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# THE Canadian Practitioner

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

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SUBSCRIPTION, \$3 PER ANNUM.

Literary Communications may be addressed to any of the Editors. All Exchanges and Business Communications should be addressed to DR. W. H. B. AIKINS, 40 Queen Street East.

TORONTO, MARCH, 1885.

## Original Communications.

### PERINEPHRIC ABSCESS.

BY L. MCFARLANE, M.B.,

Surgeon to the Toronto General Hospital.

(Read before Toronto Medical Society, Jan. 29th, 1885.)

#### CASE I.

A. J., aged 24; occupation, commercial traveller; born in Canada.

*Family History.*—Father alive; state of health good; mother died at the age of 42, from cancer of the uterus; brothers and sisters all living and in good health.

*Previous History.*—Always healthy up to the time of present illness. About the first of February, 1883, while travelling in the neighbourhood of Essex Centre, in trying to keep ahead of a fellow-traveller, he made trips of five or six miles on foot at different times, often walking across the ties of the railroad, taking a single tie at each step with left foot and two with right. One day after walking in the rain about twelve miles he got very wet and cold; the following morning he was seized with chills, followed by high temperature. About the same time he noticed a small lump in the right groin below poupart's ligament, which subsequently formed pus and had to be opened. Two days after getting the severe wetting he drove several miles; the day being cold, he got a second severe chill, and felt much worse; however, he pressed on the following day to London, where he was compelled to take to bed for two weeks. He

entered the Toronto General Hospital on the 17th of February.

*Condition on Entering.*—He was suffering from a low form of fever; the temperature ranging from 101° in the morning to 103° or 104° in the evening; pulse about eighty; tongue coated; bowels obstinately constipated; urine scanty and of a very dark color. On examining the urine, a small amount of albumen was found, also a few granular corpuscles. The temperature continued high for several weeks after admission to the Hospital. He had no tenderness on pressure over the kidneys, although he complained of a feeling of fulness and tension on the right side. The right testicle was retracted, and at times he complained of pain in it and in the penis. He lost flesh rapidly. About three weeks after coming into the Hospital, flexion of the thigh on the pelvis, with slight adduction of the limb, took place. Incontinence of urine and frequent and painful micturition were observed from time to time during the course of the disease, also distressing flatulency and constipation of the bowels. About the end of March a painful swelling appeared above poupart's ligament. The patient was put under chloroform, and a free incision made into it, when a large quantity of pus escaped. Upwards of a pint and a half of carbolic water was thrown into the abscess cavity after it was opened. The patient was subsequently treated with tonics, and the cavity washed out three or four times a day with a weak solution of carbolic acid. Rapid recovery took place after the opening of the abscess.

The limb that was formerly flexed on the pelvis gradually became straight, and the patient was able to leave the Hospital in one month from the time the abscess was opened.

#### CASE II.

Mrs. B., aged 35, the mother of four healthy children, enjoyed good health till the beginning of July, 1883, when I was sent for to see her about a very severe pain she was suffering from in the right side, over the kidney. There was tenderness on pressure, and any effort at movement increased the pain. I could not detect any hardness nor swelling, and there was no difference in the measurement of the two sides. The temperature varied from 100° in the morning to 102° in the evening; the pulse ninety, frequent and small; the urine scanty and dark co'oured. On examination, a small quantity of albumen was found, but no pus nor casts; the bowels obstinately constipated. Two weeks after I first saw her the thigh became firm'y flexed on the pelvis and slightly adducted; the patient very weak and nervous, and any attempt at straightening the limb caused intense suffering. Morphia had to be given in large doses before any ease or sleep could be obtained. The patient continued for six weeks in much the same condition as above described. About this time I noticed a fulness in the lumbar region, and a difference by measurement of one inch. I could not distinctly make out fluctuation, but felt firmly convinced that there was deep-seated pus. I introduced an aspirating needle and drew off six ounces of sero-purulent matter. The following day the patient was put under chloroform, and a free incision made in the lumbar region, when a very large quantity of pus escaped. The subsequent treatment was similar to the first case, viz., tonics and a free washing of the abscess cavity with a weak solution of carbolic acid. From the time the abscess was opened the patient began to improve; the pain left; appetite returned; sleep was restored, and the limb gradually straightened. In fact the patient went on rapidly to perfect health.

#### CASE III.

R. E., aged 9, born in Toronto; admitted to the Hospital on the 12th of Feb., 1884.

*Family History.*—Could not be satisfactorily

obtained; there is a history of syphilis on his father's side, and two uncles of his mother died of consumption.

*Previous History.*—Boy has always been strong and healthy; never had any severe illness.

*Present Illness.*—About the second week of January, 1884, a lump appeared on inner side of right thigh; this was opened, and after discharging for a few days healed up; he was in bed at this time about one week; when he got up his mother noticed that he limped a little with left leg, and complained of pain in the small of back. These symptoms became gradually more marked up to the time of his admission to Hospital.

*Condition at time of Admission.*—Patient has been losing flesh for two or three weeks; left thigh is flexed on pelvis, nearly at a right angle, and slightly adducted; any attempt to straighten the leg causes intense pain over parts supplied by lumbar nerves; there is no tenderness on pressure at any point along the spine; marked tenderness in left lumbar region, and over the kidney, both back and front; slight bulging is noticeable; left side, from spine to umbilicus, measures an inch more than right; no urinary disturbance; temperature, 104° in evening.

*Diagnosis—Perinephric Abscess.*—The temperature continued high from the time of admission to Feb. 23rd, ranging from 99° in the morning to 101°, 102° or 103° in the evening. On the 23rd of February I aspirated in lumbar region and removed 10 ozs. of pus; patient was relieved by the operation, and on the 24th his temperature was normal both morning and evening. On the 26th I made a free opening into abscess cavity and washed it out; this my assistant continued to do several times a day for several weeks. The patient subsequently was attacked with inflammation of the lungs, which protracted his recovery very much. He left the Hospital about the latter part of June quite well, and has continued in good health up to the time of writing this article.

#### CASE IV.

W. H., age 58; Scotch by birth, engineer by occupation, married; was admitted to the Hospital on the 7th Sept., 1884.

*Family History.*—Good.

*Present Illness.*—Five weeks ago to-day (15th September) went to Muskoka; came home three weeks ago, starting out on a very cold morning and riding in an open stage till noon of the same day, when he attempted to make his water, but found that he could not pass any; he continued his journey from the place the stage stopped till he arrived in Toronto without having the bladder emptied, thus going from Monday morning till Wednesday evening in this condition. After reaching the city he had his water drawn off, and afterwards it was drawn once a day till he entered the Hospital. On admission, the urine was examined, and found to contain large quantities of pus. He complained of very great pain and tenderness over the left kidney. The temperature ranged from 100° to 103°. The limb was very slightly flexed on the pelvis, about as much as you usually find in cases of pyonephrosis, but not to so great an extent as I have observed in cases of perinephric abscess. I diagnosed the case as pyonephrosis, and had arranged to open into the kidney through lumbar region, but in this I was disappointed, as the day before that arranged for the operation he suddenly commenced coughing and expectorating, the sputa consisting of very dark and offensive pus. The quantity was so great that the patient had to sit up in the bed in order to keep from choking. He was removed from the Hospital on Sunday, the 12th of Oct., and died on the following Tuesday.

I was unable to get a post-mortem. In this case I did not suspect perinephric abscess till it opened into the lung. I was led to make this mistake by the absence of the usual symptoms I had observed in the other cases; but the termination of the case fully convinced me that in addition to the pyonephrosis there was perinephric abscess; the probable location of the abscess at the upper part of the kidney, and its tendency to point in the direction of the chest, thus removing the pressure from the lumbar nerves, obscured the symptoms that I had noted in the other cases.

Is it not possible that the abscess in the lung was secondary to the pyonephrosis, and that I was in error as to the existence of perinephric abscess? I do not think so, for the following

reasons: The temperature chart did not indicate the onset of pyæmia. 2nd. The appearance of the pus was so sudden. 3rd. The patient expressed himself as being relieved of pain almost immediately after the abscess began to discharge through the lung. 4th. The limb that was slightly flexed, and gave great pain by any attempt to straighten it, could now be moved in any direction without causing any pain.

I will not trouble the Society with the reports of two other cases that came under my care recently, but will endeavour to briefly point out the causes of some of the symptoms in the cases here reported, as well as the diagnosis and treatment. The kidneys are placed behind the peritoneum, resting on the quadratus lumborum and psoas muscles, and extending from the last rib to the crest of the ilium. They are surrounded with a quantity of loose cellular tissue, in any part of which an abscess may form; consequently the symptoms in any individual case will depend upon the location of the abscess and the direction in which it tends to point.

In the first three cases reported it will be observed that there were several symptoms common to all, viz., flexion and adduction of limb, with greatly increased pain by any attempt to straighten or abduct. In the two male patients there was retraction of the testicle on the side affected. The temperature in all the cases was high during the course of the disease, ranging from 99° in the morning to 103° or 104° in the evening.

In the second, third, and fourth cases there was very great tenderness on pressure over the kidney both in front and behind. In the first there was no tenderness on pressure.

Dr. John B. Roberts, of Philadelphia, says that perinephric inflammation about the lower portion of the kidney gives rise to an effect which is much more noticeable than any other consecutive symptom of perinephritis—this is flexion of the hip-joint on account of involvement of the anterior crural nerve. At the same time there may be anæsthesia or neuralgia of varying areas of the inner, anterior or outer surfaces of the thigh from involvement of the sensory fibres of the genito-crural, external cutaneous and anterior crural nerves. Retraction of the testicle will probably be present

if the genito-crural nerve is implicated, because it supplies the cremaster muscle.

This lifting of the testicle indicates, therefore, a higher location of the abscess than when the hip flexion exists without this accompaniment.

In the first three cases the location of the abscess was very likely behind the kidney, although in the second and third it extended higher up and tended to point in the lumbar region. In the first case the pus followed the course of the psoas muscle beneath the peritoneum, and tended to open below Poupart's ligament. It will therefore be observed that in cases two and three the four lumbar nerves were pressed upon, causing not only flexion of the limb, but pain and tenderness over the parts supplied by the first and second lumbar nerves. In case one, from its lower situation, the first lumbar nerve escaped from pressure, but the second, third and fourth were pressed upon, and consequently flexion of limb and retraction of testis took place. And from the direction taken by the pus along the psoas muscle, and not tending to point either in the lumbar region or in the direction of the abdominal parietes in front, pain and tenderness on pressure were absent in the parts supplied by the branches from the first lumbar nerve. In the fourth case the abscess was evidently situated at the upper and back part of the kidney, and simply pressed on the first lumbar nerve. The lower nerves of the plexus were not pressed on, consequently we had absence of flexion and adduction of the limb and retraction of the testicle. The tonic spasm of the psoas, iliacus and pectineus, observed in three cases, was no doubt caused by pressure on the nerves, inasmuch as when the pressure was removed the limb almost immediately came into the straight position.

The presence of albumen in the urine can be accounted for by pressure on the renal veins, thus causing congestion of the kidneys. In a paper such as this it is unnecessary to enter into all the symptoms that would be caused by abscesses in other parts of the cellular tissue surrounding the kidneys, where there might be pressure on the cystic duct, the thoracic duct, ureter, inferior vena cava or sympathetic nerves. To those of you who are familiar with the

functions of these structures the symptoms will be self-evident.

*Diagnosis.*—From psoas abscess, lumbago, neuralgia, morbus coxæ, and perityphlitic abscess.

Psoas abscess is essentially a strumous disease, which can occur only in persons of a strumous predisposition, and is often associated with tubercular disease in other parts of the body, especially of the lymphatic glands, lungs, and mucous follicles of the large bowel. The disease is rarely met with before the age of puberty, and rarely, if ever, in old people. When the abscess is opened, either spontaneously or artificially, the constitution manifests the most lively sympathy, as is evinced by the rapid supervention of rigors and hectic fever, with all its train of evils. In case of perinephric abscess the very reverse occurs when it is opened. In psoas abscess there is pain on pressure along the lumbar spine, especially over the diseased vertebra. Perinephric abscess occurs at all ages, both young and old, as is shown in the cases here reported.

From lumbago it can be distinguished by its having a high temperature from the very commencement, and as the disease advances the position of the limb and the condition of the urine will be sufficient to confirm your diagnosis. The intermitting character of neuralgia will be sufficient to exclude it.

In hip disease, fixity of the thigh upon the pelvis occurs at a very early stage, and any attempt at moving the thigh will move the pelvis. This is not the case in perinephric abscess. The head of the femur can be moved in the acetabulum in all directions without any movement of the pelvis. There is no pain produced by forcing the head of the bone up into the acetabulum, such as is noticeable in hip disease. The apparent or real lengthening that occurs in hip-joint disease is absent. The pain and tenderness usually observed in the groin and lumbar regions in cases of perinephric abscess are absent in cases of morbus coxæ; also the knee pain, although it sometimes occurs at a late stage in perinephric abscess, is not a symptom in the early stage as in hip disease. In perityphlitic abscess its superficial position, and the absence of the other symptoms charac-

teristic of perinephric abscess, will be sufficient to exclude it.

*Treatment.*—Tonics and stimulants, and as soon as you are satisfied of the existence of pus aspirate; and if the pus again collects make a free incision into the abscess cavity, and subsequently wash frequently with a weak solution of carbolic acid. In all cases where it is possible, make the opening in the lumbar region. If care is taken to confine your incisions to that space in the loin between the spine and the point where the peritoneum is reflected on to the abdominal parietes, after passing over the front of the kidney, (*viz.*, from four to four and one-half inches,) and between the last rib and the crest of the ilium, no anxiety may be felt at exposing the posterior surface of the kidney. R. Clement Lucas, B.S., London, says the danger is equivalent to the amount of damage to soft parts, and not apparently increased by the fact that the kidney lies at the bottom of the wound. He further says that when surgical interference is limited to an antiseptic and extra-peritoneal exploration, the danger is of a most trivial character and the wound will often heal by first intention. This, he says, happened in two cases he explored through the loin, on suspicion of there being a renal calculus.

