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THE

Canadian Medical Review.

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Original Communications.

Knee-Jerk in the Diagnosis of Diseases of the Spinal Cord.*

BY D. C. MEYER, M.D., TORONTO.

IN choosing the subject of the present paper I did so with considerable hesitation, fearing that I should necessarily repeat many facts with which you were already familiar. The importance of the knee-jerk in the diagnosis of diseases of the spinal cord and brain, together with the fact that a diagram of these parts would explain its action more clearly than a verbal discussion, induced me, however, to offer a few remarks about it. The knee-jerk, as you are all aware, was first studied by Erb and Westphal, the former giving it the name of patellar tendon reflex, and the latter the knee phenomenon. Erb and many others believed that the cause of the knee-jerk was a reflex, beginning in the nerves of the tendon, a supposition which was supported by the discovery of nerves in the tendon, and this view was the accepted one for some time. Later, however, it was disproved

*Read at Meeting of Toronto Medical Society.

by Tschirgew, who found that, after the division of all the nerves connected with the tendon, the reflex still continued. Westphal on the other hand does not consider the jerk to be produced by reflex action, but by direct stimulation of the muscle, and consequently a purely local phenomenon. He thinks it due to the vibrations set up in a more or less tense tendon which are transmitted to the muscle, and that these throw the muscle into contractions. The arguments in favor of his theory are that the time occupied to produce a knee-jerk is much less than is required for an ordinary reflex action, and that the movement persists after section of the tendon nerves. In regard to the time required, which is .03 or .04 of a second shorter than the interval of an ordinary reflex action, one point I think must be remembered, viz., that the muscle must be at the time in a condition of slight tension, and that in consequence less time would be required in order to make its action apparent than there would be if the muscle were lax, as is usually the case, when the time required for ordinary reflex action is measured. The difference between the two (about 1-25th to 1-33rd of a second) could, I think, be accounted for in this way. In regard to the second point, a true reflex act may, as Foster says, really begin in the muscle being started in it by the vibrations transmitted along the tendon. It may further be said against the theory of Westphal, that if the posterior roots be divided the movement ceases, although locally the muscle is entirely intact, and this, to my mind, is conclusive proof that his theory is erroneous. There is another explanation, however, which will bear closer examination than either of those advanced, viz., that this phenomenon is a purely reflex one, which originates in the sensory muscle nerves, is conveyed by them through the posterior roots to the grey matter, and reflected by the grey matter through the ganglion cells of the anterior horn and the motor nerve back to the muscle which contracts. This explanation has been founded on the work of Tschirgew, who proved that the sensory nerves of muscle terminate not in the muscular fibres but in the interstitial connective tissue between them. In this way it is easy to understand how the afferent impulse is produced by tension acting on these nerves. (Here was explained the reflex arc of diagram, and how suddenly increased tension sets up an afferent impulse.) Tapping the tendon only has the effect of suddenly increasing the tension, and in consequence setting up an afferent impulse in the sensory muscle nerves. The tendon *per se* has nothing whatever to do with the reflex action except to increase the tension of the muscle, as may be easily proven in any case where the excitability of the cord is increased, by simply placing

one finger flat above the patella and striking downward with a Déjérine hammer or the fingers of the other hand, when a perfect reflex contraction of the quadriceps will be obtained. Hence the mistake of terming this phenomenon a tendon reflex, an error which it is to be hoped will soon disappear. The facts above stated make it clear, I think, that the knee-jerk is a reflex phenomenon originating in the terminations of the sensory muscle nerves, and that the nerves of the tendon have nothing to do with it, nor is it a purely local manifestation.

From a clinical point of view we now come to another question, viz., the influence of a higher centre in modifying or increasing this reflex action. This influence of the brain is clearly shown in cases where in a lesion of the cord which cuts off this influence, an increased reflex action arises in all parts of the cord below the lesion, except such as will be presently mentioned. The modifying influence of the brain can be demonstrated in a frog by experiment. If the cerebral hemispheres of a frog be removed, the excess of reflex action in the legs can be easily modified by stimulating the optic lobes, showing clearly that impulses have descended from these parts through the cord which inhibit reflex action. Similar results are obtained in the dog by irritating the corpora quadrigemina. The path by which these impulses descend in man is definitely known, viz., the pyramidal tracts. From this we learn the important clinical fact that a lesion of this tract in any part of its course, or a complete transverse lesion of cord, cuts off the inhibitory influence, and as a consequence we have, other things being equal, an increase of muscular reflex action. But it will be said immediately after a sudden and complete transverse lesion of the cord the knee-jerk is often absent. This fact is due to the shock of the accident or operation, which may be looked upon as a very powerful stimulus, and which, partly by inhibition and partly by exhaustion, depresses or suspends the normal functions of the cord. In man the excess of muscular reflex action usually comes on in a week or ten days and gradually increases.

