.C.B., M.D.\* 1870-1882, Sir Thomas Watson, Bart., M.D. 1873-1888, Sir George Burrows, Bart., M.D. 1882-1887, Wilson Fox, M.D. 1887-1890, Sir William W. Gull, Bart., M.D. 1888-1897, Sir Edward H. Sieveking, M.D.\* 1889-1897, Sir James Reid, K.C.B., M.D.\*

*Physicians Extraordinary.*—1837-1852. Sir Henry Holland, Bart., M.D. 1837-1858, Sir James Macgrigor, Bart., M.D. 1837-1859, Richard Bright, M.D. 1837-1875, Peter M. Latham, M.D. 1837-1874, Neil Arnott, M.D. 1857-1864, Robert Ferguson, M.D. 1859-1861, William Baly, M.D. 1859-1870, Sir Thomas Watson, Bart., M.D. 1861-1862, Sir William Jenner, Bart., G.C.B., M.D. 1869-1882, Wilson Fox, M.D. 1870-1873, Sir George Burrows, Bart., M.D. 1873-1887, Sir Wm. W. Gull, Bart., M.D. 1873-1888, Sir Edward H. Sieveking, M.D. 1874-1889, Charles J. B. Williams, M.D. 1875-1882, Sir James Alderson, M.D. 1875-1888, Arthur Farre, M.D. 1882-1889, George Owen Rees, M.D. 1887-1889, Sir James Reid, K.C.B., M.D. 1888-1897, Sir Richard Douglas Powell, Bart., M.D.\* 1889-1896, Sir George Johnson, M.D. 1890-1897, Sir Richard Quain, Bart., M.D.\* 1890-1897, Sir Alfred B. Garrod, M.D.\* 1896-1897, Samuel Wilks, M.D.\*

## THE CURE OF HEPATIC ABSCESS BY ABSORPTION WITH ILLUSTRATIVE CASE.\*

BY SURGEON-MAJOR W. B. BROWNING,  
Madras.

WITH reference to the title of my communication on the agenda, I wish, as a preliminary, to explain the circumstance under which I was induced to bring the subject to your notice. In looking up the literature of the subject, I was struck with the scantiness and unsatisfactory nature of the recorded cases—indeed since the days of Morehead, the material added has been small. I have made a fairly exhaustive search, and have in this paper compiled such material as I have found for the convenience of others.

It occurred to me, therefore, that a useful purpose might be served if the present case, in itself an interesting one, were the means of opening a discussion, and thus obtaining the recorded opinion of the members, on the general question. With increased accuracy in diagnosis, and with the post-mortem records of our hospitals, there are doubtless cases of this kind recorded; but, like much other valuable information, it lies buried in our hospital archives, where it will lie till hospital registrars are appointed.

*Case.*—C. R. consulted me on the 16th August of this year. He complained of markedly localized pain over the *left* costal arch; the pain was intermittent in character, and was affected by posture; when lying down there was merely a dull ache, and even at times complete freedom from discomfort; the erect posture, deep inspiration, and the ingestion of cold fluids increased the pain. On inspection, the *right* side over the hepatic area was relatively more prominent, and the intercostal spaces appeared fuller than on the left; over the right lobe there was nothing abnormal detected, or complained of. Turning now to a closer examination of the painful site and its surroundings; the pain was referred to an area corresponding vertically to the cartilages of the seventh, eighth, and ninth ribs,

\*Read before the South Indian Branch of the British Medical Association, 18th December, 1896, and reproduced in the *Record* by request.

and transversely from the costal margin outwards about two inches; so far as could be ascertained by percussion, there was dullness over all this area, as also in the epigastrium, occupying the upper two-thirds of the space between the navel and the ensiform cartilage; I may say here, however, that the tenderness on percussion, rigidity of the muscles, with the well-known variability in the size of the left lobe, all tended to obscure the diagnosis so far as enlargement was concerned. On palpation the tip of the cartilage of the ninth rib on the left side was found to be unconnected with the others; there was no history of injury; no friction sound could be detected over the above area, but a bruit was easily developed in the epigastrium on slight pressure. The respiratory murmur was normal over both bases, temperature 98° mid-day, pulse and respiration normal, tongue clean and moist, motions not deficient in bile, no general appearance of illness. Beyond, then, this localized pain, and a probable enlargement of the left lobe and a possible fulness over the *right* side, there was nothing to guide one except the previous history; and to which I would invite your particular attention, as it has an interesting and important bearing on the case.

The patient, a man of abstemious and active habits, came to India in 1881, and enjoyed excellent health until the autumn of 1891 and spring of 1892, when he had what he designated as "liver" for about four months on and off; from this he appears to have "completely recovered." In August, 1892, he had another attack, after which he went to England for three months and became quite well. In August, 1893, he became again ill with "liver and remittent fever"; he was invalided to England, where he remained fifteen months. In England, in the months of June and July, 1894, he had another attack of "liver," from which he "completely recovered" and returned to Secunderabad in October, 1894, where he stayed until posted to our hill station, Ootacamund, in June, 1895. On his arrival at Ooty he developed "congestion of the liver," not sufficiently bad apparently to confine him to the house; with this exception, both at Secunderabad and Ooty, he enjoyed the best of health; he entered into all the sports of both places, hunted and played polo, etc., and, according to himself, "never felt better in his life."

In the foregoing history I would draw your attention to the fact that the patient was ten years in India and was never seriously ill; that he then had what one colloquially calls "liver" in 1891; again in 1892, 1893, 1894, and 1895, and that between the attacks he was, so far as his feelings were concerned, perfectly well.

*History of present illness.*—This commenced quite suddenly on the night of July 26, when he got wet and chilled out driving, and next day complained to his then medical attendant of fever, pain over the arch of the ribs left side, and an occasional ache in the left shoulder, which, to use his own expression, “connected with the pain over his left side. The stools were also deficient in bile. He was confined to bed for over a week ; the above symptoms subsided, his temperature was said to have been normal, and he returned to out-door life, but the pain which had never quite left him returned, and he then came under my care with the symptoms before mentioned.

At this time, August 16, I made a mental provisional diagnosis of peri-hepatitis with adhesions, connected with old liver troubles. His temperature was taken, and a regular evening rise to  $100.5^{\circ}$ , on the average, was found to be present. The history from August 16 until September 26, when I left Ooty, I summarize as follows : Generally speaking, matters continued in a state of *statu quo ante* ; there was practically no improvement, the pain continued much the same, with this exception, that he could move about with greater comfort and drink cold fluids ; there had been a constant evening rise of temperature to  $100^{\circ}$ , being generally normal in the morning ; pain in the left shoulder, to which I have before referred, returned for a short time ; he became thinner, and lost color and appetite. He had a change to the plains, Coimbatore, which effected an improvement ; his pain became less, his appetite better, and his temperature fell to an average of  $99.5^{\circ}$ , at which it remained after his return to Ooty until he incautiously exposed himself to a fresh chill, and had an exacerbation of all his symptoms. Towards the end of September he had several curious “spasms of pain” ; these came on quite suddenly, were referred to the epigastrium ; there was a “horrible sensation of tightening,” and fear of impending dissolution ; the longest attack lasted two minutes. There had not been any change in the scanty physical signs during all this time, but my original impressions had further developed, and I considered that actual suppuration must be present, and that further measures would sooner or later have to be adopted. On September 13 I explored him with a fine needle under the costal arch with a negative result. On September 17 I asked Dr. Branfoot to see him in consultation with me ; he concurred with my view of the local condition. As I was leaving the station I did not elect to take any further measures then, neither did the patient wish it ; he was advised to leave the hills with as little delay as possible, I saw him



again in Madras on October 16 ; there was no further change in the physical signs except that he was very much thinner. The hepatic area on the right side looked more prominent than before ; he had suffered severe pain from the effects of the railway journey, and altogether looked worse. I decided to operate.

*Operation.*—Assisted by Dr. Branfoot, on the morning of October 20, I opened the abdomen in the epigastrium in the median line, through a three-inch incision. The right lobe was visible, and appeared healthy. There were no adhesions, the surface was smooth, shining, and exhibited no signs of pressure from behind. The falciform ligament, which was found to the left of the incision, was now cut across, and over the liver corresponding with the edge of the left costal arch small, white specks of recent lymph were visible ; on passing my finger in under the costal arch, firm adhesions were found about one inch or more inside the edge of the arch, and occupying about three or more inches vertically ; the liver in this situation was doughy, and retained the impress of the finger ; very marked pulsation of the left lobe was also noticed, probably cardiac. It was now evident that further examination could be carried out more easily from an incision parallel, and close to the costal arch ; the upper and lower ends of the first incision were therefore closed, another three-inch incision, which cut through the rectus muscle, made along the arch commencing from the middle of the first incision. The stomach could now be seen and some intestine, but no adhesions in this direction ; the finger was passed under the left lobe towards its left border, and it was then further evident from the thickness of the organ in this direction that one had an abscess or new growth of some kind in the left lobe : no very detailed examination was considered advisable or necessary in this direction. I now passed a needle into the left lobe ; the first two punctures were blank, at the third, under the arch, and about one-and-a-half inches from the surface, the needle grated on a hard substance which was punctured, and, on withdrawing the piston, very thick pus welled slowly up. I may remark here that the pus drawn at this time, and subsequently, was so very thick that in the sterilized fluid in the syringe it lay in coils for quite a considerable time.

Commencing at the lower end of the adhesion I now stitched the liver to the peritoneum lining the abdominal wall ; this was fairly satisfactorily done, until the upper part of the incision was reached ; here the sutures cut through the liver tissue when the slightest tension was applied ; a second row of interrupted sutures was then put in. I now tried with several different-sized needles to

again strike the abscess ; but, although I grated against the capsule more than once, I failed to find pus. I passed a bistoury into the liver, and with a dressing forceps enlarged the opening, still with no result ; the hæmorrhage was now sharp, the patient had been a considerable time under the anæsthetic, and one felt that there was a danger of tearing through the sutures, so it was deemed advisable to suspend further operations. The wound in the liver was plugged with iodoform gauze, and the parts dressed in the usual way. No ill results followed the operation, and the patient rallied from its immediate effects very well. The dressing was removed 92 hours later, and then, commencing to the left of the opening in the liver, I passed a long fine needle into its substance upwards and outwards, and about  $1\frac{1}{2}$  inches from the surface I struck the capsule, which was so hard here that on mere pressure the needle rebounded from it ; with a gentle boring motion I got into the cavity, and then passed a Pollock's knife down by the needle ; not being sure of the extent of the abscess, nor of the exact situation of the surrounding parts, I made a comparatively small opening ; I passed a director into the abscess cavity with a view of ascertaining its size, and was surprised to find that it extended far beyond the confines of the liver ; passing upwards, outwards, and backwards, the cavity extended at least six inches. A portion of No. 7 catheter was passed into the cavity to act as a drain, and alongside of it a piece of fine sea tangle. Regarding the tangle, I subsequently used two other pieces until I had the opening dilated sufficiently large to receive two large pieces of drainage tube. The dilatation with the sea tangle caused the temperature to run up to 103.8. The pulsation before-mentioned ceased at once when the abscess was opened, and the pain, the most prominent symptom all through, was at once entirely removed. An anæsthetic was not used when the abscess was opened, and the patient experienced no pain.

The discharge was of the usual type, but for the first day *very* thick, as before remarked ; it was subsequently examined microscopically ; nothing out of the common was detected.

The subsequent history does not present anything unusual, except that the temperature did not fall as satisfactorily as is usual.

On the 4th November a faint pink tinge was noticed in the sputa, which developed during the night into distinct hepatic pus ; this had been anticipated for a week before, as the usual physical signs were present ; the quantity spat up was collected, and measured about four drachms ; the cough, which had been troublesome for the preceding week, ceased after this, and the temperature fell to

normal. It rose again on the 15th November, and coincident with the rise the discharge, which was by this creamy pus, became more profuse, thick, discolored, and curdy.

He left for England on the 25th November, still wearing a large drainage tube, which I fear he will have to wear for a considerable period, as the firm adhesions and non-collapsible walls must mean a prolonged suppuration.