## ARSENIC.\*

BY JAMES STEWART, M.D.,

Professor of Materia Medica and Therapeutics, McGill University, Montreal; Physician to the Montreal Dispensary, and Director of the University Dispensary for Diseases of the Nervous System.

Gentlemen,—Arsenic, next to iron, is our most valuable hæmatinic, but it is much more than a simple blood restorer. It possesses actions of a marked degree, which in the present state of our knowledge it is impossible adequately to explain. There is no medicinal agent, whose actions on the body are more difficult to explain than those of arsenic.

*Absorption and Elimination.*—Arsenious acid in all its combinations, and by whatever method it is introduced, whether by the mouth,

or by the rectum, by the lungs, or by the skin, wounds or excoriations is readily absorbed and can be detected in the blood a few minutes after its administration.

It is eliminated by the skin and mucous membranes, through the bile, lungs and various glands, but mainly through the kidneys. The rapidity of its elimination varies considerably. It commences a few hours after its introduction, but it is seldom complete for a number of days. Occasionally small quantities may remain for an almost indefinite length of time, and it may be made to reappear by the administration of iodide of potassium. It is in all probability deposited in greatest abundance in the nervous tissues. It resembles lead in this respect, but it differs from the latter that it is deposited principally in the central nervous structures, while the lead deposition is more pronounced in the peripheral nervous system.

It is supposed that arsenic displaces phosphorus in the nervous system.

### PHARMACOLOGY.

1. *Its Action on Micro-organisms.*—The power that arsenic has of preventing decomposition from going on in animal tissue is well known, being made use of in the dissecting room for this purpose. Its antiseptic action, however, when brought to bear on the organisms of ordinary putrefactive material is of a very low order, being very much inferior to the more commonly used antiseptics. In ordinary medicinal doses it exerts no influence on pepsine and other non-organized ferments. After death from acute arsenical poisoning the signs of putrefaction set in about the usual time, but they speedily become arrested and the body passes into a peculiar mummified condition, in which condition it may remain for a lengthened period.

2. *When Applied Externally.*—The preparations of arsenic when applied to the skin cause redness, inflammation or destruction of tissue according to their strength and character.

It is an irritant when applied in a mild form, and an escharotic when used in a concentrated form.

Its action as an escharotic is not brought about by any chemical influence that it exerts

\*Lecture delivered before the Materia Medica Class, February 1885.

on the tissues. It does not, like the caustic acid and alkalis, coagulate the albuminous tissues. It acts more by direct interference with the nutrition of the tissues, causing rather a condensation and "mummifying" than an actual destruction of tissue. The escharotic action of arsenic is characterized by a high degree of inflammation, great swelling, and quick destruction of the part. It is a very painful escharotic. It should be always remembered that when weak applications of arsenic are used to destroy tissue, the arsenic may be absorbed in such quantities as to bring about fatal poisoning, while if a strong preparation is employed such a destruction of tissue takes place that absorption is prevented.

A case has come under my observation where a medical man applied a weak arsenical paste, for the removal of a malignant tumor, to the breast of a woman. It was followed by the prominent symptoms of acute arsenical poisoning, from which the woman recovered. Some days afterwards a weaker arsenical paste was used, and it was kept applied for some time. Subacute poisoning developed, which, not being recognized, persisted, and from the effects of which the patient died some days afterwards.

The lesson to be learned from this is that in applying arsenic for its caustic action it should be used in a sufficiently concentrated form to ensure the entire destruction of the parts.

3. *The Action of Arsenic when taken Internally.*—In very small doses (0.002 to 0.004, one-thirtieth to one-fifteenth of a grain) its action is that of a gentle tonic to the gastric mucous membrane. It increases the appetite and promotes digestion. When it is given in larger doses, and yet short of quantities sufficient to produce poisonous effects, it brings about a train of marked symptoms, which will be more appropriately described under the untoward effects of the drug.

Arsenic given in small, medicinal doses has the effects of increasing the intestinal secretions and of keeping the bowels regular when there is constipation. A part of this action is probably due to the fact that it causes a transudation from the intestinal vessels.

*Action on the Blood.*—Arsenic enters the blood with rapidity, and, like iron, enters into

combination with the red corpuscles, and not with the serum. It exists in the blood as an albuminate. Whether it has any power, like iron, of directly increasing the red cells has not been definitely determined. In all likelihood it has no such action. The principal action of arsenic on the blood is the power it has of increasing the amount of hæmoglobin in the corpuscles. It is, in the true sense of the term, a hæmatinic. When speaking of the action of iron on impoverished blood, I mentioned that there were two distinct influences manifested by this agent—the first being an increase in the number of the red cells, the second and more important being the increase in the amount of hæmoglobin in the individual corpuscles.

The difference between the hæmatinic powers of iron and arsenic is that the former has a double, while the latter has only a single, action. Iron increases the quantity and quality of the red cells, while arsenic only increases their quality. How arsenic increases the quality of the red corpuscles is not known. It does not, like iron, supply a deficiency.

Arsenic in overdoses diminishes both the number and quality of the red cells. In this connection I will make mention of a remarkable action possessed by arseniuretted hydrogen on the red blood disks. It has the power of displacing their hæmoglobin into the blood plasma. When inhaled in excess, a sufficient number of corpuscles are destroyed so as to give rise to a condition of hæmoglobinæmia. If the coloring matter discharged is sufficient to color the urine, then we have, in addition, the condition which is now called hæmoglobinuria. Pyrogallic acid, potassic chloride, and the different anæsthetic agents have all, when given in excess, similar actions on the coloring matter of the blood. In slight excess they cause hæmoglobinæmia; in great excess they give rise to both hæmoglobinæmia and hæmoglobinuria.

Although arsenic in overdoses interferes with the oxygen-carrying powers of the red cells, it does not destroy them.

*Action on Metabolism.*—Next in importance to the hæmatinic action of arsenic, and in some respects before it, is its influence on metabolism. It has a marked power in increasing metabolism. This constitutes its so-called "alterative" action.

It enters into combination with living protoplasm and exercises some obscure change in it, which rests in an increase of its nutrition. The above is the action of ordinary medicinal doses of arsenic. When it is given in overdoses we find that it very seriously interferes with the complete elaboration of the changes that takes place in the albuminous tissues. It prevents the fats from undergoing their transformation into carbonic acid and water. This action is due to the oxygen carrying power of the corpuscles being interfered with. As a result, we find fatty degeneration of the muscular and epithelial structures.

In poisonous doses, arsenic, like phosphorus, diminishes the amount of glycogen; and in these doses it acts as a direct protoplasmic poison.

The influence of arsenic on nutrition is well seen in those who take it habitually, like the peasants in the Styrian Alps. These people are in the habit of taking it daily in very considerable quantities. They begin with very small doses, and gradually increase the quantity until they are able to take with impunity quantities sufficient to bring about fatal poisoning in those unaccustomed to its use. An average dose for an adult Styrian peasant is 1.00 (15 grains) of arsenious acid in the week. The arsenic-eating is commenced at an early age, and continued usually during the whole lifetime. It is claimed by these people that the arsenic makes them long-winded, and that it enables them to do an amount of work which, without it, they could not do. They increase in weight and vigour generally. They became more pugnacious and salacious.

*Action on the Circulation.*—When arsenic is given for some time in small doses it acts as a weak cardiac stimulant, while large doses have a depressant action on the heart. In small doses it dilates the abdominal arterioles slightly, thus causing a transudation into the intestinal canal. It is in all probability owing to this action that arsenic tends to relieve constipation. In poisonous doses it causes great dilatation of these vessels, the result being a copious serous transudation, strikingly resembling the copious rice-water stools of Asiatic cholera. It was at one time thought that the serous diarrhoea

present in arsenical poisoning was owing to the gastro-enteritis set up by its irritating action, but now we know that it is due to the paralyzing influence that it exercises on the vaso-motor fibres of the abdominal arterioles.

In poisonous doses, death is not usually caused by the depressant action on the heart, but more commonly through a paralyzing influence on the respiratory centre in the medulla. This is almost constantly the case in warm-blooded animals, while in cold-blooded animals the contrary is the rule.

*Action on the Respiration.*—The power that arsenic possesses of making those who take it for a lengthened period "long winded" is probably explainable as much through its influence in increasing the hæmoglobin as through any direct stimulating influence on the respiratory centre. That the latter is a factor, however, in the production of this long-windedness is rendered probable from the experiments of Lesser.

When arsenic is given in overdoses it induces a form of dyspnoea, and in positively poisonous doses it completely paralyzes the respiratory centre.

*Action on the Temperature.*—When given in full medicinal doses a trifling rise in the temperature is observable. The opposite effect is constantly present from poisonous doses. This action on the body temperature is explainable through its influence on metabolism.

*Action on the Nervous System.*—The action of small doses of arsenic on the nervous system is that of a tonic. This is in all probability secondary to the hæmatising influence of the drug. In larger doses, and especially in poisonous doses, it brings about a train of symptoms due to the direct deposition of the metal in the nervous tissues. It is especially apt to attack the multipolar cells of the anterior horns when given in overdoses for a long time. It produces paralysis, especially of the extensors. It resembles lead in this respect. They differ, however, in this particular, that the latter is more prone to affect the peripheral nerves, while the former is more likely to affect the central nervous system.

*Remote Local Action.*—During its elimination through the kidneys, arsenic does not exercise any constant effect on the quantity of urine, or



of its individual ingredients. It, as already mentioned, increases, when given in small doses, the nitrogeous waste, but it has no direct power over its elimination.

In its elimination through the skin, arsenic induces changes of a nature which are far from being perfectly understood.

#### TOXICOLOGY.

*1. Acute Arsenical Poisoning.*—The symptoms of this variety of poisoning are simply those of a severe toxic gastro-enteritis. They come on usually half an hour after the injection of the poison, and if the dose has been large the case is almost invariably fatal. No matter how arsenic is introduced, it commonly induces a gastro-enteritis, showing that its intestinal action is for the most part not confined to the mucous membrane. After death the usual signs of violent inflammatory action in the intestinal canal are commonly discernible; but cases do occur where during life severe intestinal symptoms were present, together with marked symptoms of a nervous character, such as giddiness, delirium, pain in the limbs, paralysis and coma, and where not the slightest trace of any inflammatory action was discernible in the mucous membrane of the intestinal canal. This is the so-called "Arsenicismus Cerebro-Spinalis."

Parenchymatous and fatty degeneration of the liver, kidneys, of the epithelium of the urinary tubules, of the heart muscles and of the voluntary muscles, are constantly to be observed if the patient has lived twenty-four hours or more. Cases of chronic poisoning are not uncommon as the result of arsenical emanations from wall paper, paints, hangings, dresses, ornaments, and not only from green colors containing arsenite of copper, but also red, drab, blue, gray, and enamel papers generally, and from aniline colors fixed by arsenical mordants in carpets, curtains, etc.

The more common symptoms that result from arsenical emanations are similar to those which we find when overdoses of an arsenical preparation are given internally. They are conjunctivitis, swelling of the eyelids, sore throat, nasal catarrh, nausea, and serous diarrhoea. At times the prominent symptoms are headache, mental irritability, and restlessness. If a per-

son has been exposed for a long time to the injurious influence of arsenic, we find, in addition to the above, paralysis of both upper and lower extremities. Arsenical paralysis is very slowly recovered from. Neuritis of the terminal branches of the radials I have observed several times in students who were engaged in dissecting. Erythematous pustules are frequently present, owing to the irritating action of the agent on the skin during its elimination. The ulcers which appear at the root of the nails are due to interference with the so-called trophic functions of the nerves. From one to two grains of arsenious acid may be looked upon as a fatal dose. In the treatment of a case of acute arsenical poisoning, after the stomach is emptied by means of the stomach pump or apomorphia, large quantities of dialyzed iron should be given repeatedly—a tablespoonful every few minutes. The freshly-prepared sesqui-oxide of iron may also be used. Neither of these antidotes are trustworthy except where the arsenical preparation has been taken in a state of solution. Your principal aim should be to see that the stomach is thoroughly cleaned, and afterwards treat the symptomatic indications on general physiological principles. In the treatment of chronic arsenical poisoning, the source of the poisoning should be discovered and removed, and the iodide of potassium should be given internally, but not in doses of over five grains, as otherwise a sufficient quantity of the arsenic may be reintroduced into the blood to bring about acute arsenicismus.

*Therapeutics.*—The external uses of arsenic are unimportant. Its internal uses are, however, of very great importance. Its action for good in a number of diseases is very striking, but as to the way in which it acts in many cases, we have no positive knowledge.

I will first take up its use in the so-called blood diseases. In ordinary anæmia it is a useful agent, but much inferior to iron. It is, however, curative in some cases where iron fails to bring about more than a slight and temporary improvement. It is more efficacious in the simple anæmia of advanced adult life, than in the form that is so common in young women. Sometimes a combination of iron and arsenic is followed by better results than when

either is given singly. In symptomatic anæmia arsenic is probably as powerful as a blood restorer as is iron. It is in the disease known as pernicious or idiopathic anæmia, where the hæmatinic action of arsenic far transcends that of iron. At the present time we characterize as idiopathic or pernicious all those cases of anæmia which run a fatal course, and where during life or after death no definite cause can be found for the profound destruction of the cellular elements of the blood. Many distinguished physicians go so far as to maintain that it is not possible for a patient to recover from what is called true idiopathic anæmia, and that the fact of a case of this form of anæmia being diagnosed and cured with arsenic or any other remedy, is proof that the diagnosis was incorrect. If these views are correct, there must be a form of severe anæmia, clinically indistinguishable from the "pernicious" form, and over which arsenic has at times a curative influence.