Having now considered the cause of the knee-jerk and the influence of the higher centres upon it, I would in conclusion like to add a few remarks on the clinical significance of its absence or excess in some diseases of the nervous system. In the first place, in regard to the absence of the knee-jerk. This must necessarily follow from any lesion which interrupts the reflex arc either in the afferent nerve, the centre, or the efferent nerve. In regard to the *afferent nerve* a peripheral neuritis which injures its peripheral termination in the muscle is a common cause, and in this disease the loss of knee-jerk may be

as complete as in locomotor ataxia, which often leads to a confounding of the two diseases. A sclerosis of the posterior columns of the cord, as is seen in talus, has the same effect, this reflex arc being interrupted at this point. An anterior polio myelitis by the destruction of the anterior ganglion cells also destroys the reflex arc with loss of knee-jerk as the result, and the same may be said of any lesion of the motor efferent nerve. In regard to the excess of knee-jerk we find it in all diseases in which there is an interruption of the pyramidal tract anywhere between the cortex of the brain and the anterior horn of the spinal cord. A common cause is a hæmorrhage into the internal capsule causing a destruction of the fibres as they pass through this portion of the brain. As a consequence the inhibitory influence is cut off from this hemisphere, and an increased knee-jerk is developed on the opposite side of the body. In certain cases of hæmorrhage into one internal capsule, however, the knee-jerks on both sides after a considerable time may be increased, and the cause of this increase on the sound side has been much debated. Professor Déjerine told me he considered it to be due to the uncrossed fibres in the column of Turk being degenerated. This explanation is to me improbable from the fact that the column of Turk usually ends about the mid-dorsal region, and as the centre of the knee jerk is in the lumbar region, it is consequently much below the termination of this tract. A more probable explanation to my mind lies in the fact that the legs, in conjunction with other parts of the body, which are much associated in their action, are innervated more or less from both hemispheres, and that it is a degeneration of these fibres, the tract of which is still unknown, which causes an excess of knee-jerk on the same side as the lesion in the brain. Excess of knee-jerk also follows multiple sclerosis when an islet implicates the pyramidal tract. Another cause of increased knee-jerk is to be found in a tumor of the middle lobe of the cerebellum where it may be excessive. I have said nothing of myelitis since its effect on the knee-jerk varies with its position. If we suppose a transverse myelitis in the mid-dorsal region of the cord, then an increased knee-jerk results from the interruption of the pyramidal tracts. If, however, the myelitis descends to the lumbar region, then we find an entire absence of the knee-jerk owing to the destruction of the reflex centre. In conclusion, I may say that I have only mentioned a few of the more common diseases in order to demonstrate more fully some of the changes in the knee-jerk which are met with in every-day practice.

Clinical Notes.

Successful Use of Protonuclein in a Case of Extreme Anæmia.

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

THE case that forms the subject for this short paper is that of a gentleman aged 54. He is highly educated, and has filled a number of positions of an important educational character. Previously he resided in India for several years. His health has not been good for about two years. During this period he suffered loss of flesh, strength and appetite. In April, 1895, the symptoms became more distressing, when it became necessary for him to give up his work, as private tutor, and rest. He became a patient of mine about the end of September, 1895. At this date he was a pronounced victim to insomnia. His digestion was extremely bad, suffering much pain, and frequent nausea after taking nourishment, either liquid or solid. There was an excessive amount of flatulency. The bowels were very torpid. The pulse was weak, and usually as frequent as 100 per minute. There was always some elevation of temperature, sometimes as high as 102°. Continuous headache was another feature of the case.

The lips and conjunctivæ were almost colorless, and the tongue exceedingly pale. The skin had a pale lemon tint. The red blood corpuscles were only 1,200,000 per cubic millimetre. The urine was normal. No organic disease could be discovered anywhere in the system.