*Remarks.*—I think there cannot be any doubt that this was a case of an old hepatic abscess, dating back to 1891 or 1892, which had to a certain extent become encapsuled and then absorbed; the history points to this conclusion, and the hard capsule admits of no other explanation, unless possibly that of suppurating hydatid; there is nothing to suggest this latter, and no hooklets were found. But this abscess was more than an encapsuled abscess, as seen by the size of the cavity. Was there another abscess that had communicated with the encapsuled one, or had the latter worked its way outwards, forming a larger abscess between the diaphragm and liver? I think the latter is the more rational explanation.

We have all seen cases of so-called hepatitis, in which differences of opinion have existed as to the presence or otherwise of pus, and in which the patient has been sent to Europe; he recovers, and some say with an "I told you so" sort of air that no abscess could have existed, and that exploration recommended, perhaps, was unjustifiable. In some of such cases chloride of ammonium has been given, and a small few, therefore, some years back, looked upon it as a sort of specific. But there is a further phase of these cases, and one to which I would specially draw your attention: a variable period after their return to India they again become ill, again they go home, get well only to get ill again on their return, until finally they either sever their connection entirely with this country, or they return once too often, remain too long, and develop an hepatic abscess. The case I have read to you exemplifies this type fairly well; most of us have seen such cases, and I think I am correct in assuming that we look upon them as cases of encysted hepatic abscess, which become partially cured and quiescent on leaving the tropics, but which under given conditions light up again. Although, as I say, most of us recognize this train of events, yet nowhere have I seen the inference therefrom recorded in a definite form.

Fayer describes the sequence of events, but apparently puts a different interpretation on them; he says that some individuals "seem to be so *susceptible*"\* as to be totally unable to tolerate the

\* The italics are mine.

climate, and, though perfectly healthy in temperate latitudes, become affected by liver disease directly they return to India"; he says that he has been compelled to invalid officers on this account.

Another possible explanation of such cases that has occurred to me is that there may be cases in which liver inflammation *short of suppuration* occurs, the result being a damaged tissue prone to again undergo inflammation under given conditions; this idea is entirely based on analogy; take, for instance, the familiar example of pelvic inflammation in women; they recover from it in many cases most completely, but one knows what a smouldering fire exists, and how apparently trivial causes set alight the old troubles, and a most violent inflammation results. Why should not the same occur in the case of the liver?

As to the general question of encapsulment and absorption of hepatic abscess, the following is all I have been able to find. Morehead says that cases occasionally present themselves in which the existence of abscess has been undoubted, and in which the fluctuating swelling gradually lessens and finally disappears without any appreciable discharge, and he says that this inference regarding cure by absorption is further strengthened by post-mortem examination; I cannot accept the first part of the above as in any way conclusive, and I more than doubt the possibility of an abscess which appears as a large "fluctuating swelling" being absorbed; he, however, gives three cases in which post-mortem examination "showed hepatic abscess in process of absorption"; two of these appear to me to be open to doubt; the third appears to have been a clear case of the kind. Dr. Nicoll, in the *Madras Medical Journal*, Volume III., records a case of spontaneous absorption of a very large abscess; there is no record of the stools, etc. In the same journal, Volume VI., Dr. Innes records a case in which, when the propriety of puncturing a large fluctuating abscess was under consideration, it disappeared. Waring records this as a case of cure by spontaneous absorption. In the *Medical Times Gazette* for 1884 a case of this kind is also recorded. Frerichs says that the question is one to which it is difficult to give a positive answer; analogy is in favor of the possibility of such occurrence. In Murcheson, whose section on tropical abscess has been edited by Sir J. Fayrer, it is stated that small tropical abscess may exist for years in a quiescent form, and then undergo enlargement, and burst. Fayrer, in his work on tropical diseases, says: "There can be little doubt that abscesses may be absorbed; the symptoms during life pointing to the formation of matter have in a few exceptional instances subsided, and all

signs of mischief disappeared with restoration to health, leaving it almost certain that an abscess had formed, and then spontaneously disappeared." Sir Joseph apparently writes from his own large clinical experience, but does not appear to have an opportunity of verifying his opinion of such cases either by dissection during life, or post-mortem.

Virchow, as quoted in Ziemsen, says that "reabsorption of the fluid contents occurs ; interstitial tissue develops ; a cheesy or calcareous mass develops with a capsule of cartilaginous consistency." This only occurs, he says, in small abscesses. McPherson says, in Quain's Dictionary : "There is a strong *presumption*†

† The italics are mine.

that liver abscess is occasionally absorbed, and also that it may remain latent for a long period" ; and, again, "In some cases where there has been a strong presumption that the abscess had existed for four or five years, the walls have been found much thickened and almost cretaceous" ; he does not appear to quote any case within his own experience. Maclean also mentions the possibility of hepatic abscess becoming partially absorbed and encapsuled ; he gives a very gloomy prognosis of such cases from the fact that they rupture suddenly and unexpectedly ; cases of hepatic abscess shown to us at Netley, in which there was a thick capsule, admit of other explanation ; as far as I can recollect, they had all opened into the bowel. Budd speaks of encysted abscess, and mentions the case of a colleague of his who had, he says, "his liver studded with abscesses, but was still competent to do all the duties of profession." *Indian Medical Record.*

## Clinical Notes.

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CENT IN A CHILD'S OESOPHAGUS FOR NEARLY TWO MONTHS—SKIAGRAPH—REMOVAL.

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BY DR. EDMUND E. KING,

TORONTO.

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THE patient, a bright child between three and four years of age, was playing on the floor with a cent and some toys. When the child was picked up the cent could not be found. The possibility of the child having swallowed it was thought of and an emetic given, but without result. On examination it could not be located, and it was thought that if the child had swallowed the coin it would pass into the stomach and out *per via naturalis*. The little one refused solid food. Would take liquids very sparingly, and swallowed with great difficulty. A part of liquid would regurgitate. She vomited frequently. This state of affairs continued for about two months. She lost flesh and was failing fast. I made a skiagraph of the child's neck and located the coin. It showed distinctly on the left of median line, about on a level with the articulation of third rib and sternum. It was removed with very little difficulty. The child made an uneventful recovery. The time of exposure was four minutes and the resulting skiagraph very satisfactory.

61 Queen street east.

## THREE CASES OF POISONING BY METHYL BLUE.

BY A. J. HARRINGTON, M.D., M.R.C.S., ENG.

TORONTO.

SEEING the report of the successful treatment of gonorrhœa in the B.M.J. of January 16, 1897, by James Moore, of Belfast, I adopted his plan and was exceedingly pleased with it on the small number of cases in which I gave it a trial. His prescription was :

Methylene blue, grs. iij.  
Potas. citrat, grs. xv.

To be administered three times a day, followed later on by an astringent injection of alum, three grains to an ounce of water three times a day.

On May 23 R. J. came to me with an acute attack of gonorrhœa and I prescribed thusly :

Methyl blue, grs. iij.  
Potas. citrat, grs. xv.  
First konseal, mitte xii.

One three times a day.

This prescription was put up by same dispenser, and the patient took the first konseal at 2 p.m. and at 5.30 p.m. he had rather a distressing attack of vomiting. He came over same night, and explaining his condition, I concluded it had resulted from an irritable condition of his stomach, and advised him to continue his medicine. Saw him again on 28th, and he said he had faithfully tried and could not retain them, and that they purged him very much. I then made an investigation and found that the chemist had gotten a fresh supply of aniline, and that the new stock he had purchased was Merck's methyl blue (pyoktanin) and not methylene blue at all. In my first prescription I had written out the prescription in full, methylene blue, but in the latter and in cases two and three, which had similar symptoms, I had abbreviated and written methyl blue, not thinking that methylene blue was an entirely different preparation from methyl blue or pyoktanin.

Cases two and three were similar, main symptoms being vomiting and diarrhœa.

## BROMOFORM ANÆSTHESIA.

BY JAMES WALLACE SMUCK, M.D.,

TORONTO.

THE object in presenting these clinical notes is to show the result obtained from an overdose of bromoform, which was being used as a cure for pertussis.

CASE. S.C., æt. 6, female twin, in the winter of 1896 contracted whooping cough. I decided to try bromoform, but was unable to find how best to administer it. I made the following mixture, however :

R Bromoform ʒ ii.  
Aqua ad. ʒiv.

Sig. A teaspoonful every three hours during the day. (Shake well before using.)

Bromoform will not mix with water, consequently it required a severe shaking before each dose was administered.

All went well until the last dose in the bottle was reached. About eleven o'clock a.m. Mrs. S. gave the child about two-thirds of the regular dose, all that remained in the bottle.

While administering the remedy I was unable to perceive any marked benefit other than a reduction in the severity of the paroxysms. The disease may have been shortened, but after the last dose, within half an hour, the child went to sleep, and was completely anæsthetized in a few minutes. The respiration was slightly lowered, to fourteen or fifteen per minute. The pulse fell to sixty-four, but was full, strong, and regular. As I did not know what the outcome would be, I watched closely. The corneal reflex was gone. The pupil was contracted at first, and afterwards dilated as the effect deepened. There seemed no immediate danger from heart failure, and I decided to watch and wait.

In about two hours I injected thirty min. of brandy into the forearm as a preventative of heart failure.

At all times there was a strong odor of the bromoform in the breath. The reflexes of the rectum and bladder remained.



At four o'clock p.m., or four and one-half hours after going to sleep, the first signs of returning consciousness began to appear. I did not attempt to rouse her, but she awakened as from a very sound sleep, half dazed. She vomited twice, and asked for a drink of water. She remembered nothing about going to sleep, but in half an hour or so said her arm was sore where I had injected the brandy. Nothing further developed. She went to bed at her usual time that night and slept soundly until morning, when she got up as usual.

The most favorable result of all was the complete cure of the whooping cough. There was never a spasm afterwards, although a slight cough continued for two or three days, which, I think, was due to the former irritation of the bronchi. The method of dispensing bromoform was wrong, undoubtedly, and unless a good emulsion can be made to keep the drug suspended, it would be better to drop it on sugar.

I had never seen a report of a case similar to mine at this time, but since I have seen an abstract of a report by Stepp, of Berlin, I think, where a two-year-old child accidentally got 30 min. and slept for two hours, with the same result, a perfect cure of the whooping cough. I am convinced that in my case the child could not have received more than 30 min., and she slept four and one-half hours.

1. I am convinced from my observation that bromoform will lessen the severity of the symptoms in whooping cough.

2. Overdoses produce almost the same form of anæsthesia as does chloroform, with probably less depression to respiration and circulation.

3. Overdoses will cure whooping cough absolutely, but I would hesitate to try it, or to recommend the trial to others.

If any others should have a similar experience, I would recommend that the patient be kept quiet and to watch the symptoms, using such treatment as may be demanded to prevent death. I believe efforts to arouse the patient would be futile, and produce harm instead of good.

# Progress of Medicine.

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## OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto    Obstetrician to  
the Toronto General Hospital ;

AND

H. T. MACHELL, M.D.,

Surgeon St. John's Hospital and Victoria Hospital for Sick Children.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

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### PROGRESS OF MIDWIFERY DURING THE QUEEN'S REIGN.

From the paper on the changes which have taken place in midwifery between 1837 and 1897, written by Drs. F. H. Champneys and G. Drummond Robinson ; and published in the Jubilee number of *The Practitioner*, we extract as follows :

#### DEVELOPMENT OF THE PELVIS.

This subject is of considerable historical and scientific interest ; it excited some amount of discussion thirty years ago, but has since fallen somewhat into the shade. At the foundation of the subject stand two great factors—the action of the sacrum and the counter-pressure of the femora. Before the writings of Dr. Matthews Duncan the sacrum had been described as a wedge by Cruveilhier and Dubois and Gavarett. The shape of the sacrum led to this suggestion. In 1868 Dr. Matthews Duncan showed that the only part of the sacrum which entered into articulation was not even shaped as a wedge, but that its action must be entirely different, and that the body weight was hung on the posterior iliac tuberosities by means of the posterior sacro-iliac ligaments. It followed from this that the sacrum acts as a transverse beam, transmitting the body weight to the "iliac beams" of the ossa innominata, by which it is transmitted to the femora.