Several cases have been recorded by the most competent observers where the use of arsenic has been followed by a complete and permanent cure where true pernicious anæmia was diagnosed.

Bramwell, of Edinburgh, gives an account of a case under his care, which was treated for a period of three weeks in hospital with full doses of quinine and iron and later with phosphorized cod-liver oil. During all this time there was a steady advance in the severity of the case, and it was not checked until two minims of Fowler's solution were given thrice daily. The dose was gradually increased until fifteen minims thrice daily were taken. The after progress of the case may be described as one of slow but uninterrupted improvement. In a month's time he was able to attend as an outpatient. Shortly afterwards he was able to go to work, and expressed himself as feeling well again. The blood from presenting the characteristic alterations of pernicious anæmia became normal. Dr. Finney, of Dublin, reports three cases of this disease, two of which made complete and permanent recoveries while taking arsenic. Dr. Campbell, of Seaforth, and Dr. Graham, of Brussels, have each had cases of pernicious anæmia under their care, where the use of

arsenic was followed by complete recoveries, and where the previous use of iron had no effect whatever in staying the downward progress.

Dr. R. P. Howard, who was about the first, if not the first, on this continent to describe this disease, has had a very extensive experience of its treatment with arsenic. At the present time he has a case under observation where this agent has brought about apparently a complete recovery. The blood from presenting the characteristic alterations has assumed a normal appearance, and there is no evidence to indicate but what the recovery is a permanent one.

There is no necessity for laying before you any more proof of the value of arsenic in this disease. It is true the vast majority of cases of this form of anæmia proceed to their fatal ending in spite of arsenic or anything else, but even in the severest forms the progress is somewhat stayed by its timely and judicious use. It should always be the first agent to receive a fair trial.

It is not known how arsenic acts in idiopathic anæmia. It is more than probable that its influence is deeper than its hæmatinic action. There is another diseased condition bearing some analogy to pernicious anæmia, where the lengthened continuous use of arsenic does good, often great and permanent good. I refer to lymphomatous formations of the lymphatic and blood glands. These formations are of a semi-malignant nature. They generally occur in young adults, and as a rule gradually progress to a fatal termination. There are a number of these cases now recorded where the internal use of arsenic and its injection into the diseased glands has brought about a permanent improvement.

Billroth has recorded a remarkable case—that of a woman, aged 40, in whom the cervical, axillary and other glands, as well as the spleen, were affected, and where the internal administration of Fowler's solution brought about a permanent cure.

Winniwater and Israel have each had cases where permanent cures have resulted. No later than a few weeks ago, a case of this disease was shown at one of the Berlin Medical Societies, where the use of arsenic was attended by great and gradually progressive benefit.

In this connection I will mention the use of arsenic in malarial fevers. It is a well-known fact that, next to quinine and cinchonine, it is the most powerful agent we have for averting an attack of fever and ague. It appears to be especially useful in cases of long standing, where there is considerable loss of the red corpuscles of the blood, together with enlargement of the spleen.

*In Diseases of the Nervous System.*—Some of the most important uses of this drug are in diseases of the nervous system.

It is a valuable agent in many cases of chronic neuralgia, especially those cases depending on a depraved general state. It is said that it is of more value in facial and ovarian neuralgia than in the other more common varieties of this trouble. In gastralgia, which essentially is a neuralgic affection of the nerves of the stomach, arsenic is an agent of the greatest value.

There is one neurotic disorder where the use of arsenic accomplishes wonders, and that is in the condition called *angina pectoris*, including both the "true" and "false" varieties of this trouble.

When considering the actions and uses of the nitrites, I mentioned that they had a great influence in relieving these attacks and also in preventing them when given in the form of a slow acting nitrite, such as the sodium nitrite. I then mentioned that these agents acted symptomatically,—that they counteracted the active pathological state present during the anginal paroxysm—the contraction of the coronary arterioles.

Arsenic, however, does not act in this manner; it appears rather to combat or prevent the actual cause of the attacks, whatever this may be. It is supposed to be nerve degeneration, but on this subject we need much light. It is not only in anginal attacks that arsenic does good, but in fact in every painful intrinsic cardiac affection. Speaking of the use of this agent in cardiac disease attended with pain, Dr. G. W. Balfour, of Edinburgh, says that "next to digitalis, arsenic is probably our most important agent in the treatment of cardiac disease; its neurotic action is undoubtedly its most remarkable one, and its effect in removing cardiac pain

of an anginous character is really something marvellous." Another important use of arsenic is in the treatment of chorea. This disease is undoubtedly due to an instability of certain nervous motor centres, and it is likely that the arsenic acts here as it does in angina and in neuralgia in general. There is a general consensus of opinion that arsenic is by far the most useful agent that we have in the treatment of chorea. In a self-limited disease like this it is necessary that great care should be exercised in drawing conclusions as to the positive value of any agent. The value of arsenic, however, is unquestionable when we find that its administration to patients who have had chorea for months and even years is followed by recovery. Numerous instances are recorded of cure from its use in cases of chorea of over two years' standing. Failure to obtain satisfactory results in the treatment of chorea with arsenic is frequently owing to a too small dose. Children of five years and upwards bear adult doses well. Girls, as a rule, require larger doses than boys. It is necessary to induce the milder physiological effects of the drugs usually before any marked difference is noticeable in the patient's condition. If these effects are brought about by small doses, the remedy should be employed hypodermically. When given in this way, doses of fifteen or twenty minims three times daily can be tolerated without the production of any of its untoward effects. In neuritis the internal use of arsenic is of much benefit. It is of especial benefit in the cases of neuritis as seen in the intercostal nerves, in the condition called *herpes zoster*. The pain preceding and following the eruption in these cases is very severe. There is no agent that can compare with arsenic in relieving this painful state. A great deal has been written about the beneficial action of arsenic in cases of asthma of a neurotic character. I am confident that its use in this disease has been very much overrated.

In all these cases it is impossible, in the present state of pharmacology, to say how arsenic acts. In some mysterious way it exerts an influence over nervous protoplasm.

*The Influence of Arsenic in Tuberculosis.*—Recently renewed attention has been directed to the "anti-tuberculous" properties of arsenic

by the great German surgeon, Langenbeck, who has published an account of several cases of tuberculous diseased joints where the internal administration of Fowler's solution was followed by very marked improvement both in the local conditions and general states. There is much evidence to show that arsenic has at least considerable influence in retarding the progress of the more chronic forms of pulmonary consumption. The acutely progressive cases are uninfluenced by it. The whole subject of tuberculosis, general and local, is at the present time in such a state of obscurity that it is idle work even speculating as to the possible ways that the alleged action of arsenic is brought about. Whether it is through an influence exerted on foreign protoplasmic agents in the blood, or through an influence on the metabolism of the tissues, is very far from being known.

Finally, I will refer to the use of arsenic in certain skin diseases. Not long ago, it was the almost universal custom to prescribe this drug in nearly all cases of chronic disease of the skin. As long as cases were chronic they were considered to be fit for the arsenical treatment. There is much less of this practice since we know that the great majority of chronic diseases of the skin are curable by local means. Since the humoral element in the pathology of diseases of the skin has been practically thrown aside, arsenic is less seldom used. It is not so very long ago that physicians talked about a "herpetic diathesis," just as they talked then and now about a scrofulous diathesis, a tuberculous diathesis, an arthritic diathesis, and as alkalies, etc., are given in the latter, and iodine in the scrofulous, so arsenic was prescribed for the "herpetic diathesis." Undoubtedly arsenic has a modifying influence on a number of chronic diseases of the skin, such as psoriasis and eczema, but this influence is not due to any obscure antidotal action on the so-called diathesis, but to the fact that the arsenic influences directly the morbid changes in the skin, during its elimination. A little known but important use of arsenic is the power it possesses of preventing bromide acne, and of curing it when it is present. We are often compelled to diminish the dose of the potassium bromide, or even to stop it altogether in the treatment of

epilepsy on account of the production of acne. By combining arsenic with the bromide, acne is prevented, and much larger doses of the latter can in consequence be given. At the present time there is an epileptic attending the University clinic for diseases of the nervous system, who is enabled to take two drams of the bromide daily without its producing any rash, because with each dose of his bromide he takes five minims of Fowler's solution. Previous to the administration of the latter, half the present dose of bromide caused a disfiguring acne. A rare untoward effect of arsenic is noticeable in this case. The patient's skin has assumed since he commenced the arsenic a brownish tint. The skin of the hands and face are more deeply stained than that of any other part of the body.

This staining is of no significance. It is not caused, like the staining produced by silver, by the deposition of the metal in the tissues. It will disappear shortly after the discontinuance of the drug.

It would serve no useful purpose were I to simply enumerate the score of other troubles where arsenic has been or is recommended. I have given an account of its great uses; and although it is impossible to give a scientific basis for all these, I would not have you to think less of it as a power for good on this account.

It is not so many years since digitalis was given in a purely empirical manner, and we may confidently look forward to a time in the near future when we can prescribe arsenic on the same sound physiological grounds that we prescribe digitalis to-day.

*Dose and Mode of Administration.*—In prescribing arsenic internally, the acid itself or Fowler's solution may be employed. The latter is the favourite method of giving it; but, as a rule, it is better to prescribe it without the lavender, as the latter frequently disgusts patients. The dose varies from 3 drops up to 30 drops. In commencing the arsenical treatment of any case it is not well to give more than the minimum dose until the patient's susceptibility to its action has been determined. The dose can then, if there is no special contra-indication, be gradually increased until 20 or

more minims are taken three times daily. When it is considered advisable to give more than 20 minims three times in the day (in case of severe chorea it is sometimes necessary), it had better be given hypodermically, because this method of introduction is less liable to cause the usual untoward effects. In cases of profound anæmia, where there is irritability of the stomach, Dr. R. P. Howard has resorted to the method of giving small doses frequently and with great success. He orders a minim of Fowler's solution every hour.

When arsenious acid is prescribed, it should be given in the form of pills. The following formula, which is known as Hebra's Asiatic pills, is much employed in Germany, especially in the treatment of chronic diseases of the skin :—

R. Acidi arseniosi . . . . . 0.25 ( $\frac{1}{4}$  gr.)  
 Piperis nigri . . . . . 2.50 (40 gr.)  
 Mucilaginis gi. Arabici . . . . . (q.s.)

M. et fiat pil., No. 50.

Each pill contains 0.005 ( $\frac{1}{200}$  gr.) of arsenious acid.

### VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

BY WM. HENRY THAYER, M.D., OF BROOKLYN, N.Y.

In the treatment of puerperal convulsions—while recognizing uræmia as the constant predisposing cause, which may become the exciting cause—we must of course consider that the exciting cause may be reflex, requiring evacuation of the uterus, the stomach or the bowels for their arrest. All practicable measures to that end having been taken, as by active cathartics, or emetics, as indicated, we at once address ourselves to the nerve centres, to control nervous excitability until the exciting agent can be eliminated.

For this object, venesection was the reliance, until the employment of ether by inhalation largely superseded it. If venesection sometimes failed to relieve, ether never did, while the patient was kept unconscious; and it could safely be continued until delivery or free catharsis occurred, which usually terminated the paroxysms. It has been found, however, that *veratrum viride* in large doses will act as

thoroughly as ether, and its effects can be continued, and without producing unconsciousness.

In the condition of the nervous system that exists in puerperal convulsions, there is a peculiar tolerance of *veratrum viride*, so that the official dose has no effect. But large doses quiet the nervous erethism, producing a decided effect in a short time—sometimes in fifteen minutes, but almost certainly within an hour—and keeping the nervous system under control for several hours. The administration is followed by cooling of the surface, great lowering of the pulse in rate but not in strength, and along with this complete arrest of the convulsions. The state of the pulse is the guide in treatment. From a high rate, which rules in the disease, it is reduced to the normal standard or below it, and while it is kept below 60 there need be no fear of a recurrence of the paroxysms. When this effect has been once produced it will continue several hours, and a single dose may do it; if not apparent within an hour or less the medicine must be repeated in smaller doses, and it can be safely repeated at intervals until the pulse begins to fall. With the pulse for a guide, no untoward symptoms need occur from its use; the pulse may be brought down to 50 without any general depression; if carried so far as to produce vomiting we may find great prostration produced by the nausea, which is overcome within thirty or forty minutes by opium, or any diffusible stimulant—perhaps in less time by a solution of morphia hypodermically.

Dr. Norwood, of S.C., who introduced the use of *veratrum viride* as a very efficient agent in the treatment of acute febrile and inflammatory diseases, calls it “an arterial controller or vascular regulator,” and says, “its primary effect is to render the pulse slow, full, distinct and stronger.” “It allays morbid irritability in the nerves and muscles of voluntary motion.” “We have found nothing that arrests convulsions in children, accompanied with high febrile symptoms, with anything approximating such certainty and speed.” “Why would it not be the remedy in puerperal convulsions, when accompanied with frequent pulse, great heat and dryness of the skin, alone, or after bloodletting, where venesection was indicated?”

But Dr. Norwood never tried it in puerperal convulsions. In the paper from which I have quoted, published in 1868, he says, "In puerperal convulsions there is no remedy equal to stramonium."

The employment of veratrum viride in large doses in puerperal convulsions was first reported to the King's County Medical Society (New York) by Dr. Herbert Fearn, of Brooklyn, in 1869, substantiated by cases in which he had used drachm doses of the tincture, sometimes required to be many times repeated, with favorable results. This paper was published in the *American Journal of Obstetrics*, etc., May, 1871. I subsequently reported to the Society the following case, which has never been published, and will be sufficient for an illustration :

I was sent for at 9 a.m. to see a patient in consultation. She was a primipara, æt. 25, two years married; had had one miscarriage; was now at full term. Had had no trouble during her gestation; very moderate œdema of lower extremities for several weeks; nothing was known of her urine; her bowels had been evacuated daily. The day before she was to all appearance well, but in the evening had an attack of indigestion. Her physician was summoned at 10 p.m.; found her vomiting and complaining of cramp in the stomach; gave her ipecac, and afterwards cathartic doses of calomel. She became relieved, but at 4 a.m. had a convulsion, and had had no dejection.

The convulsions continued at intervals of half an hour or more till 9 a.m. They were severe and protracted, with frothing at the mouth, lividity of the face, and total unconsciousness, followed by coma and stertorous breathing; then an interval of partial restoration, but with indistinct utterance and without any recognition of friends. Between 4 and 9 o'clock she had been treated with tartrate of antimony in emetic doses; several assafoetida enemata, which had operated on her bowels; had been bled four ounces, and had had powerful sinapisms on various parts of her body. When the coma passed off she was very restless, throwing herself about and talking indistinctly and incoherently. Her pupils were dilated, pulse 120, hard, but not excessively full. The os uteri was high up, slightly dilated, the cervix not

entirely obliterated, and a uterine contraction took place during the examination.

Her physician readily acceded to my proposal to give veratrum viride in full doses, and at 9.40 a.m. we gave her nearly one drachm of the tincture. At 10 a.m. a convulsion as severe as before; at 11, another convulsion, and the last. As soon as she aroused from this she took twenty-five drops of Squibb's fluid extract of veratrum viride, which had been sent for on suspicion that the tincture we had administered was not of standard strength. But the relief probably came from the first dose, for she vomited almost immediately after swallowing the fluid extract, and probably rejected all of it. The vomiting continued for an hour, with great restlessness, the patient throwing herself almost incessantly over to the left. At 12.15 p.m. I saw her, found her rational and inclined to sleep, saying that her head was nearly free from pain; her pulse was 60 and soft. Labor went on well, and she was delivered of a dead child at 2.30 p.m. At 5 p.m. I found her quiet and comfortable, with a pulse of 84.

Since 1869, when Dr. Fearn's paper was read, the treatment of puerperal convulsions with veratrum viride has been slowly gaining favor; of which we have evidence in many communications to various societies and medical journals. Among the writers are Drs. Burge, Corey, Bunker, Pilcher, Sherwell, Brodie and Matheson, of Brooklyn; Whitehead, of Vicksburg, Miss.; Southworth and Crosby, of Michigan; Oatman, of Sacramento, Cal.; Fitch, of Illinois; and Fordyce Barker, two of whose cases are reported in the *Buffalo Medical Journal*, March, 1877. In one of Dr. Bunker's cases the patient was insensible for many hours, during which time the fluid extract was injected hypodermically, beginning with five drops, but frequently repeated until in twenty-four hours one ounce had been injected, and the patient recovered. In one of Dr. Fearn's cases of post-partum convulsions, five drachms of the tincture were given in ten hours, before the paroxysms were controlled; the patient recovered.

Stillé says, the depressing symptoms, when excessive, have generally been dispelled with facility, by suspending the use of the medicine and administering diffusible stimulants. The

effect of alcohol in counteracting the sedative action of the poison was shown, he says, in the case of a physician who took, by mistake, an ounce of the tincture of veratrum viride at one draught. Extreme nausea, vomiting, and some dyspnoea were the only evil consequences of this large dose. (Stillé's Therapeutics and Materia Medica, vol. 2, p. 297.)

The experience of one general practitioner in puerperal convulsions is not very great; but in the convulsions of children I have regularly employed veratrum viride for ten years past with excellent effect; and as a prophylactic in ephemeral fever in children who are subject to convulsions; with me it has largely superseded aconite in such conditions.

## MASTITIS AND MAMMARY ABSCESS.

BY J. H. BURNS, M.B., TORONTO.

At the regular meeting of the Toronto Medical Society, held January 15th, Dr. Burns read a paper on the above subject, a synopsis of which we give. Of all the causes of this painful affection, a fissured condition of the nipples is by far the most frequent. Early attention to these parts by astringent washes, soothing powders and strict cleanliness will do more to prevent this fissured condition than is generally appreciated by obstetric practitioners.

The most earnest enquiry and frequent inspection of these parts will reward the physician for any amount of trouble taken in this direction. Writers on skin affections are unanimous in regarding an eczema of the nipple, if not promptly treated, as an almost certain precursor of irritation sufficient to lead to mammary inflammation and subsequent abscess.

Dr. Robinson, of New York, in a very recent "Manual of Dermatology," says: "Eczema is very frequent in nursing women. The forms met with are eczema rubrum and eczema impetiginosum, usually both nipples are affected. Longitudinal and horizontal fissures form and discharge a serous fluid which dries to crusts. The nipple soon becomes broader and flatter, and there is much pain and itching. Nursing increases the inflammation and purulent mastitis often results."

The fact is noted that irritation of the nipples is more frequently observed in primiparous women; and the writer of the paper gives it as his experience that women who bear their first child late in years are more than ordinarily predisposed to this affection. To a condition of general debility may be assigned many cases of excoriated nipples; and in such cases, so great resistance to treatment is found that, failing all other remedies, it may be necessary to wean the child.

Inflammation having extended to the breast, may terminate in resolution or in abscess. The seat of abscess may be superficial, *i.e.*, in front of the gland; deep, behind in the gland; or in the parenchyma proper. The superficial abscess is fortunately the most frequent, and so long as confined to the areolar tissue in that situation may be a matter of a few days only. Inflammation beginning in this site may rapidly extend to the whole areolar tissue surrounding the mamma and cause deep abscess posterior to it, or may be communicated to the gland itself. Glandular inflammation, however, is more generally the result of engorgement of the lacteal ducts and obstruction to the discharge of milk from one of the lobules. In this form of inflammation lobule after lobule may be affected successively, each becoming in its turn the seat of an abscess, and here we have a formidable affection to deal with. Severe constitutional disturbance follows. There is high fever, exhausting sweats, and profound prostration.

Diagnosis as to the seat of abscess is not difficult. When beneath the breast it should be remembered that pointing of fluid may be sought for a long time. Unusual bulging forward of the breast, so that the skin appears tense and glistening, should lead to early exploration and free opening, lest the pus discharge in numerous places and lead to troublesome fistulous sinuses. In all cases of abscess early and free incision should be made, and antiseptic precautions are of the utmost importance.

Nurses are to be forbidden to practice the method so dear to them, of "rubbing away the lump," unless by special permission after proper advice. Where a duct is engorged, gentle rub-

bing with the fingers, well lubricated with oil, in a direction from the circumference to the nipple, followed by the application of belladonna, is not only admissible, but is good practice; in other cases it will serve only to increase the irritation.

The treatment of fissures and excoriations of the nipples resolves itself into diligence as to cleanliness of the parts affected—careful washing after each time of suckling, and the application of soothing and astringent powders and lotions. Among the best may be mentioned powdered starch, calcined magnesia, tinc. benzoin co., glycerole of tannin alone, or combined with sulphurous acid, as advised by Dr. Playfair; nitrate of lead, sulphate of zinc, etc. These may all be found ineffectual; under such circumstances, early resort to the nipple shield is imperative. The rest given to the nipple by the use of a proper shield will, in the majority of instances, lead to a spontaneous cure. The glass shield, with a rubber teat, is an excellent modification of this appliance. It also serves to draw out flattened nipples.

When the breast has become the seat of inflammation, support by means of the sling gives positive comfort and should be applied early. Support and pressure may be combined by the use of straps of adhesive plaster, evenly applied. Resolution will more likely follow this means than any other. The application of ice is recommended, but has failed in the writer's hands, as has also the use of phytolacca.

After the abscess, wherever situated, has been opened and thoroughly evacuated by careful pressure, support and compression by adhesive plaster to bring the abscess walls together is insisted on. Constitutional treatment with tonics, especially quinine, should be actively employed.

The amount of interference with lacteal secretion, the condition of the child, and the constitutional disturbance of the mother will be the best guide to the physician as to the propriety of weaning in this affection.

In glandular abscess of one mamma it may be found necessary to restrict the child to the healthy breast, although cases will occur where, notwithstanding the violence done by a succession of abscesses, lacteal secretion is maintained and the child is nourished from both breasts.

## THE PREVENTION OF OPIUM ADDICTION, WITH SPECIAL REFERENCE TO THE VALUE OF GALVANISM FOR RELIEF OF NEURALGIC PAIN.

BY J. B. MATTISON, M.D., BROOKLYN, N.Y.

(Read before the King's County Medical Society, Feb. 17th, 1885.)

Pain is the paramount cause of addiction to opium. Barring slaves to the pipe—who are simply victims of a vicious indulgence—exceptions to this statement are so infrequent as to weigh little against its correctness as a whole. In an experience embracing many cases, but a single instance to the contrary has been noted. Granting this the great generic factor, and believing prevention better than cure, one can appreciate the surpassing importance of the therapeutics of pain in relation to the prophylaxis of this growing neurosis.

Peerless among anodynes is opium, yet it is potent for evil as well as good, and its power for ill is one of which we believe the profession at large have not an adequate conception, or, if aware of it, fail to realize it to the extent it deserves: and not until the mischief is done beyond their undoing, do they rise to an appreciation of what a subtle enemy is often ambushed behind a seeming friend.

The power of opium to make itself a necessity—to create a demand for continued taking—would be almost incredible, were it not so often attested by sad experience. The writer's belief in this peculiar property becomes more profound with each case coming under his care; and when medical men, in general, accept it as a fact, and act accordingly, we believe the steadily growing proportions of this toxic disorder will be speedily checked and decline.

Pain, be the character what it may, if sufficiently persistent, and the giving of opiates too prolonged, will, almost unfailingly, beget this disease. But it is to the strictly neuralgic type, the one so often encountered by every day medical men, that this assertion pre-eminently applies. It goes without saying that in no other land does this outcome of impaired nerve tone prevail as with us. Why this is is well enough known, and need not detain us here. The fact cannot be gainsaid that neuralgia abounds, and that its treatment with opiates—



especially morphia, hypodermically—has made more opium habitues than can be placed to the credit of any other one cause.

It would ill become us to assert that this lamentable sequel can be entirely prevented, but we certainly think it can be largely lessened, and the special point of this paper is to invite renewed attention to a remedy the value of which the profession at large have not, we think, proper knowledge and appreciation, and which, in our opinion, outranks all others as a substitute for opium in the relief of neuralgic pain.

Dr. Anstie, in his unrivalled work on neuralgia, speaking of electricity in its treatment, said: "I shall make bold to say, that nothing but the general ignorance of the facts can account for the extraordinary supineness of the mass of English practitioners with regard to this question." Nearly a decade and a half have passed since this was written, and yet we believe it is true, to-day, of many American medical men. Certain it is, no physician who has not had properly directed experience on this subject can form any idea of the possibilities for good possessed by a well equipped galvanic battery. Anstie's estimate of it was: "The constant current is a remedy for neuralgia unapproached in power by any other save only blistering and hypodermic morphia, and even the latter is often surpassed by it in permanence of effect: while it is also applicable in not a few cases where blistering would be useless or worse."

With this opinion we are in full accord, and a growing experience serves only to strengthen our conviction of its truth.

In a paper by the writer—*Louisville Medical News*, February 23rd, 1884—attention was called to the value of this agent in relieving migraine. Our present purpose is to ask consideration of its merit, by actual trial in the hands of those who have not employed it, for the relief of other neuralgic pain. Every physician who has given attention to the treatment of opium habitues well knows how often some form of neuralgia follows among the sequelæ of an opiate disusing. Those that slumber, as it were, during the opiate addiction often seemingly take on a new lease of life. Others that may be pronounced are essentially the outcome

of impaired nerve tone due to the opium-taking. In either event they must be remedied, if we would have the prospect of permanent cure at all promising.

One danger ever menaces the ex-opium habitue—the occurrence of pain and the risk in re-using opiates. To guard against this latter, he must needs lend every effort, for on its success his future depends. He who has escaped the thralldom of opium is no longer like his fellows. The boon granted them, if required, is denied him; for one dose of the old narcotic may undo all done months or years before—a truth many an habitue learns by sorrowful experience, but one which, happily, proves at times an increased and assured protection against future ill.

To the ex-habitue some substitute for opium is, then, a *sine qua non*, and of all such with which we have had any experience not one equals the galvanic current. It is a most valued ally, and our estimate of its worth increases as experience with it extends. Points in its favour, as compared with remedies given by mouth, so far as regards unpleasant gastric or other results, need not be stated; they are self-suggestive. One great advantage it possesses is promptness of effect, often surpassing in this respect even hypodermic morphia. The latter is sometimes ineligible; and, when it acts kindly as an anodyne, is frequently followed by such nausea, vomiting, headache or general discomfort as to make the freedom from pain a relief dearly bought. No such charge can be made against the current; for when it fails, as at times it will, disagreeable sequelæ are not noted if the battery has been properly equipped and rightly managed.

We are not aware that ex-opium habitues possess any peculiarity or susceptibility that makes neuralgic pain in them any more amenable to galvanic treatment than when it occurs in those not addicted to this drug. If this be true, it follows that the latter are as eligible subjects for the constant current, with just as rich promise of successful result, as the former. Authorities agree as to its value. Bartholow says: "There is no fact more certain than the power of galvanism to relieve pain." Others, commending it, declare, as did Anstie, that lack of knowledge as to its value, and consequent

failure to employ it, are largely the cause of its limited use.