## THE LENGTH OF THE CERVIX UTERI IN ADVANCED PREGNANCY.

At the beginning of the present reign the current teaching was that the cervix was gradually taken up into the body of the uterus and formed part of its cavity. This was the teaching of Roederer (1759), Desormeaux, Gooch, and Montgomery, though not the older teaching of De Graaf (1677), Verheyen (1710), and others. In 1826 Stoltz insisted on the opposite and older view that the cervix never forms part of the uterine cavity during pregnancy until the onset of what is now known as the premonitory stage of labor, consisting in the canalization of the cervix beginning at the os internum. In 1859 Matthews Duncan emphasized this position, which has since that time been generally accepted. In 1872 W. Braune published plates of frozen sections of a woman at the beginning of labor, showing a freely projecting semi-circle 4 cm. above the symphysis and 2 cm. above the promontory of the sacrum. The external os, which was completely dilated, appeared as a small projection. The upper ring was called the os internum, but the difficulties of identifying this with the os internum of the unimpregnated uterus were felt. Still it was supposed that this upper ring of the full-time uterus was the os internum. In 1875-76 Bandl endeavored to return to the previous view, interpreting Braune's plate by saying that the part below the upper ring was formed from the cervix, which did, after all, form part of the cavity of the full-time pregnant uterus, and that the os internum of Stoltz and Duncan was not the os internum of the non-pregnant uterus. This was partly right and partly wrong, but it directed attention to this important part of the uterus known as the "lower uterine segment," which Bandl has shown to be the site of spontaneous rupture of the uterus, and which formed the subject of much controversy. It is now looked upon as part of the body of the uterus; its muscular fibres are arranged in a different fashion from other parts of the cervix and uterus; it is lined by decidua, and it is not separately represented in the unimpregnated uterus. To Bandl is due the credit of directing the attention to the lower uterine segment and insisting on its study, especially in connection with rupture of the uterus.

Anæsthetics in labor came into use in 1847 on the introduction of Sir James Simpson. This date is the same as that of Semmelweis's paper.

The axis-traction forceps was invented by Tarnier in 1877.

## BIPOLAR VERSION.

This manœuvre, one of the most useful ever introduced into midwifery, was invented by Dr. Braxton Hicks. Its field of appli-

cation is very wide, as it makes version possible in all cases in which two fingers can be passed into the uterus. In no class of cases has it proved more useful than in placenta prævia, as it enables bleeding to be controlled much earlier than was previously possible, experience showing that after version, and before delivery, the bleeding ceases in the great majority of cases.

#### EXTRA-UTERINE PREGNANCY.

In 1835 Velpeau denied the existence of ovarian pregnancy, and Mayer in 1845 did the same. Merriman (1817), Campbell (1840), and Rokitansky (1855) expressed doubts as to the existence of primary abdominal pregnancy. In 1873-89 Lawson Tait "demonstrated the overwhelming importance of tubal pregnancy, and the conditions which might develop from it, especially the extraperitoneal development of the ovum after rupture of the tube into the broad ligament."

#### RUPTURE OF THE UTERUS.

Bandl's share in the elucidation of this accident, which always, when spontaneous, affects the lower uterine segment, has been mentioned elsewhere. At the beginning of the present reign the practice was to deliver in all cases by the natural passages (Ramsbotham, 1841). Since the greatly increased success of abdominal section in the Cæsarean operation, it has become the practice to remove the fœtus and placenta by this method in cases where the fœtus has escaped into the abdominal cavity, and to suture the uterus, as in a Cæsarean section, or to remove it. This has led to a diminished mortality, but the accident still remains one of the most terrible in midwifery.

#### INVERSION OF THE UTERUS.

Our accurate knowledge of the conditions giving rise to this accident is principally due to the researches of Matthews Duncan, whose classification is probably well known. It amounts to this, that the predisposing cause of inversion is never activity, but, on the contrary, always inertia, of the uterus, and that this may affect the whole of the organ or the placental site only. The exciting cause may be unskilful action on the part of the attendant; but this is not the only cause, since vomiting or straining of any kind may also produce it. Acute or recent inversion can always be easily reduced by the hand. As soon as the involution of the uterus is complete—that is, at the end of some six to eight weeks—the case becomes technically "chronic," and it is to West and Tyler Smith

(1856) that we owe our present knowledge that, however long a time may elapse after this, such an inversion may always be reduced by elastic pressure in the absence of adhesions. Previous to this, such inversions, if they could not be replaced by manual taxis, were treated by amputation. This was the practice up to some twenty years ago in London.

#### CÆSAREAN SECTION.

In 1841 Ramsbotham wrote: "Out of nearly thirty instances in which the Cæsarean section has been resorted to in the British Isles, in three only has it proved successful, as far as the preservation of the mother was concerned." He advises rupture of the membranes before operation, and writes: "There will be no need of sutures to bring the edges of the uterine wound together; the abdominal parietes, however, will require two or perhaps three sutures." Uterine sutures had been apparently first used in 1769 by Le Bas. Ramsbotham's advice, as far as regards absence of sutures, was followed, at least to a considerable extent, till some twenty years ago. The results of the operation were everywhere deplorable, and it was only used as a last resource. In 1882, at the suggestion of Sanger, of Leipzig, multiple sutures were used after the manner of Czerny-Lembert to the intestine, twenty in all being inserted into the uterine wound.

The mortality in 1841 was at least 90 per cent. At present, in skilled hands, it is calculated at about 12 per cent.

#### SYMPHYSIOTOMY.

This operation was suggested in 1768 by Sigault, a medical student in Paris. In 1777 he performed the operation, the child was saved, the mother much injured, permanent incontinence of urine also resulting. Sigault performed five operations in all, the last time in 1778, losing both mother and child. In 1866 the operation was again taken up by Morisani and Novi, of Naples, and in 1891 by Pinard, of Paris. The operation, as its name implies, consists in enlarging the pelvis by cutting through the symphysis pubis, and divorcing the cut halves of the pelvic brim. In England the operation was tried by a few operators, but never had a large following, and everywhere it seems to be rapidly falling into disfavor, an event which we long ago foresaw.

#### PORRO'S OPERATION.

In 1876 Porro, of Milan, moved by the great mortality of Cæsarean section, especially that caused by the failure of the union of the uterine wound, proposed and carried out successfully the

operation known by his name. This is removal of the foetus from the uterus (the placenta not being removed) and immediate excision of the uterus and appendages after the manner of a hysterectomy for fibroids, the pedicle being treated extraperitoneally. This got over the difficulty of the uterine wound, and also the risk of hæmorrhage from failure of the uterus to contract. The results were very much better than those of the old Cæsarean section. It must, however, be remembered that Porro's operation was the first to gain the advantage of antiseptic methods, and that the improvement produced by it was very largely due to this, which has since become the common advantage of all surgical procedures. The operation had a short popularity, which was rapidly eclipsed by the new Cæsarean section.

#### LAPARO-ELYTROTOMY.

The object of this operation is to avoid the peritoneum, since peritonitis was the greatest cause of the mortality in Cæsarean section. Its conception is highly ingenious. It consists in opening the vagina by an incision like that for ligature of the external iliac artery in the flank, the foetus being extracted through the cervix uteri beneath the peritoneum and above the greatly-contracted pelvis. This operation has also been abandoned in consequence of the greater success of the far more satisfactory modern Cæsarean section.

#### PUERPERAL FEVER.

Before 1847 there were many different views :

- (1) It was considered to be due to metastasis of the milk.
- (2) To bilious or mucous material accumulating in the bowels.
- (3) To inflammation of some part which formed a focus, from which the disease spread to other parts. Thus (*a*) metritis, (*b*) metrophlebitis, (*c*) metrolymphangitis, (*d*) peritonitis, (*e*) inflammation of the intestine and omentum were all examples of disease starting from different foci.
- (4) To many different diseases, all classed as puerperal fever (Trousseau).
5. To vitiation of blood by products of decomposition (Kirkland, 1774).
6. To a fever of a special nature, like typhus.

In April, 1843, Oliver Wendell Holmes wrote on the contagiousness of puerperal fever in the *New England Quarterly Journal of Medicine and Surgery*. In 1847 Semmelweis insisted on the same view. The text on which he preached was the case of a pregnant

woman with cancer of the uterus, who was examined by the students, and became the cause of the death of fourteen puerperal women. Semmelweis also noticed that the lying-in wards which were attended by midwives had far fewer deaths and far less illness than those which were attended by students. He obliged the students to anoint their hands before touching a dead body, and to disinfect them afterwards with chlorine water or chlorinated lime before examining a pregnant woman, with the result that deaths and infection were considerably diminished.

In 1848 Tyler Smith classified puerperal fever thus :—

1. *Sporadic puerperal fever*: probably due in the first place to the absorption of irritating or putrid lochial discharges, decomposed coagula or portions of retained placenta. (This is equivalent to sapræmia or septic intoxication.)

2. *Epidemic puerperal fever*, which originates “in the crowding of puerperal women together, and in the epidemic prevalence of erysipelas, hospital fever, typhus, or other disorders allied in their nature to the puerperal disease.”

3. *Contagious puerperal fever*.—He refers to the observations of Semmelweis.

In 1870 Stadtfeldt, of Copenhagen, used antiseptics in midwifery (carbolic acid) on a large scale. In 1881 Tarnier introduced perchloride of mercury. As an example of the results of antiseptics in English lying-in hospitals, the General Lying-in Hospital, York Road, Lambeth, may be quoted:—In 1877 every seventh mother died. In 1884 perchloride of mercury was introduced. From 1884 to 1893 there were only three deaths due to sepsis, of which one occurred during a time when salufer was used instead of mercury as a disinfectant, and the other two during one month in which a very weak solution of mercury was used.

Similar improvement has followed in the practice of other lying-in hospitals (Godson, *Lancet*, Jan. 23, 1897, p. 221). But no corresponding improvement has taken place in the results of the confinements of the country generally, in which puerperal fever has rather increased than diminished.

#### BACTERIOLOGY OF PUERPERAL FEVER.

1837. Eisenmann thought that puerperal fever was identical with surgical septicæmia.

1850. Sir James Simpson expressed the same opinion.

1862. Sieffermann, of Strasburg, suggested the presence of a germ.

1863-65. Mayerhofer described germs, but his description is not very clear.

1864. Rokitansky found germs in the lochia both of febrile and of non-febrile patients.

1869. Coze and Feltz found streptococci in the blood of infected women, but failed to cultivate them.

1879. Pasteur isolated and cultivated the streptococcus from puerperal cases. Since then many others have worked in this direction.

Antistreptococcic serum has been introduced during the last few months with encouraging results, and, so far, with no ill effects (Marmorek).



# SURGERY

IN CHARGE OF

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## THE PREPARATION OF CATGUT.

The many methods suggested for the preparation of catgut since Lister first made it possible for us to utilize this material for ligature and suture purposes, is at once an indication of the uncertainty of the methods which have up to this time been used, and of the readiness with which operating surgeons the world over would use it, almost to the exclusion of other materials, were a method of sterilization introduced which was both reliable and simple.

Catgut, as we receive it from the manufacturer, is and always must be septic. Made largely from the small intestine of sheep, it contains a large proportion of fat and a variety of organisms, all more or less dangerous when buried in a closed wound. The difficulty in producing a satisfactory sterilized gut has been due to, first, the fact that the bacteria are protected by the presence in the gut of a large proportion (20 per cent.) of fat; and secondly, that gut itself is a comparatively perishable article, its tensile strength being destroyed by high degrees of temperature, which exert no injurious effect upon silk. Germicides which best reach the organisms in their protected positions are heat and carbolic acid. The degree of heat necessary to destroy the pathogenic bacteria, including their spores, is not greater than 212° F. Other organisms resisting even a higher temperature than this have been found in catgut (as demonstrated by Brunner), but they are non-pathogenic and have no surgical importance in the absence of pyogenic cocci.