This paper, as asserted, is a plea for securing a practical acquaintance with it at the hands of those who are now unaware of its worth. Electricity need not and should not be limited to the specialist. Every practitioner, if he will, may avail himself of it. Careful study of its theory will pave the way for success in its practice. Varied works of this topic are at his service, and, without disparagement to others, it may be said that the last edition of De Watteville's treatise will bring him quite abreast the times regarding it.

One obstacle to its more general employment may have been the lack of a battery that combines three features desired—lightness, smallness, cheapness. Faradic batteries of this type abound, but the interrupted current is of very limited value in true neuralgic pain. Had the demand for such a battery, incident to a more extended use of the constant current, been created, we are inclined to think it would have been promptly supplied. At present we know of no galvanic battery, unless specially constructed, that contains less than ten or twelve cells. Absence of a smaller and less costly instrument has, we think, been a bar to more extensive use of electricity. As a fact, in very many cases, the larger batteries are not needed. Of all forms of neuralgia, facial is the most frequent, and in many instances a current of from 2 to 4 cells will suffice for its relief. We have repeatedly proven this with the Bartlett battery, made by the Galvano-Faradic Company, which, when a large instrument—12 to 36 cells—is desired, has many points in its favour.

For those desiring a smaller battery, the Kidder Manufacturing Company make one of four cells, which we have known give entire relief in severe neuralgic pain. It is small, inexpensive, and efficient. Not only is it valuable in professional hands, but it is especially adapted to domestic use, details of its management being easily acquired and applied.

Galvanism is not here lauded as a specific for neuralgia, nor is it intended to serve as a substitute for well directed general treatment to improve the impaired nerve status on which the painful bouts depend. Neither of these roles

will it fill, although cases have been recorded where entire and permanent freedom from suffering has followed a single application, but this is not the rule. The great point gained by it is relief from pain without resort to opium—the exceeding importance of which will be all the more appreciated when one considers the oft-recurring outbreaks so peculiar to this disorder, and the consequent need of repeated narcotic doses to secure the desired result.

Having decided on a trial of galvanism, the strength of current, points of application, and length and frequency of sittings must be duly considered. Regarding all these, careful study should be made of some standard work on the subject; but, in general, it may be said, as to the first, it must be painless—nothing more than moderate tingling, burning or redness under the negative pole. When used about the head, a current strong enough to cause slight flashings of light if the eyes are closed when the circuit is broken, will usually relieve the pain. In a battery, newly charged, we have known two cells suffice. Minimum strength is required about the brain; marked flashes, vertigo, or faintness are excess, and must be avoided.

Neuralgia of the trunk and extremities requires a stronger current, the extent of which individual peculiarity must determine.

The site of the electrodes varies according to the nature of the case, but, as a rule, the positive pole over the vertebra corresponding with the exit point of the nerve affected and the negative over the painful part will succeed. Some insist on a reverse order—*i. e.*, negative to the spine—but, in general, it is not essential: either will answer, though, as a fact, we have invariably noted in bilateral cases earlier subsidence of pain under the negative pole. In the latter, exceptions to this method may be practised; for instance, in migraine, an electrode on each mastoid, or in supra-orbital or temporal, over each eye or temple.

Length of sitting varies. Anstie asserts five to fifteen minutes the rule. We have repeatedly known less than the first sufficient, and have not hesitated to continue it more than the latter if the attack showed tendency to subside. Prolonged seances are more allowable to parts other than the head and face. Pelvic neuralgias and

sciatica most often require extended sittings. If several painful points, the current can be no longer given by varying the site of application, taking care not to break it, by lifting the electrode, but allowing it to glide from one place to another.

Frequency of sitting depends on frequency of attack. Every bout should at once be arrested. The more promptly this is effected the better. It lessens nerve exhaustion and tendency to recur. Dr. Herbert Tibbits cites a striking case bearing on this point. A patient for two years had been subject to attacks of neuralgic pain, occurring from six to twenty times daily. She was galvanized twenty times on the first day. Improvement was rapid: after a month's treatment, attacks were reduced to one or two weekly; in three months patient was cured. Dr. Tibbits believes that in severe and obstinate cases the full sedative effect of the current is only to be obtained by applying it as frequently as the paroxysms of pain recur.

Two cases under personal care will illustrate. Mrs. A. became an habitue from using morphia for relief of pelvic pain. After twelve years' addiction, reaching a daily taking of twelve grains hypodermically, she came under the writer's care and recovered. During her convalescence she had repeated attacks of neuralgia—seventeen in all—and some exceptionally severe. Thirteen were ovarian, three trigeminal, and one intercostal. In every instance the constant current gave entire relief after a seance ranging from six to twenty minutes, with a strength of six to sixteen cells. The negative pole was always applied to the painful part. This lady's husband is a physician, and in his hands the battery has since served her well.

Mrs. B., recovering from an opiate addiction, had from one to four neuralgic attacks daily for nearly three weeks, and then, at increasing interval, a fortnight longer. They were bilateral, supra-orbital and through temples. Some were intense. Without exception, every one was entirely relieved in from three to seven minutes by a two to four galvanic current. The poles were applied to the painful points, and it was invariably noted that the pain first subsided under the negative pole. Patient was instructed how to use the battery, and repeatedly did so

with success. Leaving our care, she sailed for the Bahamas; and in order to be prepared for possible neuralgic returns, we supplied her with a four-cell Kidder galvanic, the efficacy of which we had determined by several trials, in which a two-cell current had given entire relief. Tidings received since her leaving prove it retains its power to remove the occasionally recurring pain.

Nothing could be more satisfactory—in fact, we know of nothing so much so—as the prompt and complete success of galvanism in these cases. And they are not isolated examples. Their like abounds in medical annals. The Germans, notably Niemeyer, have given some most striking cases, making them, as has been well asserted, “among the most interesting facts in therapeutics that have ever been recorded.”

Since then there is at command a remedy so effective, and withal so free from unpleasant result, we urge the profession to avail themselves more largely of this powerful auxiliary in the therapeutics of neuralgic pain, instead of the so common resort to opiates, and especially the facile—yet so often fatal as regards the mental and physical health and happiness of many—hypodermic syringe. It is a trite story, but it is a true one—this using of opium to one's harm. Its importance cannot well be over-insisted on, and the right-minded physician must admit and appreciate it, if he would conserve the wellbeing of many who consign themselves to his care.

But it is so easy to prescribe an opiate for neuralgia pain that medical men, unmindful of possible harm, have been too often content to follow the old routine. Is it not time to begin a new order of things—to get out of the old path into one that will lead to better results, since free from the former risk?

Would it not be wiser for every practitioner to equip and acquaint himself with galvanic battery, and make trial of this rather than at once resort to opium? Would it not be far more prudent to provide his neuralgic patient, if occasion required, with this, and instruct as to its use, rather than supply morphia or an opiate prescription, which, as every one knows, can be easily refilled; or, most pernicious of all advice—since it is almost sure to have a ruinous ending—to counsel the purchase and self-using of a hypodermic syringe?

Let each one put this query to himself and weigh well the answer.

### Selections.

#### TRYPsin AS A SOLVENT OF THE DIPHThERITIC MEMBRANE.

Dr. B. M. Van Syckel, of 2091 Sixth Avenue, recommends a trial of trypsin as a topical application in diphtheria. Trypsin is one of the ferments of the pancreatic fluid. It will dissolve its own weight of fibrine in from five to ten minutes at a temperature of 37° Cent. (98.5° F.). It has been successfully employed as a solvent of the false membrane in diphtheria by Drs. J. Lewis Smith, of New York, and J. A. Keating, of Philadelphia, and at present several gentlemen are engaged in clinical experiments to determine its value for this purpose. Dr. Van Syckel has found that when the diphtheritic membrane, removed post-mortem, is immersed in a trypsin solution at a temperature of 37° Cent., "it becomes transparent and slightly swollen, then breaking into fragments it is slowly dissolved, with the exception of a small residue consisting of cells and possibly bacteria. This settles to the bottom of the glass, leaving the solution slightly turbid and mucilaginous. In cases where the membrane is still adherent to the surrounding tissue, the solvent action of the trypsin is slower, but no apparent change takes place in the healthy tissue." The solution is to be applied by means of the spray, applications being made every fifteen minutes if possible, or as often as the strength of the patient will permit, only a small amount of the liquid being used at each spraying. The importance of frequent applications should be impressed upon the parents or nurse, as upon this depends the success of the treatment. A leading pharmaceutical firm of this city is now employed in preparing a solution for use in diphtheria; but the writer states that the following extemporaneous preparation has been found very serviceable in his hands: 50 c.c. (3 j. 3 vj.) of a 1 to 1,000 solution of salicylic acid may be added to 5 grm. (3 j. gr. xvij.) of "extractum pancreatis," and the mixture allowed to digest in a water-bath at a temperature of 37° C. (98.5° F.) for four hours, then filtered and made slightly alkaline by the addition of bicarbonate of soda. The solution should be made only as required, as it will not keep more than one or two weeks.—*New York Medical Record.*

#### TREATMENT OF WHOOPING COUGH BY CROTON CHLORAL.

Dr. W. C. Webb, of Bryantsville, Ky., says in the *American Practitioner* that he has employed croton chloral in whooping cough with more benefit than he found from almost any other remedy. This drug does not derange the digestive organs, nor affect the vital nervous centres. Patients frequently fall asleep on their chairs after using it. On taking this remedy the patient must be watched lest toxic symptoms be manifested. A child from one to two years old may take 1 grain of the preparation every four hours. One ten years old, may take 2 grains as often. After the first week the dose should be lessened and given at longer intervals. Should there be much gastric irritability, or should the paroxysm be very severe, a few whiffs of chloroform may be given in advance of the croton chloral. This may be repeated only three or four times.

The following formulæ are given for its administration: R. Croton chloral, ʒ j; tinct. cardamon comp.; glycerine aa ʒ ij. Sig.—One half a teaspoonful every four hours for a child two years old and under; or, R. Croton chloral, ʒ j; tinct. belladon., ʒ ij; tinct. cardamon comp., ʒ ij; glycerine, ʒ iij. M. Sig.—One-half teaspoonful.—*Medical Summary.*

CHLORAL HYDRATE AS VESICANT.—Dr. A. M. Fautleroy (*Southern Clinic*) recommends powdered chloral hydrate sprinkled on adhesive plaster and melted by a gentle heat—not more than sufficient to cause the plaster to adhere to the flesh. It is applied while warm to the part where the blister is wanted; within a few minutes a gentle heat is felt, increasing in intensity for a short time, then gradually easing off, and at the end of ten minutes the part is free from pain, and effectually blistered. Thus, within about 10 minutes, the work of an old-fashioned blister is accomplished, with many advantages over the latter, viz: 1. Rapidity of action. 2. Ease of application. 3. Non-occurrence of strangury. 4. The blister requires no dressing. The plaster is simply allowed to remain until it loosens and comes off itself. The blistered surface is, in the meanwhile, healing kindly.

**TENDON REFLEXES IN CHOLERA.**—Dr. A. Josias concludes from his researches, that the tendon reflexes are exaggerated in cholera at the beginning and at the crisis of the disease, and are lessened or normal during convalescence and recovery. In severe cases of rapid onset this exaggeration is constant; in grave cases of slower evolution it is frequent, and in mild cases the reflexes are normal.—*Le Prog. Méd.*

**CURE FOR CHILBLAINS.**—Boil a stalk of celery in water sufficient for a hand or foot-bath. Take the bath as hot as can be borne. The chilblains will have disappeared by the next morning.—*Jour. de Méd. de Paris.*

Terpene hydrate absorbs and condenses oxygen, and afterwards by evaporation parts with it as ozone. It is prepared by distilling in vacuo the buds and resins of *Pinus Maritima* and *Paustialis* at as low a temperature as possible. The terebene thus obtained is intimately mixed with a certain quantity of distilled water. The mixture is then made to absorb oxygen to saturation. The liquid thus prepared possesses very pronounced disinfecting properties. It has been successfully used as an inhalation in phthisis and diphtheria—as a dressing for surgical and other wounds—as an injection in dilated stomach with foetid eructations it has been of great benefit giving rise to none of that gastric irritation occasioned by the injection of oxygenated water.—*Jour. de Méd. de Paris.*

R. B. N.

In the Feb. number of the *Journal of Cutaneous and Venereal Diseases*, there appeared an able article on treatment of ring worm of the scalp, by Dr. Alexander. He recommends the use of a pigment composed of chrysarobin (of the strength of ten per cent. in *Liquor Gutta-perchæ*). It is applied in the following way: The hair was closely cut or shaved on all the heads which presented scaly patches; the scalp was thoroughly cleansed, and epilation by forceps of the hairs on the spots and for a short distance around them was practised. This left a clear, bald spot, the centre and greater part of which was thickened, infiltrated and of a dark-gray

color, contrasting sharply with the healthy skin around it. This discolored area was then covered with a layer of the pigment applied with a stiff brush. Nothing further was done until the artificial cuticle began to crack, or until the growing hairs pushed their way up through it. The application was then renewed, and this was done twice or thrice a week. No attempt to isolate the patients was made, and no other precautions taken except to make them wear caps, to insist on frequent inspections and thorough cleanliness, and to attend to their general health. Cod-liver oil or iron were administered to such as seemed to require them.

**IODIDE OF POTASSIUM IN THE TREATMENT OF PNEUMONIA.**—The *Practitioner* summarizes two articles on this subject by Schwartz ("Bull. gén. de thérap.") and Gualdi ("Boll. della R. Acad. Med. di Roma.") Schwartz recommends the administration of six grains of the drug every two hours, and records a number of cures under this treatment. Ice-bags were applied over the affected lung. Gualdi has followed the same method in many cases with great success. Both observers agree that the use of the remedy causes a speedy disappearance of the fever and dyspnoea, while the local condition remains unchanged. It should be given at the outset, and the applications of ice must not be continued after the stage of congestion is past. It is noted that children respond to the treatment better than adults.—*N. Y. Med. Jour.*

**TOPICAL APPLICATION FOR DENTAL CARIES.**—Redier (*Union med.*) suggests the following mixture:

Tincture of benzoin.....	1 drachm;
Tincture of opium,	} each ..... ½ drachm.
Chloroform,	
Creosote,	

Cleanse the carious cavity, and introduce into it a small tampon of cotton soaked in the mixture. This is to be left *in situ* for a few minutes, and then removed in case relief is not obtained. The action of the remedy is said to be prompt and almost invariably successful.—*N. Y. Med. Jour.*

A COMBINATION OF BROMIDES FOR EPILEPSY.—Erlenmeyer (*Centralbl. f. Nervenheilk*) recommends the following formula :

Bromide of ammonium . . . . . 30 grains ;  
 Bromide of potassium, } each . . 1 drachm ;  
 Bromide of sodium, }  
 Water . . . . . 24 ounces.

The whole is to be given in the course of twenty-four hours.

It is said that the use of this mixture does not cause bromism, even acne not having been observed under its action, and that its control over the attacks is very decided.—*N. Y. Med. Jour.*

A RESOLVENT OINTMENT.—M. Mallez (*Union med.*) gives the following formula :

Iodide of lead . . . . . 75 grains ;  
 Iodide of potassium, } each . . 30 "  
 Extract of belladonna, }  
 Extract of opium . . . . . 8 "  
 Lard . . . . . 12 drachms.

This ointment is recommended for use in cases of orchitis, to be applied night and morning, also, applied along the course of the urethra, to promote the absorption of surrounding deposits in cases of gonorrhœa.—*N. Y. Med. Jour.*

THE CHAIR OF PATHOLOGY AT LEIPSIK.—Prof. Birch-Hirschfeld, of Dresden, has been nominated to the Chair of Pathological Anatomy at Leipsic, vacant by the death of the late Prof. Cohnheim. The new professor is perhaps best known for his exhaustive text-book on Pathological Anatomy, of which the second edition is now appearing. He has done much original work in bacteriological subjects. He is not, therefore, likely to pursue the physiological line of inquiry so much advanced by the late illustrious teacher.—*Lancet.*

OBSTRUCTION FROM GALL STONES.—At a recent discussion in the N. Y. Surgical Society several speakers spoke highly of the efficacy of phosphate of sodium in cases of obstruction from gall stones. It should be given in drachm doses thrice daily for months if necessary.

HIGH TEMPERATURES.—Mr. Tait reports in the *Lancet* two cases with remarkably high body-temperatures. Both were associated with ovarian disease. In the first case an ovarian tumor was removed; the temperature reached its maximum, 111°, on the fifth day after the operation, declining to normal on the eighth day. Nothing was found to account for the fever. The second patient was ill with chronic ovaritis, and, after some heavy lifting, the symptoms of pelvic peritonitis supervened. During the following two weeks her temperature often went up to 110° and 111°. She made a slow recovery and has had frequent relapses, but no repetition of the extremely high temperature.—*Chronicle.*

#### WARM DOUCHING OF THE HEAD AND NECK IN THE INSOMNIA OF CONTINUED OR ERUPTIVE FEVERS.

BY ARTHUR J. CAMPBELL, M.B.

In the *British Medical Journal* for December 6th there is an article on "The Cold Bath in Enteric Fever." In this, Dr. Alexander Collie condemns the practice of lowering the temperature by such means: first, because the temperature is not the primary disease; secondly, because as good results are probably obtained without its use; and, thirdly, because, in severe cases, the bath is contraindicated by the cardiac weakness.

While I agree entirely as to the unsuitableness of such a proceeding as plunging a timid, disease-weakened patient into cold water, I wish to point out what I consider a most pleasant and soothing method of employing a douche, especially indicated in sleeplessness, and not contraindicated by cardiac debility; the proceeding is neither novel, difficult, nor disagreeable, and is productive of the best results if efficiently performed.

The patient's shoulders having been wrapped in a sheet or blanket, and his ears plugged with cotton-wool, his head is supported over the edge of the bed (a suitable vessel being placed underneath to receive the water), while a gentle stream of warm water from the rose-spout of an ordinary watering-pot is directed over the

head and neck. The watering-pot should be held at least eighteen inches above the level of the patient's head, and the douching may be kept up for three or four minutes; the head should then be lightly dried with a towel, and the patient lifted into his ordinary position in bed. As a rule, sleep is produced within a short time.—*Brit. Med. Jour.*

Dr. Fordyce Barker, the family physician of Gen. Grant, is reported to have recently given the following account of his condition: "Gen. Grant's health has improved very much during the past few weeks, and the swelling in his mouth, which a few weeks ago made it difficult for him to talk or eat, has subsided in a great measure. Some eight or ten weeks ago he was suffering from a swelling, accompanied by great pain, in the back of the tongue, and I called in Dr. J. H. Douglas for the purpose of applying local treatment. The General's smoking, in which he had been accustomed to indulge all his life to excess, seemed to irritate the tongue, although he was not conscious of its affecting his general system. We therefore advised him to cut down his smoking to the first half of three cigars a day, as we thought it probable that it was the nicotine which accumulated in the last half of the cigar that produced the irritation. He followed this advice for perhaps a week, and then gave up smoking entirely, apparently without the least disturbance to his nervous system, loss of sleep, or other unpleasant effect whatever. This was remarkable, as he had been smoking from twelve to fifteen cigars a day. The improvement in his condition since then is marvellous. Under treatment by muriate of cocaine not only has the pain been greatly diminished, but the capillary congestion of the tissues has in a large measure disappeared." Dr. Douglas intimated that the trouble in the tongue was of an epitheliomatous character.—*Jour. Am. Med. Asso.*

NEPHRECTOMY. — Mr. Knowsley Thornton has had eleven nephrectomies. All the patients have recovered and are well. He employed in every case abdominal section, generally by Langenbuch's incision. The vesical end of ureter was fixed outside abdomen in seven cases.

THE TREATMENT OF PHIMOSIS WITHOUT CUTTING OPERATION. — Recently a child aged 18 months, with a tight phimosis, was placed under ether; I then inserted within the prepuce the end of a pair of dressing forceps, expanded the blades, and with great ease retracted the prepuce behind the glans. The facility and rapidity with which this was done (the whole process being almost momentarily) and the satisfactory results, lead me to doubt whether it is justifiable to submit any infant to the risk, however slight, attending circumcision (to say nothing of other objections), and in the case of adults (for whom Mr. Richmond's ingenious instrument appears specially intended) it seems to me highly probable at any rate that a similar proceeding could be well borne without anæsthetics, and that it would be preferred by the patient to a tedious gradual dilatation.—HERBERT L. SNOW, in *British Med. Jour.*

UNUSUAL OCCURRENCE IN TRACHEOTOMY.—Mr. Osborn reports a case (*Brit. Med. Jour.*) where he performed laryngo-tracheotomy for croup, in which the symptoms, as far as difficulties in breathing were concerned, were not relieved. A necropsy showed that the false membrane had not been punctured, and the tracheotomy tube passed down between trachea and membrane.

ANTISEPTIC SURGERY. — The *N. Y. Med. Journal* thinks it probable that no surgeons understand the principles of antiseptics better, and carry them out worse, than Americans.

EXTRA-GENITAL CHANCRES.—Drs. Lavergne and Perrin have published in the *Annales de Dermatologie et de Syphiligraphie* a report of the extra-genital chancres which they have observed in 1883 at the St. Louis Hospital, in the service of Prof. Fournier. In one year and in one service of this wonderful hospital, which has six services equally important, and the clinical richness of which can only be appreciated by a long attendance, these conscientious observers have collected twenty-seven cases of extra-genital chancres, which may be divided as follows: Lips, 10; eye and eyelids, 5; cheek, 2; anus, 2; nose, ear, neck, arm, finger, bosom, leg, thigh,

each, 1; total 27. As an interesting feature we note that among the twenty seven patients, twenty-one were men, and only six women; that five times the contagion had followed the bite of a patient affected with buccal syphilides. In sixteen out of the twenty-seven cases, the mode of contagion was not discovered. This interesting work terminates with a monograph upon chancres of the eye.—*Jl. Cut. and Venereal Diseases.*

**FISSURE OF THE ANUS.**—Dr. Kelsey says that for the past two years he had not been obliged to stretch the sphincter for fissure of the anus, but had used instead a weak solution of nitrate of silver—never of more than five or ten grains to the ounce. In a recent case the patient was cured by a single application of a ten-grain solution, and in another and very severe and obstinate case a cure was effected in three weeks by this method.—*N. Y. Med. Jour.*

**SIR JOSEPH LISTER.**—The Emperor of Germany has just conferred on Sir Joseph Lister the "Ordre pour le Mérite" for Science and Arts. This act of the venerable Emperor is a generous recognition of the claims of British medical science. In commenting on it, the *Lancet* says: "The discoverer of vaccination has been more honored in Germany than in his own country, in accordance with the Scripture that 'cannot be broken.' The quiet revolution in surgery, involving the practical abolition of pyæmia, hospital erysipelas, and gangrene, and an infinite diminution in the calamities of surgery, which we owe to Sir Joseph Lister more than to any other single man, is a service to mankind not quite on the same scale as the discovery of vaccination, but of very far-reaching consequence."—*Medical News.*

While discussing vaginal examination, Emmet says that "a patient once informed him that she had refused to submit to an examination because she noticed that the physician whom she consulted did not keep his finger nails clean. This circumstance convinced her that, if he was so negligent of his own person, he would be quite as likely to neglect the details of her case."—*Detroit Lancet.*

### SEVERE OR "UNCONTROLLABLE" VOMITING OF PREGNANCY.

At a meeting of the London Obstetric Society, Dr. Graily Hewitt, in a paper, said there were two factors in the vomiting: 1st, Altered position or incarceration; 2nd, indentation of tissue near os internum.

Dr. Barnes said that excessive vomiting in pregnancy was an instance of a physiological process passing the healthy boundary. The physiological basis was vascular and nervous tension peculiar to pregnancy. Vomiting was a safety-valve for nervous energy, and a safeguard against nervous seizures, such as eclampsia. Vomiting was a sort of physiological convulsion, and so was labour itself. After delivery, the tension ceased, and the liability to vomiting also. The exciting cause of the vomiting of pregnancy was usually in the uterus itself. The fact of the vomiting occurring as soon as the patient got up might be partly explained by increased flexion, partly, also, by Bretonneau's theory of rapid distension of the uterine fibres under increased hydraulic pressure of the blood from the erect position, when the nervous centre was most excitable after rest, and the inhibitory force weakest from fasting. Since flexion remained for the rest of the day, however, flexion was not sufficient. Vomiting later in pregnancy, which was the severer form, was kept up by starvation when once started; degraded blood increased the irritability, and a vicious circle was formed. Albuminuria was a further evidence of toxæmia, and hiccough was a form of convulsion. The vomiting seen in obstructive dysmenorrhœa was analogous. The solution was not to be sought in any one factor, but nervous and vascular tension underlay the whole question.

Dr. Braxton Hicks said the term "severe" was too vague, and he had never seen uncontrollable vomiting. The vomiting of pregnancy was so variable that severe vomiting could not be considerable apart from the vomiting which might be called natural. When the pulse rose, emaciation commenced and the tongue became red, and the epigastrium tender, the case became urgent. He had never seen a case which had not yielded to remedies. With regard to



the cause of vomiting, he agreed in many points with Dr. Barnes. Since Dr. Graily Hewitt's first paper he had examined all cases carefully, and he had never found any displacement or other local disturbance requiring mechanical treatment, nor had he ever failed to carry his patient safely to full time by the persistent use of remedies, especially opiates, given perseveringly until some portion was retained by the stomach, and the system was calmed. The nerves of the mucous membrane of the stomach became irritated, and, after a time, formed a centre of disturbance, after the manner seen in other parts. By the administration of opiates by the mouth these nerve-ends were soothed and consequent benefit secured.

#### CREDE'S METHOD FOR DELIVERY OF THE PLACENTA.

The vigorous controversy over "Crede's method," which has recently involved so many obstetricians, has led Crede to restate in detail the manipulation he advises. As many American practitioners habitually adopt what they believe is his practice, I think it will be of interest to know exactly what that method is; I therefore have translated his own description, giving the italics as found in the original, in the *Archiv fur Gynaklogie*, xxiii., 2, 313:

\* \* \* "The natural detachment of the placenta occurs within a few minutes after the birth of the child, and is recognized by a discharge of blood, and by a marked diminution of the size of the uterus, which may now be felt as a firm ball, the size of a child's head, between the umbilicus and pubes. As soon as any after pains have occurred, the midwife grasps the entire uterus through the abdominal walls with both hands and presses it towards the concavity of the sacrum; she repeats this *several times*, if necessary, *but only during a pain*, until the placenta is found at the vulva or is entirely expelled. If, from imperfect contraction of the uterus, or from tenderness of the abdominal walls, sufficient pressure to expel the placenta cannot be made, the attendant, guided by the umbilical cord, feels carefully in the vagina for the placenta; if a portion is felt, then, with one

hand, *gentle* traction is made on the umbilical cord, while with the other pressure is made over the uterus. If the point of insertion of the cord in the placenta cannot be reached, or if on *gentle* traction of the cord resistance is felt, no further effort to deliver the placenta in this way may be made until after *several uterine contractions* have occurred, which may be increased by *gentle* rubbing and pressure. If the placenta is found low in the vagina, and readily reached by the finger, then the attendant shall pass the index and middle fingers as far upon the placenta as possible and press it gently downwards and backwards, while with the left hand the cord is made tense. When the placenta appears at the vulva the attendant shall grasp it with the fingers of one hand and draw it gently upwards and slowly turn it upon itself several times in order that the membranes may form a cord and not be torn away. When delivered, the entire after-birth and any coagula are removed under the flexed leg of the woman and placed in an empty basin.