Thomas Keith, following Lister's lead, used catgut largely in his abdominal work. He simply wound the catgut upon pieces of sheet lead immersed in a 10 per cent. solution of carbolic acid in olive oil, and allowed it to stand for six months before using. He assured me that this method of preparation gave him thorough satisfaction. On my return from Edinburgh I prepared a large quantity of catgut and after seven years opened a sealed jar prepared in this way and found its tensile strength unimpaired; and, judging from the results obtained in the cases in which it was employed it must have been thoroughly sterile. It is not always convenient to wait six months before using gut. To avoid this delay, I have modified Keith's plan, and the results thus far have been all that I could have wished. My method is as follows: Almond oil is used; this is raised to its own boiling point (about 400 degrees), which eliminates the water, which all vegetable oils contain more or less of, and which if allowed to remain in the oil would convert the catgut into a useless mass. Some of the oil is then placed over a water bath with 10 per cent. of carbolic acid. The catgut, loosely wound on microscopical slides or Halstead's glass spools, is placed in this 10 per cent. solution of carbolic acid, in the almond oil, and kept at the boiling point of water for an hour. It is then transferred to a fresh 10 per cent. solution of carbolic acid in almond oil, which has been boiled before the addition of the acid. It might be safer to repeat the boiling once each day for three days, but I have been in the habit of using it after a single boiling, and so far have had no reason to regret it. I have used the gut prepared in this way in about one hundred abdominal sections, in intracranial work, and in what is a more severe test than either, a large amount of skin stitching. In many of the latter cases the dressings were not changed for more than two weeks from the time of the operation, and while a little redness would occasionally occur about a suture, I have had no reason to change a dressing of stitch hole abscess. Where the subcutaneous suture was employed there has been absolutely no trouble, except that now and then, in removing the dressing from an abdominal wound at the end of twelve or fourteen days there will be noticed a little redness with perhaps a slight moisture where the catgut emerges at the end (more commonly the lower) of the wound, where the sebaceous follicles dip deep down into the skin, making skin disinfection more than ordinarily difficult.

However perfect the sterilization of catgut may become, some operators will always be comparatively unsuccessful with it. One of the causes of their lack of success will be their failure to keep it

sterile after it has been sterilized. Carbolic acid is volatile, and a ten per cent. solution becomes, in a carelessly stoppered bottle, a four or two per cent. solution in a very short time. I have seen bottles of what had been well-prepared catgut become thoroughly rotten and the oil rancid through a poorly fitting stopper. Then, again, I have seen operators in tying bleeding vessels take a strand of catgut eighteen inches or two feet in length in their hands, the portion of catgut which has been wound about the hand during the tying of one vessel becomes itself tied about the following one. The force required to secure a thorough tying of the first has drawn the catgut strongly through the hand, wiping off, no doubt, some of the organisms which remain there even after a comparatively careful washing. Then, again, I have seen stitch-hole abscesses produced by the use of a needle so small that it left an opening barely large enough for the catgut with which it was threaded to follow in its wake; in its repeated passage through the too small needle holes in the skin, however carefully that skin may have been disinfected, it is almost certain to carry with it many of the organisms with which even the deeper layers of the skin are always charged. This is especially so in those localities in which we find the glands of the skin largely developed.

It has been urged that catgut must always remain an uncertain suture, because in the case of infection the catgut forms a ready path along which the organisms will rapidly travel. During the past year I have seen two cases in which the superficial wound has shown deep infection between the fourth and sixth day. In both of these cases the wound had been closed by a continuous subcutaneous catgut suture. In neither of them did the organisms travel along the line of suture. In neither of them was there any reason to suppose that the catgut more than the tissues favored the growth of the organisms. The catgut retained its strength for nine or ten days and then disappeared, having given rise to much less trouble than silk would have done under the same conditions.

The tissue necrosis in these cases, if it spreads at all, takes the course of the denser connecting tissue fibres in the fat, or if the sheath of the rectus be exposed, the course of the fibres of that fascia.

My success with catgut I attribute to thorough sterilization by means of heat and carbolic acid, to preservation of the catgut and carbolized oil by careful bottling, to care in not leaving in a wound any portion of catgut that has been handled, to the use of a needle of such a size as to enable the catgut readily to follow in its track,

to thorough drying of the edges of the 'closed wound, and to the rubbing in, after the stitching of the wound has been completed, of a powder of one part of sterilized powdered iodoform in seven parts of Squibb's impalpable powder of boracic acid. Sprinkling of the wound with this powder is not sufficient. It must be thoroughly rubbed into the surface of the wound. If the wound receives any subsequent dressing, it is washed first with pure alcohol and the powder applied as before. No aqueous solution of any kind is brought near the wound.

Many of the more recent methods suggested for the preparation of catgut will undoubtedly be found to yield thoroughly sterile catgut, such as Kœonig's sterilization by Cumol, and a modification suggested by Doctors Clark and Miller; that of Dr. George R. Fowler, of boiling in alcohol under pressure, and its modification by Jellett; that of Cunningham with Formaline, and its modification by Hofmeister. All these methods may be thoroughly reliable, and yet inasmuch as a man must prepare his own catgut to secure anything like uniformly good results, it is doubtful whether any of these methods will be thought simple enough by the general practitioner to warrant him in adopting it. Whereas the method of boiling in carbolized oil, while it stands the severest tests, both of the laboratory and the hospital ward, requires for its adoption no utensils other than those found in every ordinary kitchen.

L.W.S.

# HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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ASSISTED BY

J. W. SMUCK, M.D.

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## DANGERS OF CONTAMINATED WATER.

Where shall we go for a holiday? is the constantly recurring question which each summer brings to nearly every one. With the facilities of locomotion and multiplication of so-called pleasure routes and resorts, we are allowed abundant choice. Discretion must be used in this matter, and among the most important is the effect of contaminated water upon the health-seeker. The sanitary arrangements, taken as a whole, should be considered. Water may be the most deadly drink which we can take. Disease may be caused by drinking water, and it does not do to consider the chemist's report as final, but we must have the report of the bacteriologists as well regarding purity. It is well known that typhoid is, in the majority of cases, due to impure water; whether it be from drinking water or the various articles of food, such as milk, oysters, ice, cream, etc. Those who seek health by rest and change of air, will do well to guard themselves.—*New York Medical Record.*

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## CLIMATIC CONDITIONS IN RELATION TO HEALTH.

Gen. A. W. Greely, chief signal officer U.S. army, writing in the recent Summer Resort special of the *New York Medical Record*, says, "the government established a monthly publication called *Climate and Health*, but have discontinued it." The most important life region, the austral, is practically co-existent with the United States—yet there it presents climatic conditions that are at times and in places most detrimental to human health. "It is significant that death from sunstroke and exposure to heat is practically unknown over regions where the highest temperatures have not exceeded 100° F., that is on the immediate Pacific coast, the regions

of the great lakes, over the Blue Ridge, Alleghany, Catskill, Adirondacks, and other mountains in the eastern part of the United States, and also the higher altitudes of the Rocky mountain region, as well as at certain places on the New England and New Jersey coasts."

It will be seen from this that we, in Canada, are especially favored.

The degree of humidity is a potent factor in allowing or causing a range of temperature, thus aggravating certain diseases. Medical experts on respiratory diseases would do well to study the influence thus exerted on air passages.

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#### SOME PHYSICAL EFFECTS OF ARCTIC COLD, DARKNESS, AND LIGHT.

Dr. F. A. Cook, who was surgeon to the first Peary Arctic expedition, in the New York *Medical Record* of June 12th, tells of his personal observations, experiences, and deductions.

There is a winter night of about four months, from October 20th to February 14th, and a summer of day from May 1st to middle of August. The temperature ranges from zero, Fah., to 60° below in winter; during the summer, from zero to 60° above.

The air is clear, free from dust and smoke, and so pure that men can stand great physical labor with little exhaustion.

The great amount of snow and ice in winter and the melting of it in summer equalizes the temperature, so that life is possible.

Myriads of birds appear in early summer to disappear at the approach of winter. The Polar bear, as all other Arctic animals, early develops an ability to fast for long periods during winter. The reindeer shows this ability to a marked degree, and when well fed, puts on fat in the dorsal and lumbar regions where they will afford the least trouble in locomotion.

The native people, like the animals, have evolved a system of life and adaptation to their habitat that could not be much improved by civilized aid.

The effect of the darkness in winter was more marked than was the effect of cold. The bodies and minds of all became sluggish. When the air was still and dry the cold was not felt so keenly as when the wind carried moisture from the south. The Eskimo do not seem to be as much affected by the temperature as do the Caucasians.

The organs of generation in the Eskimo mature late; in men, about twenty, and in girls, from sixteen to twenty years of age.

There seems to be a period of sexual excitement occurring soon after the return of the sun. For a time everything is given up to the gratification of the passions.

During the rest of the year life resolves itself into a matter-of-fact existence—a continuous series of fierce struggles for food, clothing, and shelter, during which they have little time or ambition to nurse or gratify amorous instincts.

J.W.S.

### REPORT OF PROVINCIAL BOARD OF HEALTH.

Monthly report issued by the Provincial Board of Health, showing the deaths from contagious diseases in the province, as reported to the Registrar-General by the division registrars throughout the province, for the month of May, 1897.

The Act relating to the registration of births, marriages, and deaths, requires that monthly returns of contagious diseases be made by the division registrars on or before the 5th day of every month. The returns for May have been received by the Department up to the 15th, before tabulation, in order to have them as complete as possible.

Total number of municipalities in the province, 745.

Number which made return to June 15th, 540.

Table showing total deaths returned from the several contagious diseases for a population of 1,471,365, which were caused as follows: (Total population of the province, 2,233,117.)

	Population	No. of deaths from and rate per 1,000 per annum.						Total.
		Scarlatina.	Diphtheria.	Measles.	Whooping Cough.	Typhoid Fever.	Tuberculosis.	
Cities .....	377,349	11 (0.3)	23 (0.7)		1 (0.03)	7 (0.2)	64 (2.0)	106
Towns and villages reporting.	281,497	4 (0.1)	7 (0.3)			1 (0.04)	37 (1.6)	49
Townships reporting.....	812,519	2 (0.3)	9 (0.1)	1 (0.01)	3 (0.04)	1 (0.01)	72 (1.1)	88
Population reporting.....	1,471,365 (61.5%)	17 (0.1)	39 (0.3)	1 (0.008)	4 (0.03)	9 (0.07)	173 (1.4)	243 (1.81)

## MODEL PLUMBING BY-LAW.

The Provincial Board of Health have recently issued a pamphlet containing a model by-law which is recommended for adoption by the various municipalities in Ontario where there is a system of sewerage disposal. As will be seen by reference to the diagram, the trap is laid within the wall. All the pipes are uncovered so as to be easily accessible. They are provided with screws at points most likely to become choked, so as to allow easy inspection and cleaning. The trap is entirely new, and is fitted with suitable fresh air inlet and sewer gas outlet above the house roof, and with cleaning screws, one outer, to allow the proximal end to be seen, and another inner one, which allows the farther or sewer end to be reached. Provision is made for the ventilation of the traps, etc., through the house. (See illustration.)