"*All strong traction* on the umbilical cord, or attempts to extract the placenta when high up by introducing a part or the whole hand, or to aid the efforts at extraction by straining, coughing, blowing in the hands, etc., are *very dangerous*, and therefore are *inadmissible and forbidden*."—W. H. TAYLOR, M.D., *Lancet & Clinic*.

**BEEF PEPTONIDS.**—The enterprising firm of Reed & Carnrick have brought forward many preparations which have been of great use in the treatment of disease. They have recently introduced two new preparations, which, in our opinion, quite surpass any of their previous efforts—one, the emulsion of cod-liver oil with milk and pepsin, we have already spoken of; the second is the new form of beef peptonoids—a combination of concentrated beef, milk, and the gluten of wheat. When taken with milk it is a very pleasant form of food, and it certainly does help the digestion of the milk. The writer has given this combination with the very best results to patients who previously could not take milk on account of the indigestion it produced. We can heartily recommend this preparation.

# THE Canadian Practitioner.

(FORMERLY JOURNAL OF MEDICAL SCIENCE.)

To CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of County or Territorial Medical Associations will oblige by forwarding reports of the proceedings of their Associations.*

To SUBSCRIBERS.—*Those in arrears are requested to send dues to Dr. W. H. B. Atkins, 40 Queen St. East.*

TORONTO, MARCH, 1885.

## UNIVERSITY CONFEDERATION.

Since our last notice of this subject, considerable progress has been made by the authorities of the several Universities in this Province. The result may be given as follows:—Queen's has refused to go into the confederation; Trinity will join the confederacy if the propositions she has made are acceded to; Victoria will in all probability become a member.

The University will then be the central and highest corporation, with the following colleges as members: University, Victoria, Trinity, Wycliffe, Knox, and St. Michael's Colleges, and McMaster Hall.

We have not yet seen any reference made to the relationship which the medical schools will bear to the governing body. It is singular that so much progress should have been made in the scheme, without any notice having been taken of a department which is considered to be one of the most important in the principal European Universities. It is time that the medical profession of the Province was asserting its rights, and endeavouring to secure in the future University system endowed chairs in the departments of Anatomy, Physiology, and Pathology, subjects which we all know cannot be properly taught under the present condition. We also hope that the Senate will see to it that some change is made in the curriculum. It is a lamentable fact that since the present curriculum came in force, the number of undergraduates in medicine has very much diminished, and the University has been robbed of professional men who would otherwise have been among its most influential supporters.

So far as we can judge of the scheme which has been laid before the public, it would be better for the medical schools to become members of the University system on the same terms as the other colleges mentioned. We would recommend the following plan:

1. That the two medical schools of Toronto become members of the confederation.

2. That a Physiological and Pathological Institute be built in the neighbourhood or in connection with the hospital.

3. That in this institute there shall be established endowed chairs of Physiology, and Pathology.

4. That a reasonable pass and honour curriculum be established which will require a large amount of practical work.

5. That the Matriculation Examination be brought in some way into harmony with the Council Examination.

We contend that if these changes were made the Toronto University would secure all the best graduates in medicine, and the profession throughout the Province would be immensely benefited.

## TORONTO SANITARY ASSOCIATION.

We are very pleased to notice the growth of this Association, and the interest it is awakening in the public mind on the important questions of health. The management is placed in the hands of persons who are thoroughly alive to the importance of their positions, and we can almost say of the trust placed in their hands. The subjects brought before the meetings have been of direct local and provincial interest and have been dealt with by lecturers thoroughly versed in their subjects. The lectures on Toronto drinking-water, by Dr. W. Hodgson Ellis, the public analyst; sewers and sewerage, by Mr. Alan Macdougall, the sanitary engineer; and house plumbing, by Mr. Curry, architect, have each in turn all been practical and instructive. Of the last named too much cannot be said, the subject is of such vast and directly personal importance to every householder; we can only add our praise, and compliment the Association on having members who do devote so much time to the preparation of lectures full of research, interest and practical application.

Mr. Curry's diagrams were most beautifully and elaborately prepared, and showed every phase from "how not to do it" up to the perfectly plumbed house.

Not content with discussions amongst themselves the Association has appealed boldly for public sympathy in appointing two Committees, one to wait on the Mayor to urge on the City Council the importance of enforcing the provisions of the Health Act, and the other to wait upon the Government to urge them to pass an Act regulating the examination and licensing of plumbers and inspectors of plumbing.

There is a wide field of operation open to the Association, and we would like to suggest to the Council the scheme of trying to have a course of popular health lectures delivered, similar to those which have been carried on so successfully in the old country, notably in Edinburgh, Glasgow, Manchester, Liverpool, London, and elsewhere. We would gladly see such a course instituted next winter, if the present session be too far advanced to commence them, and we appeal to our professional brethren to come forward and aid this very meritorious movement. At present the membership is confined largely to architects, plumbers, and builders; if our physicians would come forward and join the Association, they could help forward the membership by inducing their patients to join, and a very great deal of useful information could be disseminated which would not fail to have an important bearing on the general health of the city. Every life saved is a life gained to the commonwealth, and every life so saved helps to reduce the death roll. The mere fact of good sewers, good plumbing, and so forth won't make a healthy community unless our citizens are alive to the importance of personal and domestic cleanliness, the necessity of proper physical exercise, and the treatment, and isolation, and nursing of the sick, and those ill with contagious diseases. *Mens sana in corpore sano*—a healthy mind can only exist in a healthy body.

We draw the attention of our readers to the meeting of the American Medical Association, which takes place in New Orleans, on April 28th and two following days. The Exhibition will remain open until the first of June, which, together with the reduced railway fares, will cause the attendance to be larger than usual.

## TORONTO'S MEDICAL HEALTH OFFICER.

Toronto was very fortunate in obtaining as Medical Health Officer a man possessing such high attainments as Dr. William Caniff. He has been for many years one of the best known and most highly respected among Canadian physicians. Four years ago the members of the general profession showed their high appreciation of his worth by bestowing upon him the highest honour at their command in making him President of the Dominion Medical Association.

When he was first appointed Medical Health Officer of Toronto, with a salary of \$1,500 per annum, it was supposed that he would be able to retain a certain portion of his private practice, but as a matter of fact he has been compelled to devote all his time to the performance of his public duties, and indeed has found it necessary at times to employ a clerk to assist him in his work. During last year he received an addition of \$500 from the Local Board of Health, which will not be forthcoming this year.

It so happens, however, that by virtue of his position he has been appointed Statistical Officer by the Dominion Government, the fees therewith amounting to nearly \$400. We regret to learn that certain members of the Council wish to deduct these fees from his small salary of \$1,500.

As we have before contended in this Journal, we think the salary of our Medical Health Officer, when he is expected to give all his time to the city, should not be less than \$2,500 a year, and we had hoped that before this time it would have reached that amount. We trust now that the City Council will at least do nothing so petty as take away from Dr. Caniff the fees obtained for work not at all included among his duties as Medical Health Officer of this city.

It is scarcely necessary for us to say that Dr. Caniff has proved a most able and efficient Health Officer. He has probably saved the city at least \$1,000 a year in hospital fees, while his careful and laborious discrimination has probably brought scores of worthy patients under hospital treatment who would otherwise

have been neglected. Among other items the city has probably been saved \$300 a year for vaccinations. The good which he has been able to accomplish in other ways cannot be computed in dollars and cents. Much remains yet to be done, and we hope that Dr. Caniff may long be spared to carry on the good work which he has commenced. Would it be too much to ask our Council to accord him something like simple justice as a professional man and public officer, even though it declines to show anything like generosity.

### THE ANATOMY ACT.

For some years past the amount of dissecting material at the disposal of the medical schools of Toronto has been found quite inadequate for proper teaching in anatomy and surgery. The present Anatomy Act has been many years on the statute-book. No doubt its provisions were quite sufficient for the need of the time when it was passed; but, with increased population and a greater number of medical students, a revision is now imperative.

A revised Act has been carefully framed and agreed to unanimously by those interested in medical schools, and will shortly be introduced into the Provincial Legislature. By its provisions only those bodies will be claimed when there are neither relations nor friends willing to bear the funeral expenses, and who would otherwise be buried at the expense of the municipality. When it is stated that in Toronto alone over a hundred corpses were buried during the past year at the expense of the city, it will be clearly seen that the supply of material will be ample.

We have no doubt that when the matter is laid before the members of the House they will see that it is in the interest of the public that their physicians should be properly trained, and to this end it is absolutely necessary that more dissecting material should be provided. We hope that there will be no serious opposition to the Bill.

We regret to announce the death of Mrs. Winstanley, the wife of Dr. O. S. Winstanley, who, for many years, was one of the most prominent physicians of this city.

### THE JOHN H. STRATFORD HOSPITAL OF BRANTFORD.

Mr. Stratford, of Brantford, has done nobly in giving to the city a complete and well-equipped hospital, large enough to meet the requirements of the place for many years to come. Such practical generosity is deserving of the greatest praise. It is to be hoped that many wealthy and public-spirited citizens of Canada may be induced to imitate, and devote a portion of their abundance to the alleviation of human suffering and the advancement of medical education.

At a recent meeting of the Paris Académie des Sciences, M. A. Howarth, Professor at the University of Kazan, Russia, claimed for Dutrochet priority in the discovery of the migration of blood corpuscles through the walls of blood vessels in inflammation. The credit of priority in the discovery is generally given to the late Professor Cohnheim. He quoted from the writings of Dutrochet a statement that in 1824 the latter demonstrated the diapedesis of blood globules.

### Obituaries.

#### DR. O. T. HEARTWELL.

The late Dr. O. T. Heartwell, of Dunnville, whose sudden death took place on the 10th ult., was but a young man, being in his 36th year. He was born near Caledonia, County of Haldimand, entered upon the study of medicine at Toronto School, and upon graduating practiced for a short time at Jarvis, but removed to Dunnville, where he in a little while secured a busy practice. The doctor was a pleasant, sociable companion, generous and impetuous in his nature, and ever willing to lend a hand to any laudable enterprise, whether of a civil, social, or religious nature. His end came with scarcely a moment's warning. In the night he awoke in distress, and died before medical aid could be summoned. Cause of death being valvular disease.

Dr. S. N. Reynolds, of Detroit, died in Texas February 14th. He graduated in Toronto University, having completed his course in the Toronto School of Medicine. In 1877 he went to England, where he spent some time, principally in London. After his return from England he commenced practice in Detroit, where he was very successful. His health was bad for some years, and it was hoped that a visit to the South would prove beneficial. His death occurred rather suddenly, and was a great shock to his friends and relations.

#### WILLIAM BRAITHWAITE, M.D.

Mail advices from England announce the death of the well known English physician and surgeon, William Braithwaite, the founder of *The Retrospect of Medicine*, who died at his home in Leeds on January 31.

He was the oldest medical practitioner in Leeds, and in his large and varied practice he was esteemed on all hands, both on account of his great knowledge and his sympathetic and kindly disposition. Dr. Braithwaite was born in 1807 and was therefore in his seventy-eighth year.

The *Retrospect* will be published as before under the editorial charge of Dr. James Braithwaite, assisted by able colleagues.

#### DEATH.

DRAPER.—At Tilsonburg, on Saturday, February 21st, Jennie, wife of Dr. J. S. Draper, of Tilsonburg, and sister of Dr. Adam Wright, of Toronto.

It is with pleasure we note that *Gaillard's Medical Journal*, of New York, will be continued by Messrs. M. E. and E. W. Gaillard, assisted by able collaborators.

At the last meeting of the Toronto School of Medicine Medical Society, held Feb. 27th, Dr. J. H. Richardson delivered a most eloquent and instructive address on the subject of Homeopathy. There was a very large attendance of both physicians and students.

#### Book Notices.

*The Hygiene of the Nervous System and Mind.* By C. H. HUGHES, M.D., St. Louis.

*Cocaine and its Use in Ophthalmic and General Surgery.* By H. KNAPP, M.D. New York: G. P. Putnam & Sons; 1885.

*A Manual of the Medicine Botany of North America.* By LAWRENCE JOHNSON, A.M., M.D., New York: Wm. Wood & Co.

*Diseases of the Urinary and Male Sexual Organs.* By W. T. BELFIELD, M.D. New York: Wm. Wood & Co.

*The Revival of Ovariectomy and its Influence on Modern Surgery.* By Sir SPENCER WELLS, Bart. London: J. & C. Churchill.

This is an address which was delivered at Birmingham, in November, 1884, before the Midland Medical Society; and is exceedingly interesting, as we might expect from one whose name is so intimately connected with the most brilliant exploits of modern surgery.

*The London Medical Student and Other Comicalities.* Selected and compiled by HUGO ERICHSEN, M.D., Detroit.

The author, in the prefatory, says: "The London Medical Student' is taken from the *London Punch*, where it was published half a century ago. Despite my strenuous efforts, I could not detect who wrote the sparkling portraiture of medical student life in the great metropolis of the world; but I am convinced by my investigations that its authorship belongs to Hood, Dickens, Thackeray, or Douglas Jerrold."