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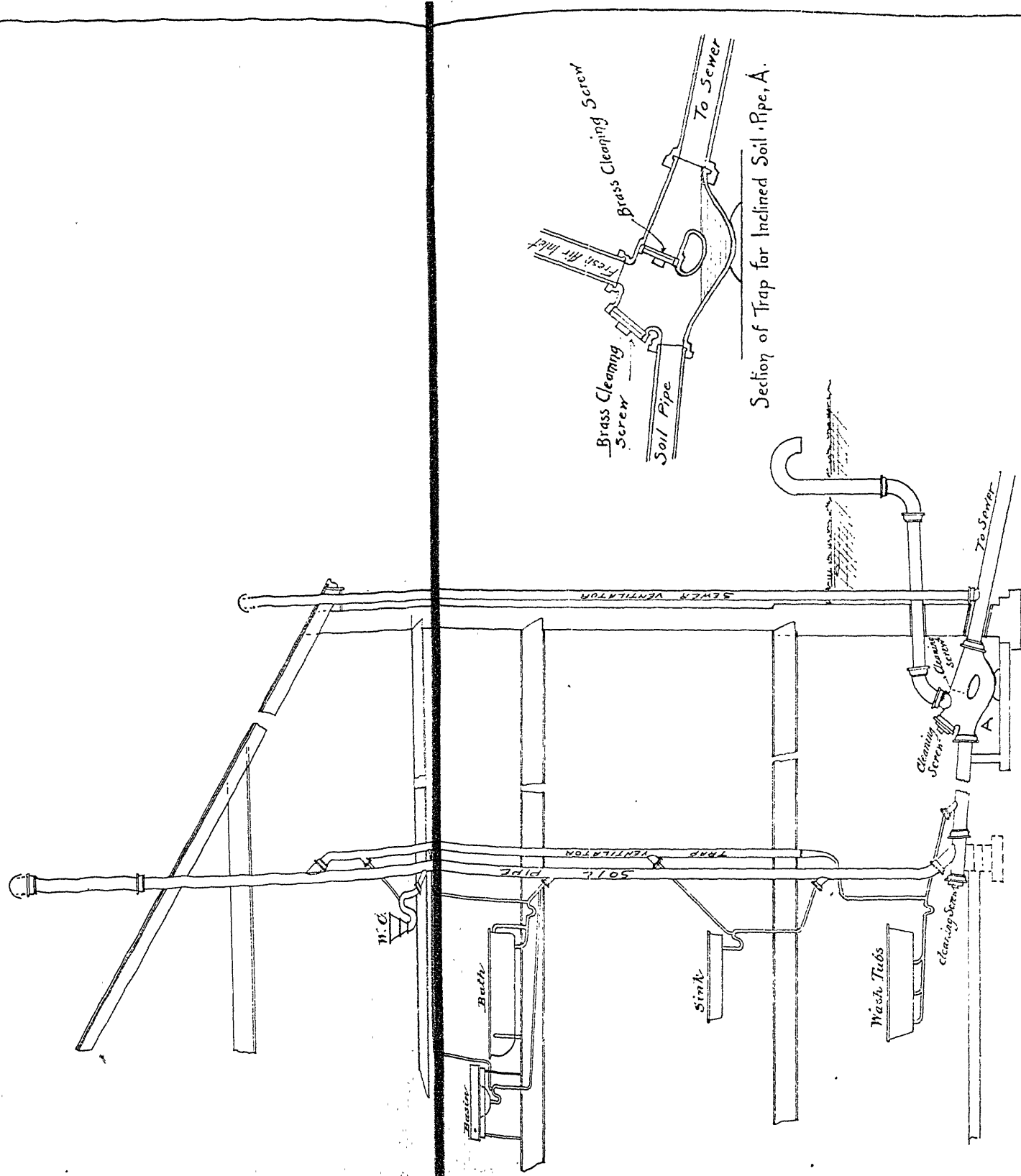
## STREET CLEANING BY DIRECT LABOR.

The two cleanest cities on the continent to-day are Toronto and New York, and they are both cleaned by direct labor.

New York not only employs and thus directs all its street cleaning and garbage dispatch forces, but it has an organized department, with an adequate and properly adjusted equipment of horses, carts, brooms, stables, and stations, and it pays its men \$2 a day and upward, for eight hours' work. It is by the method of direct labor, under model conditions of employment, that this first worthy result of the kind in a large American city has been achieved.

Toronto, the other of these two exemplary cities, has gone even further than New York in eliminating the contractor. In this enterprising Canadian town, with 190,000 people, Street Commissioner Jones has, during the last seven years, entirely revolutionized the care of the streets of the city. He has not only organized the execution of this work under a distinct department, but out of the margin thus saved from the annual appropriations for caring for the streets, he has actually built and equipped a modest but complete set of workshops, where the entire construction and repair work of the department is executed. A considerable element of this saving of labor has been due to the automatic loading machines, invented in these shops, which elevate the winrows of litter directly from the street into a dump cart as rapidly as horses can walk.—From "Cleaning Streets by Contract," by George E. Hooker, in April *Review of Reviews*.





SECTION SHEWING GENERAL ARRANGEMENT  
OF HOUSE PLUMBING AND DRAINAGE

From Model Plumbing By-Laws.

## A MICROBE-PROOF HOUSE.

The current number of the *Sanitarian* gives an account of a microbe-proof house built by Dr. W. Van der Heyden, of Utrecht and Yokohama. It consists of double thicknesses of glass so joined as to have absolutely no cracks. Entrance is effected through a long corridor with doors so arranged as to exclude all the air except that entangled in the clothes. The sole supply of air is brought from some distance, properly filtered through cotton, and driven against a glycerine-coated plate in the cellar to entangle the germs, after the manner of our "stickfast" fly paper. Ventilation takes place near the roof, which allows for exit of air, but no inlet. Impurities due to breathing, etc., are carefully absorbed by chemicals. The spaces between the glass plates of the wall are filled with a solution of certain salts so as to absorb the solar heat, thereby keeping the interior cool by day, and yet when there is less solar heat than is desirable, the radiation from this solution supplies heat to the interior. It is seldom necessary to heat by artificial means unless several cloudy days occur in succession. J.W.S.

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## AN IMPROVED METHOD OF FILTRATION.

Frank H. Mason, Consul-General, Frankfort, in his report to the Department of State, U.S.A., gives the details of the system of filtration at Worms-on-Rhine. Instead of the sand filters in ordinary use, and which are difficult to keep clean, Director Fischer, of the waterworks of Worms, conceived the idea that clean, sharp sand, mixed in due proportion with finely pulverized glass, would form a porous mass which may be baked into any desired form.

In this case the filters are made in plates forty inches square and eight inches thick, that is, with walls three inches in thickness and about two inches of hollow space at the centre.

These plates are arranged in groups or batteries of any number. The water in the tanks should cover them three or four feet. The water is then forced by its own pressure through the porous walls into the hollow space, where it trickles down and is drawn off. By reversing the action, and forcing the water in an opposite direction for a time the plates may be cleaned.

By arranging the plates in groups one set may be cleaned at a time, so no impairment of efficiency occurs.—*The Sanitarian*.

# PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

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## INVESTIGATIONS CONCERNING THE MICROSPORON FURFUR.

Spietschka (*Archiv fur Dermatologie and Syphilis*, Band xxxvii., Hefte 1 and 2), who has recently studied this fungus, sums up the results of his investigations as follows: Out of twelve different cases which were employed for culture experiments one and the same fungus was obtained. This fungus was differentiated from other pathogenous hyphomycetes and non-pathogenous moulds through its cultural properties. In the very numerous culture experiments which were undertaken with scales from herpes tonsurans, eczema marginatum, favus, pityriasis rosea, and other affections, this fungus was never found. Reinoculation of pure cultures of this fungus upon man was successful in producing a disease of the skin which consisted of brown patches without inflammatory symptoms, associated with active desquamation. In these artificially-produced scales the microsporon furfur, in its typical arrangement, could be demonstrated, and out of the same scales the fungus could be again cultivated. Accordingly, this fungus is to be regarded as the cause of pityriasis versicolor.—*University Medical Magazine*, April, 1897.

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## THE BACTERIOLOGY OF DISEASED ADNEXA.

Kiefer (*Centralblatt fur Gynakologie*, No. 42, 1896) sought to determine the question as to the presence of bacteria in pyosalpinx, what method of examination is of the greatest practical value, the

cover-glass preparation or culture; the proportion of the different species, and the average virulence of the pyogenic bacteria found. He made cover-glass preparations and cultures from forty cases of pyosalpinx or ovarian abscess, in all of which the pus had soiled the peritoneum during operation. The results are shown in the following table:

<i>Cover Glass Preparation.</i>		<i>Culture.</i>	
52 ½ per cent.	contained germs.	40 per cent.	contained germs.
	Of these,		Of these,
32 ½ per cent.	were gonococci.	22 ½ per cent.	were gonococci.
22 ½	“ “ bacteria coli.	10	“ “ bacteria coli.
7 ½	“ “ streptococci.	2 ½	“ “ streptococci.
5	“ “ staphylococci.	5	“ “ staphylococci.

Thus it is shown that, although cover-glass preparations show the presence of bacteria, they do not give information regarding their vitality or degree of virulence. The gonococci were largely in majority, next the bacteria coli, the latter mainly found in ovarian abscesses. None of the forty cases died from purulent infection of the peritoneum, which again proves the fact that bacteria confined and encapsulated in closed cavities soon lose their virulence; they die from their own products—the toxins. The average time determined from the formation to the sterility of the pus is about nine months.—*University Medical Magazine, April, 1897.*

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#### RENDERING OF ANIMALS IMMUNE AGAINST THE VENOM OF THE COBRA AND OTHER SERPENTS.

Fraser (*British Medical Journal*, June 15, 1895) gives the results of some interesting experiments with the venom from different serpents. That of the cobra was most largely used, though rattlesnake-poison gave the same results as did the venom from the brown and black snake of Australia. The lethal dose was first found, using guinea-pigs, rabbits, cats, and harmless snakes as subjects. It was found that the action of the poison was twofold—the action on the general system and the local action.

In immunizing animals it was found that the action on the functions was much more quickly and easily controlled than the local action. It was found after many experiments that rabbits could by the use of gradually increasing doses become accustomed to twenty, thirty, and forty times the minimum lethal dose. The duration of immunity has not been definitely determined, but large

doses have been given as long as twenty days after immunization with no effect whatsoever.

The blood-serum of immunized animals was used to give protection to animals from lethal doses of the poison. To this serum the term *antivenene* is applied, and the experiments proved positively that this antivenene is able in varying conditions of administration to perfectly prevent lethal doses of the venom of the most poisonous animals from producing death in unprotected animals.

It is proposed to carry on experiments and obtain the antivenene in large quantities in order that its applicability to the cure of snake-bite in man may be tested in India, where there is an annual mortality of 20,000 from this accident.

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#### TREATMENT OF SCARLATINA BY AN ANTISTREPTOCOCCIC SERUM

Alexandre Marmorek in "Ann. de l'Institut Pasteur." (*Abstract*). Jan., 1896.

Germ of scarlatina unknown. Streptococcus pyog. *always* found in the throat in this disease, and constantly present in complicating lesions, e.g., buboes, nephritis, endocarditis, otitis, pleurisy, etc.

Knowledge of these facts suggests the use of antistreptococcic serum in order to eliminate it as source of danger, and render treatment more easy.

It is noticeable that epidemics vary in severity, and even in the same epidemic light and severe cases occur side by side. Streptococcic symptoms, however, occur in *all* cases.

*Experimental treatment.* Oct. 16—Dec. 31, 1895. 103 cases of scarlatina in service of Dr. Josias; seven of these not treated with serum. Ninety-six infants were treated with serum of preventive power, 30,000. (The epidemic was light at first, but gradually became serious).

In all the streptococcic was demonstrated. In seventeen Loeffler's bacillus was found, and four of these died with marked symptoms of malignant diphtheria. One infant of two years of age died of a frank double pneumonia.

All cases received on entrance 10 c.c. of the serum; if seriously ill, 20 c.c. Treatment was restricted to serum and washing of throat. Injections were repeated daily till temperature fell. Usually one to two injections sufficed. If buboes or albuminuria showed themselves, injections were begun again and kept up till cure. The effects of the serum are transient, and therefore it was necessary to watch and renew when streptococcic symptoms came late. Light

cases got 10-30 c.c.; severe, 40-80. In one case attacked with broncho-pneumonia 90 c.c. were necessary to cure.

The most marked effect of the serum was upon the buboes. Nineteen cases had on admission, or shortly after, buboes on the neck. All resolved without any suppuration.

In one case otitis with suppuration developed in spite of serum; it soon ceased. In four cases admitted with double otitis the serum promptly put an end to suppuration. One or two injections always sufficed to put an end to albuminuria. False membranes from throat were rapidly cast off under serum, and delirium ceased; the pulse became slow and soft. Temperature fell, *if due to streptococcic lesions*, otherwise ran ordinary course. The general condition was markedly improved. It seems to show that the *scarlatina proper* is *not* due to streptococcic.

The only disturbance seen as a result, *i.e.*, of injections, was erythema of throat.

Conclusions: Too few cases; results apparently good so far as they went.

[Kurth found streptococcic in scarlet fever which he named *streptococcic conglomeratus* from its form. A central mass of cocci, seemingly quite irregular, *i.e.*, staphylococcic, forms with a few short curved chains of a few articles, project here and there from the border of the mass. In a case recently examined here the conglomerate coccus was easily separated from the blood. In a recent paper by Widal and Besancon it is shown that it is quite impossible to differentiate the thirty (30) or more so-called forms of streptococci from one another. All supposed tests break down under examination.—J.C.]

## Editorials.

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### THE ONTARIO MEDICAL COUNCIL.

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THE proceedings at the recent meeting of the Ontario Medical Council were in no sense flat or prosy. The discussions at certain sessions were decidedly breezy, but always commendable. Partyism was especially conspicuous, and perhaps did no harm, excepting when it influenced certain members to indulge in personalities. The work of the various committees was quickly, well, and faithfully performed; and, as a consequence, the results upon the whole are likely to give general satisfaction. Dr. Thorburn, of Toronto, was elected President, and as chairman showed his usual tact and ability, although his rulings were not always satisfactory to all parties. Dr. Henry, of Orangeville, an old and faithful member of the council, was elected Vice-President. Dr. Pyne, as a matter of course, was re-elected Registrar. We were much pleased to see Dr. Wilberforce Aikins, son of Dr. W. T. Aikins, who was acting treasurer since the formation of the council, elected Treasurer without a division. Dr. Wilberforce has done the work wholly or in part for several years in a manner that has given general satisfaction to all parties, and well deserved the honor that has been conferred on him. Mr. Alexander Downey was re-elected stenographer.

The Education Committee considered several important matters connected with the curriculum, and made a few changes. The most important of these was the lengthening of the annual session in the medical schools from six to eight months each, such change to come into effect in the fall of 1899. Some thought that in lengthening the yearly sessions so materially it might be well to abolish the fifth year; but, as a very decided majority of the territorial representatives were in favor of retaining it, for the present at least, it was unanimously decided to make no change in this respect. We have expressed our opinions on this question before; and, while they are not in accordance with the expressed wish of

the council, we think that due respect should be paid to the majority, and we cheerfully accept their decision. The regulations as to didactic lectures were not changed, but more clinical teaching will be required in the future. A new subject has been added to the curriculum, viz., anæsthesia, and the administration of anæsthetics, in which five lectures and five demonstrations will be required. Certain additions have been made in the requirements as to the teaching of pathology, and a regular course of instruction in bacteriology will be demanded. Certain changes were made respecting certificates of attendance on lectures which are intended to prevent the schools from admitting students after the Christmas holidays.

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### THE NURSING-AT-HOME MISSION IN TORONTO.

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WE know of no charitable organization in this Province that is doing, in a quiet and unostentatious way, more noble work than the Nursing-at-Home Mission of Toronto. It was established eleven years ago, its chief aim being to nurse the deserving sick poor at their own homes. There are at present six persons in the mission, one superintendent and five nurses. The committee of management have appointed an investigating committee, whose duty it is to enquire carefully into the merits of all cases coming before them, and select only those that properly come within their jurisdiction, according to their rule of selection. We are glad to notice that considerable interest is now being taken in this worthy charity by the public and the lay press. The managers contemplate the erection of a new building, and we hope that our wealthy and charitable citizens will consider carefully the character of the work done by this band of noble women, and give them some substantial assistance towards placing the institution on a better basis.

One physician, well acquainted with the nature of the work done, in speaking to a *Mail* reporter recently, spoke as follows: "I think that the work of the Nursing-at-Home Mission has amply proved the right of the organization to the kindly consideration both of the public and of the city authorities. The work that it undertakes is not duplicated by any existing organization. The main work of the institution is done in the homes of the very poor, and the dispensary part of it, which, necessarily, is subsidiary to the work of carrying out in the homes of the patients the orders of the physicians attending them. The selective process thus applied makes it impossible for imposition to occur. People who can pay are found out, and dropped, or compelled to pay, and to my mind



this very fact should induce the city authorities to deal very liberally with the mission, as the abuse of city charity, which is so glaring at nearly all other public dispensaries, is here effectively prevented. As to the value of the nurses' services to the poor, nothing too strong can be said, as I have myself proved many times in practice."

Another said: "The Nursing-at-Home Mission merits the most generous support of the public. The mission seeks to help, care for the sick poor in their own homes, when it is impossible or inadvisable to send them to an hospital. I have had many opportunities of observing the excellent work done by the nurses of this mission, often under the most difficult and disheartening conditions. The nurses are well trained, and they undertake nothing beyond that for which their training qualifies them. The people of Toronto cannot commemorate the Diamond Jubilee better than by providing a fund to place this mission on an efficient footing, so that it may be prepared to care for all the sick poor in the city who need such assistance."

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### ROENTGEN RAYS.

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IT is not right that we should believe implicitly all that the daily press publish concerning the destructive powers of Roentgen Rays. The medical press of late have allowed the subject to drop from sight too much. Great advancement has been made within the past few months, principally in reducing the time of exposure. On another page in this issue will be found the notes on a case of foreign body in the œsophagus. The diagnosis was made solely by the aid of Roentgen rays, and undoubtedly the discovery and removal of the cent saved the child's life. It is quite true that one could have groped about in the œsophagus hunting for the coin, or even made an incision, but with the skiagraph the diagnosis was made certain without inconvenience to the little patient. The cases of extensive burn following exposure to the rays that have been reported are examples of idiosyncrasy on the part of the subject, or the too long exposure of the part to very powerful rays. One case of very extensive burn followed an exposure of *four* hours. This particular case, widely reported in the daily press, and has brought an amount of discredit on the use of the rays as a means of diagnosis that it does not merit.

We have taken most perfect skiagraphs of the hip joint in five minutes in an eight year old child. The ankle joint and leg in two minutes. The hand in half a minute. With these short exposures it is most unlikely that any burning results will follow. We have made not less than two hundred exposures, and have yet to see the first bad result.

## MEDICINE DURING THE VICTORIAN ERA.

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THE editor of *The Practitioner* (Mr. Malcolm Morris), with the assistance of a number of contributors, including Dr. Samuel Wilks, Sir Dyer Duckworth, Sir William Broadbent, Bart., Sir James Crichton-Browne, Mr. Frederick Treves, Mr. Watson Cheyne, Dr. F. H. Champneys, Mr. Henry Power, and other equally distinguished physicians and surgeons, has prepared a special issue for June, entitled "Queen Victoria's Diamond Jubilee Special Commemoration Number," which contains a most interesting abstract of the advances made in all departments of medicine during the sixty years of Her Majesty's reign. A series of articles are published on the following subjects: Medicine Fifty Years ago, Progress of Medicine, Psychological Medicine, Progress of Surgery, Wound Treatment, Midwifery and Gynæcology, Special Branches of Medicine and Surgery, Pathology, Bacteriology, Therapeutics, Preventive Medicine, and Nursing. It also gives particulars as to the Court Physicians and Surgeons during this period.

We publish in this number of THE CANADIAN PRACTITIONER, as a separate article, the editorial comments on this remarkable era, as far as the broad subject of medicine is concerned, written in that bright and charming style which has characterized the editorial columns since Mr. Morris assumed control of this great English monthly journal. We also publish other extracts and abstracts which will be found interesting. It is impossible to properly epitomize such articles as those of Duckworth, Broadbent, Treves, Watson Cheyne, Hamilton, Woodhead, and others. We can only say that they are such as we would naturally expect from such bright and shining lights in the mother country, and are well worthy of careful study on the part of those who have an opportunity of reading them.

## UPPER CANADA DURING THE QUEEN'S REIGN.

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THE governing body in medical matters when Her Majesty ascended the throne, was the Upper Canada Medical Board, which was established in 1819. It was the duty of this Board to examine all candidates for license, and to grant certificates to those found qualified to practise, whereupon "the governor, or person administering the government," granted the licenses. The members of the Board in 1837 were Drs. Widmer, Baldwin, Grant, Powell, Horne, Sampson, Deihl, King, Rolph, Ridley, Stratford, Duncombe, Hanley, Lathan, Winder, O'Brien, and Morrison. There

was much dissatisfaction in certain quarters because Drs. Gwynne and Egan were not on the Board in the place of Drs. Widmer and Latham.

At this time there was no medical school in the Province, and the Board strongly advised the establishment of a Faculty of Medicine in King's College. In their recommendation to His Excellency the Lieutenant-Governor they stated that intending students were compelled to go to Great Britain, Lower Canada, Philadelphia, New York, Fairfield, and other colleges in the neighboring States to obtain a medical education; and for these reasons they thought it important that such students should have ample opportunities for studying in our own Province. This Medical Faculty first gave regular lectures in 1843, but was abolished in 1853, and remained a dead letter until it was re-established in 1887.

In the meantime Dr. Rolph was gaining a reputation as a teacher of medicine. The following were pupils of his between 1837 and 1843: Parks, Mitchell, Beatty, Barnhart, Cameron, D. Lee, J. W. Corson, J. W. Hunter, H. H. Wright, and J. H. Richardson. Rolph's School of Medicine was opened, in a sense, in 1843, after Rolph returned from Rochester, and was first called the Toronto School of Medicine in 1848, but was not properly incorporated under that title until 1853. The Trinity College Medical School, which for a time was called the Upper Canada School of Medicine, was opened in 1850. Shortly after the incorporation of the Toronto School of Medicine Dr. Rolph withdrew from that institution and established a new school, which became the Medical Faculty of the University of Victoria College. Shortly after that time a medical school was organized in Kingston, and many years after a Medical Faculty was established in London in connection with the Western University, and two schools were opened for women—one in Kingston and one in Toronto.

In 1839 the College of Physicians and Surgeons of Upper Canada was incorporated, but only remained in existence for two years. After this the old Upper Canada Medical Board resumed its functions. In 1866 the Medical Council of Ontario was organized, and became the College of Physicians and Surgeons of Ontario in 1870. This body is to-day the Medical Parliament of the province.

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#### SIXTY YEARS AGO.

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**A** FULL length portrait of Canada's greatest Surgeon, sixty years ago, Dr. Christopher Widmer, occupies a prominent position in the Toronto General Hospital. Although this country had no

medical schools in those days she had a goodly number of able, cultured, and highly educated physicians and surgeons in both upper and lower Canada. In Toronto, Widmer held the first place, but among his contemporaries in 1837 were many distinguished men, whose memories are held in high respect by our older inhabitants, including Drs. Rolph, Dunlop, Gvozene, King, Hornby, Nicol, Deihl, and Morrison. In other parts of this Province there lived and worked other equally able and worthy physicians, such as Dr. Charles W. Covernton, then practising in Simcoe, and now living in Toronto; Dr. James Grant, of Martintown, Glengarry, afterwards of Ottawa, father of Sir James Grant, M.D.; Dr. Gerald O'Reilly, of Hamilton, father of Dr. Charles, Gerald, and Edward O'Reilly; Dr. Alfred Digby, of Brantford, father of Dr. James W. Digby; Dr. Walter H. Burritt, of Smith's Falls, father of Dr. H. C. Burritt; Dr. Charles W. Buchanan, of Brockville; Dr. Robert D. Hamilton, of Scarborough; Dr. James Hamilton, of Dundas; Dr. Joseph Hamilton, of Queenston Heights.

This is a very incomplete list, but, so far as we can learn, includes a majority of those who were most prominent at that time. Nearly all were connected with the Rebellion of that year 1837, mostly as military surgeons or officers of the line on the Loyalist side. A few, however, sympathized with Wm. Lyon Mackenzie's views, and gave him more or less assistance. Of these the most notable were Dr. John Rolph, and Thos. D. Morrison. After the collapse of the rebel demonstration against Toronto, Morrison was placed under arrest, and we find in Canniff's work on "The Medical Profession of Upper Canada" (from which we have received much information for this article) the following quotation from a published account of the "Trial of Thomas David Morrison for High Treason," April 24th, 1838. "It was expected that he would be convicted, and his life was trembling in the balance, however, the jury, after long deliberation, brought in a verdict of not guilty." Rolph was informed of certain dangers threatening him by his house student, young Henry Wright, afterwards Dr. Henry Wright, of Toronto, and, with considerable difficulty, escaped from the country, and resided until 1843 in Rochester. By Royal Proclamation, dated December 11, 1837, a reward of \$500 was offered for his apprehension and deliverance "up to justice, in the city of Toronto."