*The Therapeutics of the Respiratory Passages.* By PROSSER JAMES, M.D. New York: William Wood & Co.

This is the November volume of Wood's Series for 1884. The author has such a widespread reputation on this continent that his name alone is a guarantee for the excellence of his book. In the age when so much energy is displayed in the field of pathology and etiology, it is satisfactory to know that the important

department of therapeutics is not being neglected.

This work is well arranged, and will serve as an excellent means of reference for the practitioner as well as a text-book for the student. We can confidently recommend the volume, which adds one to the number of really first-class works which have been issued in Wood's Library.

*The Popular Science Monthly.* New York: D. Appleton & Co. Fifty cents a number, \$5 a year.

The variety and readableness of its articles, for which "The Popular Science Monthly" easily holds a leading place among our periodicals, are well maintained in the March number. Dr. Frank H. Hamilton gives us from the point of view of a physician of large experience an estimate of the character and value of "Medical Expert Testimony," particularly in cases where the question of insanity is involved. The second of Dr. von Pettenkofer's valuable papers on "Cholera" appears in this number. Dr. B. W. Richardson, in "The Painless Extinction of Life," considers the relative value of some twenty anæsthetics for this purpose. Dr. H. Percy Dunn gives the "English Experience with Cancer," and shows that the disease is increasing as life grows more comfortable.

*A System of Practical Medicine by American Authors.* Edited by WILLIAM PEPPER, M.D., LL.D. Philadelphia: Lea Brothers & Co.

We have received the first volume of what will no doubt be one of the most exhaustive and complete works on medicine. It is indicative of the very great progress which has been made on this continent, that so able a work should be entirely written by physicians in the United States and Canada. The first volume is divided into two sections. The first section is taken up by general pathology and sanitary science. We would here notice especially the very able article on "Drainage and Sewerage in their Hygienic Relations," by George E. Waring. It contains in a small compass all that is known on that very important subject. The second section contains articles on general diseases, written by men who are at the head of the profession in their particular departments.

We have no hesitation in recommending the work to our readers as a most exhaustive treatise on medicine, and especially valuable on account of the accurate manner in which diseases peculiar to this continent are treated of. The first volume is excellently printed, and the whole make-up of the book is very creditable to the enterprising publishing house of Lea Brothers & Co.

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### Personal.

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Dr. W. H. Montague has returned to Dunnville, and resumed practice there.

Dr. O. S. Strange, of Kingston, has been appointed Surgeon of the Penitentiary in the place of Dr. Lavell.

The Hon. Dr. Robilaille, ex-Lieut.-Governor of Quebec, has been nominated a Dominion Senator, in place of his brother who has resigned.

Dr. J. T. Carroll is practicing in Welland, having succeeded Dr. Montague in the firm of Schooley & Montague.

Dr. George Wright has been placed on the Consulting Staff, and Drs. Krause and McPhedran on the Active Staff of the Hospital for Sick Children, Toronto.

Prof. Osler, of Philadelphia, sailed on Feb. 11th, for England. He will deliver the Gullstonian Lectures before the Royal College of Physicians of London, in March.

Dr. E. U. Brush, of the Utica, N. Y., has been appointed Assistant Physician in charge of the male insane department of the Pennsylvania Hospital. Those present at the last meeting of the Canada Medical Association, in Montreal, will remember Dr. Brush, whose remarks in discussions during Session and at the banquet were highly appreciated. We quite concur in the general opinion that the appointment is an excellent one.

The following is the Board of Examiners for this year in Medicine for Toronto University: —Physiology and Pathology, Charles Sheard, M.D.; Medicine and Therapeutics, J. J. Cassidy, M.D.; Midwifery and Forensic Medicine, W. Britton, M.D.; Anatomy, M. H. Aikens, B.A., M.B.; Surgery and Surgical Anatomy,

I. H. Cameron, M.B.; Clinical Medicine and Surgery, C. O'Reilly, M.D.; Hygiene and Medical Psychology, C. W. Covernton, M.D.—Medicine and Arts: Chemistry, W. H. Ellis, M.A., M.B.; Biology, H. Montgomery, M.A., B.Sc.

The State Medical Association, of New York, accredited Dr. Lucien Howe, of Buffalo, as delegate to the next meeting of the Ontario Medical Association.

It gives us great pleasure to announce that the position of Warden of the Penitentiary has been given to Dr. Lavell, of Kingston. The place is one of great responsibility, and we are convinced that Dr. Lavell possesses those qualities which are requisite to perform the duties connected with the office successfully.

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### Miscellaneous.

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A fee in the hand is worth two in the book, says the *New York Med. Record*.

Dr. Edwin S. Gaillard, Editor of *Gaillard's Medical Journal*, died February 2nd.

The Canadian Club which has been in existence for sometime in Edinburgh has become merged into the Transatlantic Club.

Dr. Hammond's second novel, "Doctor Grat-tan," has appeared. His "Lal" is being prepared for representation on the stage.

The professional examinations of the College of Physicians and Surgeons of Ontario will commence Tuesday, April 7th, at 9 o'clock. See advertisement, page 5.

The cholera appears to have entirely disappeared from France with the exception of Toulon, and the disease lingers in only a few places in Italy.

The University of Vermont will grant to British registered medical practitioners the degree of M.D., upon passing a satisfactory examination in the final subjects, and on payment of thirty dollars.

The latest remedy for pruritus, when seated in the anus or vulva, is balsam of Peru. The *British Medical Journal* alludes to it as a new triumph in medicine.

Mr. Ruskin is opposed to vivisection and uses the following thoughtless language, "all scientific pursuits are most definitely, provokingly and insultingly separated from the science of religion."

We have recently purchased one of Kidder's 32-celled batteries for the use of the strong galvanic current. The construction is simple, and there was no difficulty in getting it to work. We may at some future time give some results of treatment with the constant current.

The New York Young Men's Christian Association, decided at a recent debate that "physicians should be Christians." The *Springfield Union* agrees to the decision, but thinks it a mistake to draw the line at physicians: their patients should be included.—*Ex.*

An exchange says, men who "change their minds" can justify their apparent inconsistencies now by authority of a German histologist, who reckons that the human brain contains 300,000,000 nerve cells, 5,000,000 of which die and are succeeded by new ones every day.

Recently a man had a leg amputated in a Washington hospital, and, upon visiting the capital some months afterward, discovered the member preserved in alcohol. He was shocked, and demanded it, that he might bury it. The demand was refused, but upon bringing suit in replevin the case was decided in his favour, and he was given possession of his own leg.

"Who is your family physician, George?" "Doctor Smoothman." "What! Why do you employ that hair-brained creature?" "Oh, my wife once asked him if he could tell why she always had cold feet, and he told her they were so small they couldn't hold blood enough to keep them warm. Since that she won't have any other doctor."

**A BREACH OF PROFESSIONAL ETIQUETTE.**—The following story is told of the celebrated Oppolzer. Shortly after his arrival in Vienna he was consulted by an invalid, whom he advised, after a somewhat hasty examination, to go to Pistyan, in Hungary, and take the waters. After several months the man, whom the Professor had forgotten, again presented himself, with an aggravation of all his symptoms, and said he had just returned from a course of Pistyan waters. The Professor examined him, this time rather more carefully, and then, with some wrath, asked him what confounded ass had advised him to go there, as it was the worst thing he could possibly have done. Moral: Always speak well of your neighbor.—*Chronicle.*

Dr Price, the Welsh Druid, has again made himself conspicuous by his cremationist eccentricities. One night he cremated a bull thirteen years old, called Morgan Apis, to which the Druid was peculiarly attached. The proceedings lasted nine hours, and the field where the cremation was carried out was crowded with spectators. Dr. Price some years ago used to attend the annual meetings of the British Medical Association attired in a peculiar dress, supposed to represent the robes worn by the Druids at an early period of English history.—*Am. Med. Asso.*

Dr. J. Marion Sims, in "The Story of My Life," when speaking of Trousseau, brings him thus interestingly before the reader:

Trousseau was one of the greatest physicians of the age—a man endowed with physical beauty as well as fine intellect, the philosophic physician, the classical litterateur, the elegant teacher, the successful practitioner. He was without a rival. I had never known such a grand man who was purely a physician, and yet he was a very miserable man, and why? Had he not reached the highest distinction in his profession? Was he not exhibited as the highest authority in medicine all over the world? His lectures were translated into all languages, and then he was the leading practitioner, the great consultant, the fashionable doctor in Paris, and had accumulated a large fortune. Every body spoke well of him, everybody admired him

as a man; his private character was above all reproach; he had no children whom he could not recognize as his own. As the world saw the man, they had the right to think and to see that he ought to be one of the happiest of men. True, he was not Court physician, but every other ambition of his life had been fully gratified, and yet he was unhappy, and why? His wife was an elegant and accomplished woman, of great beauty and fine intellect, but they were separated. He had a daughter, one of the most beautiful women in Paris, who married a man too much her senior. They were incompatible, and separated. He had an only son who was a scapegrace. He was a gambler and everything else that was bad. His father was worried to death with his dissoluteness and foolish extravagance, and had to pay enormous sums of money to extricate him from his disgraceful orgies and gambling complications. He was married to a fine woman, who ought to have made any man happy, but he neglected and made her miserable. . . . Trousseau had not seen his son for a long time before he died. About a fortnight or three weeks before this event his son went to one of the gambling hells of Paris and lost all his money, and more than he could pay besides. His poor father died soon after this, and his unworthy son saw a notice of his death in a London paper the next day, and I saw the tall, handsome, wretched man bending heartbroken over his good father's coffin in the Madeleine, whence he followed it to its final resting-place in the Père la Chaise. We are happy or unhappy in this life as our children choose to make us.

I have received some details connected with Dr. Koch's bacteriological course which, I think, will be of some interest. Dr. Koch has been giving lectures in the laboratory, which he has fitted up for the purpose, since the beginning of October, and will continue doing so till the end of January. His whole time, from 8 a.m. till 4.30 p.m., is daily devoted to giving instructions in bacteriology, for which he has received a large sum of money from the German Government. Medical men, civil and military, have been summoned in small batches of ten or twelve to take part in these courses. I have



been enabled to learn the following details from one who was fortunate enough, as a stranger, to obtain permission to attend the course. He tells me that he has learnt more during his ten days' course, under Dr. Koch, than he has learnt in any course of lectures in his life. The primary object of these courses is, that a certain number of medical men in Germany should learn how to make pure cultivations of comma-bacilli, so as to be able, in the event of danger from cholera, to detect its presence at once, and to take measures for confining the plague to within as narrow limits as possible. Certain precautions are adopted; namely, everybody is recommended not to put his hands to his mouth, and is obliged continually to wash his hands with sublimate; he is also recommended not to eat or drink for an hour and a half after leaving the laboratory. Above all, the members of the course are warned to lead a regular life, to minimize, as far as possible, the risk incurred from connection with the comma-bacillus.

On coming to the laboratory, the first thing is, to learn how to make the medium for making the pure cultivations. For this purpose a considerable time is spent in the preparatory room, where each receives his ingredients. Half a pound of fresh beef, without any fat, is finely chopped up and strained through an ordinary towel; this meat-juice is kept sufficiently heated, and water is added to it to make the whole solution 500 grammes in weight. Then 50 grammes of gelatine, 5 grammes of peptone, and  $2\frac{1}{2}$  grammes of common salt are added. The whole is neutralized and boiled, and then strained through two pieces of filtering paper, and poured, in small quantities, into a number of test-tubes, which have been plugged with cotton-wool, and then sterilized at a high temperature. The next process is to sterilize the material in these test-tubes. About fifty test-tubes are filled with the gelatine solution, and are then sterilized by subjecting them to the action of steam for fifteen or twenty minutes, for three days in succession. When all is in readiness for inoculation, the so-called cholera-room is entered. Three test-tubes are taken at a time, and, from Koch's cholera-tubes, comma-bacilli are fished by dipping a platinum wire,

previously sterilized, into them. The point of the platinum wire, thus impregnated with comma-bacilli, is then dipped into the surface of the gelatine medium contained in one of the three test-tubes; the original cholera-tube is then put aside, and into No. 1 tube, now impregnated, a platinum point is dipped three times successively to impregnate test-tube No. 2; then the same process is continued six times in tube No. 2, in order to impregnate No. 3. The tubes are then heated to make the medium just flow a little, then the contents of Nos. 1, 2, and 3 tubes are poured upon glass plates six inches by four in size, and these plates, kept separate by means of glass bridges, are covered with a bell-jar, where they remain for twenty-four hours. At the end of twenty-four hours, when examined under a low power, cholera-colonies will be seen on the first plate, and they will be less marked on the other two. After another space of twenty-four hours, the plates are examined again, and fresh test-tubes are impregnated from the colonies, the contents of these tubes being also poured out upon glass plates.

Luncheon is at one o'clock, and occupies half an hour, during which Koch relates his experiences in Egypt, India, and France, every word he says being listened to with the greatest attention. Another quarter of an hour is allowed for smoking, and then time is called, and all return to work, which lasts till 4.30 p.m. This forms the daily routine, time not actually taken up in the cholera-room with the cholera-bacillus being devoted to the cultivation and study of other bacilli. Other bacilli are cultivated in the same way. Demonstrations are made with the so-called Finkler and Prior bacillus, and the peculiarities of all are carefully pointed out. Each member of the course has an assistant by his side, and Koch goes the whole day from one member to another, asking and answering questions.—*From the Berlin Correspondent, Brit. Med. J.*

Little Boy.—“Please, I want the doctor to come and see mother.” Servant.—“Doctor's out. Where do you come from?” Little Boy.—“What! Don't you know me? Why, we deal with you. We had a baby from here last week!”