## Book Reviews.

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TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION. VOLUME IX. Ninth session held at Nashville, Tenn., November 10, 11, and 12, 1896. Published by the Association.

We have before referred to this association and its work, and always in words of praise. There is a fire, an energy, and a life in the society that always makes its work interesting and refreshing. Dr. W. E. B. Davis, of Birmingham, Ala., is still secretary, and, therefore, all things go well. The meeting at Nashville was an excellent one in all respects, the papers were above the average, and the discussions were equally good and interesting. The social features were as pleasant as "Southern hospitality" could make them. The world contains nothing better for such purposes.

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MANUAL OF STATIC ELECTRICITY IN X-RAY AND THERAPEUTIC USES. By S. H. Monell, M.D., Founder and Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine, Member of the New York County Medical Society, etc., etc. New York: William Beverley Harison, publisher, 3 and 5 West Eighteenth Street. Pages, 614; octavo; cloth; gilt. Price \$5 net; postage 35 cents.

We find in the above volume material that every physician who is interested in the use of static electricity should be in possession of. It is the only exhaustive treatise on static electricity that we are acquainted with, and it deals very exhaustively with the whole subject. The author is careful to explain how static machines should be cared for. He does not wish the blame for failure to be attributed to the wrong cause, and endeavors to place the blame on the careless operator and the one who does not keep the machine free from dust and damp. We know of no instrument that requires more careful attention than a static machine; nor one that so soon deteriorates, but with proper care its action is absolutely certain. Considerable attention has been devoted to the production of X rays by the static machine. Dr. Monell has done most excellent work with the static machine, and his description of the apparatus, and how to use it, is very lucid. We cannot agree entirely with his remark in chapter vii. that "The high potential static current from therapeutic Holtz machines is superior to any coil known to be made at this date

(Feb. 24, 1897) in respect to economy, value, efficiency, satisfaction, and almost all that pertains to the medical and surgical uses of X-rays in hospital and office practice." For economy, absence of noise, ease of manipulation, we much prefer the coil. The author states that with static electricity to excite the tubes no danger of dermatitis exists. The only two serious cases of burns we have seen occurred from the use of static electricity to excite the tubes. We know the cases were over-exposed, but we have over exposed cases with the coil without evil results. The causes of burns produced by exposure to X-rays are not yet explained, and whether, as the author says, they are due to radiant heat-rays, or, as we believe, to some idiosyncrasy on the part of the individual, we are not prepared to make a positive assertion. The balance of the book is devoted to the therapeutics of static electricity and the examination of clinical results. We know of the good effects of electricity, and particularly of static electricity and can freely advise a perusal of this most instructive book, and congratulate the author on the clearness of his description and the easy style in which the book is written.

The publisher has succeeded in putting out a very attractive volume.

W. B. Saunders, Philadelphia, announces in preparation for early publication :

AN AMERICAN TEXT-BOOK OF GENITO-URINARY AND SKIN DISEASES. Edited by L. Bolton Bangs, M.D., Late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital, and William A. Hardaway, M.D., Professor of Diseases of the Skin, Missouri Medical College.

AN AMERICAN TEXT-BOOK OF DISEASES OF THE EYE, EAR, NOSE, AND THROAT. Edited by G. E. de Schweinitz, M.D., Professor of Ophthalmology in the Jefferson Medical College ; and B. Alexander Randall, M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

MACDONALD'S SURGICAL DIAGNOSIS AND TREATMENT. *Surgical Diagnosis and Treatment.* By J. W. Macdonald, M.D., Graduate of Medicine of the University of Edinburgh ; Licentiate of the Royal College of Surgeons, Edinburgh ; Professor of the Practice of Surgery and of Clinical Surgery, Minneapolis College of Physicians and Surgeons.

ANDER'S THEORY AND PRACTICE OF MEDICINE. *A Text-Book of the Theory and Practice of Medicine.* By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia.

SENN'S GENITO-URINARY TUBERCULOSIS. *Tuberculosis of the Genito-Urinary Apparatus, Male and Female.* By Nicholas Senn, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and of Clinical Surgery, Rush Medical College, Chicago.

PENROSE'S GYNÆCOLOGY. *A Text-Book of Gynæcology.* By Charles B. Penrose, M.D., Professor of Gynæcology, University of Pennsylvania.

- HIRST'S OBSTETRICS.** *A Text-Book of Obstetrics.* By Barton Cook Hirst, M.D., Professor of Obstetrics, University of Pennsylvania.
- MOORE'S ORTHOPÆDIC SURGERY.** *A Manual of Orthopædic Surgery.* By James E. Moore, M.D., Professor of Orthopædics and Adjunct Professor of Clinical Surgery, University of Minnesota, College of Medicine and Surgery.
- HEISLER'S EMBRYOLOGY.** *A Text-Book of Embryology.* By John C. Heisler, M.D., Prosector to the Professor of Anatomy, Medical Department of the University of Pennsylvania.
- MALLORY AND WRIGHT'S PATHOLOGICAL TECHNIQUE.** *Pathological Technique.* By Frank B. Mallory, A.M., M.D., Assistant Professor of Pathology, Harvard Medical School; Assistant Pathologist to the Boston City Hospital; and James H. Wright, A.M., M.D., Instructor in Pathology, Harvard Medical School; Pathologist to the Massachusetts General Hospital.
- SUTTON AND GILES' DISEASES OF WOMEN.** (New volume in Saunders' Aid Series.) *Diseases of Women.* By J. Bland Sutton, F.R.C.S., Assistant Surgeon to Middlesex Hospital, and Surgeon to Chelsea Hospital, London; and Arthur E. Giles, M.D., B.Sc., London, F.R.C.S. Edin., Assistant Surgeon, Chelsea Hospital, London.

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Books received :

- THE MENOPAUSE.** A consideration of the phenomena which occur to women at the close of the child-bearing period, with incidental allusions to their relationship to menstruation. Also a particular consideration of the premature (especially the artificial) menopause. By Andrew F. Currier, A.B., M.D., New York. New York: D. Appleton & Company. Toronto: N. Morang, agent, Traders' Bank Building.
- GENITO-URINARY SURGERY AND VENEREAL DISEASES.** By J. William White, M.D., Professor of Clinical Surgery University of Pennsylvania, and Edward Martin, M.D., Clinical Professor of Genito-Urinary Diseases University of Pennsylvania. 1065 pages. Illustrated with 243 engravings and 7 colored plates. Philadelphia: J. B. Lippincott Company. Dominion agent, Charles Roberts, 593a Cadieux street, Montreal.
- LIPPINCOTT'S MEDICAL DICTIONARY.** A complete vocabulary of the terms used in medicine and the allied sciences, with their pronunciation, etymology, and signification, including much collateral information of a descriptive and encyclopædic character. Prepared on the basis of Thomas' Complete Medical Dictionary, by Ryland W. Greene, A.B., with the editorial collaboration of John Ashurst, Jr., M.D., LL.D., Boston, Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania; George A. Piersol, M.D., Professor of Anatomy in the University of Pennsylvania; Joseph P. Remington, Ph.M., F.C.S., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy. 1154 pages. Philadelphia: J. B. Lippincott Company. Dominion agent, Charles Roberts, 593a Cadieux street, Montreal.

## Medical Items.

DR. W. B. THISTLE, McCaul street, sailed for London, Eng., this month.

DR. JAMES G. CAVEN will spend July and August in London, England.

DR. MARTIN, 3 Carlton street, left for British Columbia July 1st. He will be away a month.

DR. NATTRESS, of Toronto, has been appointed to the position of surgeon to No. 2 Company, R.R.C.I., Stanley Barracks, which was made vacant by the death of Dr. Strange. Dr. Nattress, who has been surgeon of the Queen's Own for many years, will enter upon his new duties immediately.

BRITISH MEDICAL ASSOCIATION—MONTREAL MEETING, AUGUST 30, 1897.—It will be necessary for those who purpose attending the Montreal meeting to become members of the association. For the remainder of the year the membership fee is fixed at one-half guinea, which will secure membership and the *British Medical Journal* until January, 1898. Joining through the Toronto Branch the amount will be \$2.75, half the annual fee of \$5.50. Dr. Machell, 95 Bellevue Avenue, Toronto, the treasurer, will receive applications and subscriptions.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The next meeting of the Mississippi Valley Medical Association will be held in Louisville on October 5, 6, 7, and 8, 1897. All railroads will offer reduced rates. The President, Dr. Thos. Hunt Stucky, and the Chairman of the Committee of Arrangements, Dr. H. Horace Grant, promise that the meeting will be the most successful in the history of the association, and this promise is warranted by the well known hospitality of Louisville and Kentucky doctors. Titles of papers should be sent to the secretary, Dr. H. W. Loeb, 3559 Olive Street, St. Louis.

MUSKOKA COTTAGE SANITARIUM—A meeting of the executive committee of the trustees of the National Sanitarium Association was held at the Muskoka Sanitarium, Gravenhurst, July 1st. The work of furnishing and equipping the main building was found so far advanced that while the public opening ceremonies will not take place until some time next month it was decided to open the doors to patients immediately. The fees were fixed at \$6 per week, including board, washing, and medical attendance. Only patients whose condition affords reason-



able prospects of recovery under favorable treatment will be admitted. All correspondence about admission should be addressed to the Medical Superintendent, Cottage Sanitarium, Gravenhurst, who will give all necessary information about the preliminary medical examination.

PROVISIONAL PROGRAMME OF CANADIAN MEDICAL ASSOCIATION.—Monday, August 30, 1897, 1 p.m.—Meeting at one of the hospitals; address by Chairman of Local Committee of Arrangements; clinical demonstration. 3 p.m.—General session; reception of visitors; election of members; President's address; addresses by prominent Englishmen; appointing of committees. 8 p.m.—No general session; meetings of committees.

Tuesday, August 31, 1897, 9.30 a.m.—General session; Report of Committee on Inter-provincial Registration; Report of Nomination Committee; Reports of other committees; general business.

N.B.—The railways will grant a return trip on the certificate plan for *single fare* from points *east of Fort William*.

For further particulars, address F. N. G. Starr, General Secretary, 471 College Street, Toronto.

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THE FUTURE OF MEDICINE.—Dr. Samuel Wilks, president of the Royal College of Physicians in London, contributes an article in the Jubilee issue of *The Practitioner*, entitled "Fifty Years Ago," in which we find the following concluding remarks on the future of medicine: "What the future of medicine will be no one can predict, because it is only by developing our present methods that we can judge; but we may be sure that some facts in science will be discovered of which we have at the present time no inkling. Some time ago, when asked this question, I could give nothing but a fanciful answer, which I now quote. What will be the next fifty years' experience in medicine the wildest imagination cannot conceive. All microbes may have been put to the sword; all organs may be taken out, washed and renewed; continued transplantations of active glands like the thyroid keep the brain in continued activity; or injection of Brown-Séguard's fluid preserve perpetual youth. We may, perhaps, discover what there is in our baneful environments which prevent us living the thousand years of the patriarchs; or, perhaps, a great discovery is close at hand: our concentrated beef and meat essences, being injected into the blood, will take the place of bulky food, so that our intestinal tract will be reduced to a minimum, and then, bellyless, we shall develop into that higher angelic creature which we see so often portrayed—all head and wings.

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AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.—The American Association of Obstetricians and Gynecologists will hold its tenth annual meeting at the Cataract House, Niagara Falls, Tuesday, Wednesday, Thursday, and Friday, August 17, 18, 19 and 20, 1897, under the presidency of Dr. James F. W. Ross, of Toronto. The railways have granted reduced fares on the certificate plan to all who

attend the meeting ; the Cataract House has made a reduction from its regular tariff of charges ; the place of meeting is a famous one ; the season of the year auspicious ; and everything seems to conspire to justify a prediction that this will be a large and interesting meeting of this famous association. The date of the meeting has been fixed in mid-August, apart from college sessions, during the vacation season, and at a place where many people like to spend a portion of their outing. The climate of Niagara is always desirable during the heated term, the spray from the cataract giving it a healthy moisture and coolness that is at once invigorating and charming. To visit Niagara under the auspices of this association will afford the tourists exceptional opportunities for the enjoyment of a rare and radiant scenery that is the most sublime in the world. One session will be devoted to the exhibition of specimens and giving their histories. The scientific work of the association will begin on Tuesday morning at 10 o'clock and end Friday at 1 o'clock, and it is expected to so arrange the programme as to afford the members opportunity to visit the places of interest each day on the adjournment of the afternoon session. It is expected that the inducements to attend this meeting are such that Fellows will not only come themselves, but bring their families and invite their friends as well to visit the wondrous cataract.—*Buffalo Medical Journal*.

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#### BRITISH MEDICAL ASSOCIATION—MONTREAL MEETING.

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The time of the great medical event of the year at Montreal is not very far distant, and it behoves all who may not have decided to be present at the meeting to speedily make up their minds, and, if the visit is contemplated, to at once inform the Committee at Montreal of the fact. We learn that they are very anxious to know approximately how many they will have to entertain, and urgently request all who intend going to at once inform the local secretary, Dr. J. A. Springle, 2204 St. Catherine street, of the fact. The probable attendance of medical men is estimated at the present time to be about one thousand—two hundred and fifty from England, fifty from other colonies, three hundred from the United States, and four hundred Canadians. Three or four lady members have signified their intention of coming across the Atlantic, among them Mrs. Garrett Anderson. Dr. Saundby, Dr. Barnes, and Mr. Fowke will arrive in Montreal on the 14th of August by the *Parisian*.

Dr. Adami writes that the names of members who intend coming across are coming in daily, but when he wrote was not certain that a special steamer would be required, but he is prepared at any moment to charter a vessel in the event of a sufficient number of late applicants appearing.

Seven eminent men who cannot be present at the meeting have promised to send demonstration specimens. The English secretaries are generally working in that direction.

Among the interesting discussions which are likely to be arranged for, is one on syphilis between the dermatological and pharmacological sections, introduced by Dr. Whitla, of Belfast, Ireland, members of other sections, of course, being invited to attend.

Full arrangements will be made in advance whereby members intending to land at Quebec may obtain cards of membership entitling them to half fare and the privileges granted by the Customs Department. Vessels conveying members will be met at Rimouski probably by Canadian representatives.

One of the most interesting and pleasant excursions will be the one arranged for, to Ottawa, probably on Saturday. Dr. Roddick met the profession in Ottawa some days ago, and consequently the Finance Committee of the City Council promised to undertake all the expenses connected with the giving of a luncheon to the visiting members of the Association.

During Dr. Roddick's recent visit to Toronto, he spent some time with Professor Macallum, secretary of the B.A.A.S., from whom much information was obtained regarding the arrangements for that meeting. He found that a great many purposed attending both meetings, more especially those belonging to the physiological section. Dr. Roddick arranged with the president of the branch, Dr. I. H. Cameron, to have any members of the B.M.A. entertained during their stay in Toronto. He found the profession, as a whole, very enthusiastic regarding the meeting, and very anxious to assist their Montreal brethren in every way.

It was Dr. Roddick's intention to have formed other branches in western Ontario, in such places as London and Hamilton; but there was a feeling on the part of these places that there was not room for branches, which might interfere with the existing local medical societies.

The Rev. Dr. Norton has kindly offered the Association the English Cathedral for a special service, and Dr. Adami will arrange with either Bishop Courtney, Bishop DuMoulin, or Bishop Sutherland, who are now attending the Lambeth Conference, to officiate.

Some six hundred invitations have already been sent out, and replies have been received from 221. Among those who have intimated their intention of attending the meeting are: A. C. Abbott, Department of Hygiene, University of Pennsylvania; John Ashurst, jr., L. D. Bulkley, W. T. Bull, H. T. Byford, H. P. Bowditch, J. Solis-Cohen, T. M. Cheesman, D. W. Cheever, W. B. Coley, J. McKeen Cattell, Fred S. Dennis, D. B. Delavan, Reginald Fitz, Geo. H. Fox, Frank P. Foster, Christian Fenger, Virgil Gibney, H. G. Gerrigues, E. H. Grandin, Langdon Carter Gray, Geo. M. Gould, Hobart A. Hare, C. A. Herter, James Nevin Hyde, E. Hodenpyl, B. C. Hurst, A. Jacobi, Chas. Jewett, M. McKeen, Howard A. Kelly, C. A. Lindsley, John H. Musser, W. F. Mittendorf, Hunter McGuire, Thos. G. Morton, H. H. Mudd, J. B. Murphy, Paul F. Munde, W. P. Northrup, Wm. Pepper, Roswell Park, Fred. C. Shattuck, Louis Starr, W. Alan Starr, J. V. Shoemaker, E. C.

Spitzka, Geo. F. Shrady, E. L. Trudeau, James Tyson, Hiram N. Vineberg, Wm. H. Welch, and Casey A. Wood.

The English list of members coming has already appeared in the *British Medical Journal* and in the daily papers, but it will be of interest to be reminded that those coming will have the privilege of listening to such men as Professor Chas. B. Ball, William Mitchell Banks, Henry Barnes, Prof. R. Boyce, Watson Cheyne, Sidney Coupland, I. Ward Cousin, J. H. Crocker, Prof. E. M. Chookshank, C. Heath, Arthur Kelsey, D. J. Leech, Right Hon. Lord Lister, Harvey Littlejohn, Donald MacAlister, Stephen Mackenzie, Thos. M. Madden, Malcolm Morris, E. Nettleship, Robt. Saundby, W. J. Sinclair, Prof. W. Waitla, Dawson Williams, and Professor Richet, of Paris. Replies have been received from twelve of the branches of the association accepting the invitations tendered requesting them to send delegates.

The Museum Committee report that all their space has been taken up, and they probably will have to secure another building besides the large Victoria Skating Rink. This department will prove one of the most interesting features of the meeting. A rare opportunity will be afforded to see pharmaceutical preparations, surgical and medical appliances, and everything that interests the physician, from the leading firms of the United States and Canada, as well as from across the Atlantic. Among the leading surgical instrument manufacturers will be Collin, of Paris, and Down Bros., of London, the latter making a special exhibition of antiseptic furniture which will be worthy of inspection. Among the leading pharmaceutical houses who are making elaborate displays will be R. K. Mulford & Co., of St. Louis; Parke, Davis & Co., of Detroit; Wyeth, of Philadelphia; Sharpe and Dohme, of Baltimore, and others. Zeiss is making a special display of microscopical apparatus. There will also be a great variety of exhibits from leading firms in Vienna, Berlin, Edinburgh, London, Paris, and New York.

The Local Entertainment Committee are being assisted by a committee of ladies consisting of the wives of the profession in Montreal and others. Among the entertainments provided for, in addition to those mentioned before, are a number of afternoon tea and garden parties. The ladies' committee will specially interest themselves in looking after lady visitors, and will make ample provision for continuously entertaining them during the progress of the meeting, so that members may without hesitation bring their ladies with them and be assured while they themselves are fully occupied with the essential features of the meeting the former will be so well looked after that the time will not hang heavily. The annual dinner will be held at the Windsor Hotel. The large dining room will accommodate six hundred. The dinner will cost five dollars, including wines.

The excursion committee have arranged an attractive and varied programme, which cannot fail to meet the desires of all. We append the printed outline of some of the excursions, which was issued recently.

Among other excursions not noted on the printed list, is the one on

Lake Memphremagog to Newport and Magog. This is one of the most picturesque spots in the Province of Quebec, and the trip will carry the tourist through one of the most fertile portions of Canada, with scenery of mountain, lake, and river, fairly typical of what is characteristic of the province, and to be seen more especially in almost endless variety in the Laurentian district, which for want of time cannot be visited. A special train will be provided, which will enable the party to return in the evening. The steamer will accommodate about 800. Lunch will be taken at Newport, or probably at the foot of Owl's Head, if it is found that the hotel there can supply refreshments for the number expected to go. The excursion will be arranged for Saturday, and it is thought probable that for those desiring it, the privilege of remaining over Sunday and returning on Monday will be obtained. A trip is proposed to Shawenagan Falls, on the St. Maurice River, which is said to almost rival Niagara.

Among other local trips on different afternoons are a ride round the mountain on the electric cars, and through some of the more interesting parts of the city; a trip to the top of Mount Royal, where a luncheon will be served by the mayor and corporation of Montreal. The incline railway, carriages, or bicycles may be the means of arriving there; a trip down the St. Lawrence; another to St. Anne, and down the Lachine Rapids. It can be gained from what we have indicated that those going to the Montreal meeting will not only be benefited from a medical point of view by coming in contact with the leading members of the profession from Britain, the United States, and Canada, and taking in the various discussions and papers which may be expected to represent the most recent advances, but that they will also be fully regaled by a varied and full round of social entertainments and pleasure trips such as has not been privileged to the members of any previous meeting.

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#### AMERICAN MEDICAL ASSOCIATION.

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The following officers were elected for ensuing year: President, Brigadier-General George M. Sternberg, M.D., Surgeon-General U.S.A.; first vice-president, J. M. Mathews, Kentucky; second vice-president, J. L. Thompson, Indiana; third vice-president, F. W. Wiggin, New York; fourth vice-president, T. J. Happell, Tennessee; treasurer, H. P. Newman, Illinois; secretary, William B. Atkinson, Philadelphia (permanent); assistant secretary, W. A. Jayne, Colorado; librarian, D. J. Webster, Illinois; chairman committee of arrangements, J. W. Graham, Colorado; board of trustees, J. W. Priestly, Iowa; Joseph Eastman, Indiana; Truman W. Miller, Indiana; judicial council, D. W. Crouse, Iowa; T. D. Crothers, Connecticut; W. T. Bishop, Pennsylvania; R. C. Moore, Nebraska; G. B. Gillespie, Tennessee; C. H. Hughes, Missouri; Ida J. Hieberger, District of Columbia; annual addresses, "General Medicine," J. H. Musser, Pennsylvania; "General Surgery," J. B. Murphy, Illinois; "State Medicine," S. C. Busey, District of Columbia;

delegates to International Medical Congress at Moscow, August, 1897, G. S. Mitchell, J. E. Hyndman, Charles Dennison, A. M. Miller, H. L. E. Johnson, George M. Sternberg, D. L. Huntington, A. Marcy, sr., H. D. Holton, Thomas McDevitt, J. N. Quimby, George R. Fowler.

Denver, Col., was chosen as the next place of meeting.

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OBITUARY.

J. LEWIS SMITH, M.D.—Dr. J. Lewis Smith, of New York, died June 9, 1897, aged 69. His treatise on "Diseases of Children" is probably better known to us in Canada (or was a few years ago) than any other book on the subject. He had been in poor health for some years, and death finally resulted from "cardiac exhaustion."

WALTER RIVINGTON, M.S. LOND., F.R.C.S. ENG.—Mr. Walter Rivington, one of the most eminent of the surgeons connected with the London Hospital, died at his residence at Epping, May 8, aged 62. He had enjoyed his usual health until April, when he had influenza, followed by an affection of the right lung. The immediate cause of his death was hæmorrhage from the bowels.

WILLIAM THOMPSON LUSK, M.A., M.D., LL.D.—Dr. Lusk, the eminent obstetrician of New York, died suddenly at his home, June 12, of apoplexy, aged 59. He is well known in Canada as the author of the "Science and Art of Obstetrics," which is one of the best text-books on the subject. He was President of the Bellevue Hospital Medical College, and Professor of Obstetrics and Gynæcology in the same institution. He was one of the most highly cultured among physicians of the United States, and was highly honored by his professional brethren in many ways.

JAMES GREIG SMITH, M.A., C.M., M.B., F.R.S.E.—Mr. James Greig Smith, one of the most brilliant surgeons of England, died at his late residence, Bristol, England, May 28, 1897, of pneumonia, aged 43 years. He was born near Aberdeen in 1854, and was educated in that city; graduated in arts in 1873, and in medicine in 1876. He became surgeon on the staff of the Bristol Royal Infirmary in 1879 when he was only 25 years of age. He soon became known as a great surgeon and a great writer on surgery. His treatise on abdominal surgery is now going through a sixth edition, and has been translated into French, German, and Italian. Many of those who have heard so much from and about Greig Smith during the last fifteen years will be surprised to learn that he was so young a man. The loss of such a man at such an age is a serious loss to a nation.