In spite of all efforts at treatment and feeding, he gradually grew worse. I had given his wife a very unfavorable opinion of the case, and advised a consultation.

Dr. J. E. Graham saw the case with me. No other disease could be discovered than that of progressive anæmia. It was agreed at this interview to place him in some hospital for a time. He was admitted into the Toronto Western Hospital on January 7th, 1896. I went with him in the coupé, and really feared he would collapse on the way. When he arrived at the hospital he was in such a state of exhaustion as to be unable to walk upstairs. On being taken into his room he became unconscious, and in this condition he was hurriedly undressed

and put to bed, with hot bags around him. In the course of an hour or so he gradually regained consciousness.

At this stage of his disease there were varying elevation of temperature and a subnormal condition of same. He had intense headache, and almost continuous insomnia. The bowels were constipated, and nearly everything in the way of nourishment was vomited. The patient was in a state of extreme emaciation and asthenia. There was frequently low delirium and confusion of thought. He often regarded himself as a duality.

On his admission the bowels were washed out daily with a large enema, containing some boracic acid. Daily he was given a sponge bath. The stomach was washed out daily, except occasionally when he felt too weak. He was fed on peptonized milk, egg albumen and beef-juice. The headache continued, however, to a most intense degree, and no improvement in the insomnia. For the headache, acetanalid, phenacetin, salol and other agents were employed, and with only the most temporary relief. Opium, chloral, paraldehyde and sulphonal were administered from time to time for the insomnia. On one occasion thirty grains of sulphonal were given, with the result of obtaining only a few hours imperfect sleep, followed the day after by much vomiting, great restlessness, extreme headache and feeble pulse.

He had been in the hospital a little over two weeks, and all the appearances pointed to an unfavorable termination of the case. He was now placed on protonuclein (tablets), as prepared by "Carnrick." The enemata, lavage of the stomach, and same nourishment continued. Tablets were given every three hours. By the third day it became apparent that the patient was improving. The headache was the first symptom to become modified. In a week it had almost wholly disappeared, and at the date of writing is entirely gone.

The sleep soon became better. By the end of the first week on the protonuclein, he would sleep three and four hours at a time. He now sleeps from six to eight hours, and wakes with a rested and refreshed feeling. The appetite is good. He can take eggs, meat, toast, porridge, oysters, beef-juice, bread and butter, milk and light puddings without the slightest discomfort. There is no nausea or vomiting; the bowels are quite regular, and no enemata or aperients have been administered for at least ten days. The temperature is constantly normal. The patient is gaining in flesh and can walk about the ward and in the hall for an hour and experience no ill effects. The lips and nails have a good color, and the tongue has lost its pallor. The abdominal walls, which were extremely retracted, are now filling with adipose tissue.

The most marked change, however, is to be found in the red blood globules. When the protonuclein was first ordered, there were not quite 1,000,000 to the cubic millimetre. Now there are 3,500,000. This is a remarkable increase when the condition at starting is borne in mind.

The progress of the patient is one of daily improvement. He will leave the hospital in two or three days, when the same line of treatment will be maintained, with the addition of a mild course of massage to assist in the development of the muscles.

It ought to be mentioned that the preparations of arsenic and iron had been fairly tried in this case, and could not be tolerated in any form. During the past three days arsenic has been tentatively prescribed, and so far has caused no disturbance, indicating an improved state of assimilation.

Since the above was written the patient has been out of the hospital for a short time, and the improvement still continues. The sleep and digestion are now good, and the muscles are gaining rapidly in tone and size.

A NOBLE PROFESSION.—Physicians know the fearful risks they incur in operating for the relief of patients suffering from certain diseases. Danger never deters a doctor from the duty of alleviating human suffering or prolonging human life. It is not a question of money. The two most notable Canadian victims of blood poisoning this year, Dr. Fenwick, of Kingston, and Dr. McFarlane, of Toronto, got their death by operating upon patients in hospitals. To relieve suffering or save human life these physicians did their duty calmly and open eyed, and death came to them, not through carelessness, but by unavoidable mischance. The chivalry which glorified the age about which the poets sing was poor in its standards compared to the ideals which guide the noble profession of medicine and surgery. There are heroes to-day whose bodies are not armor-clad, but whose souls are uplifted with that high sense of duty which makes them willing to venture in a battle where all they can win is the life or comfort of some unfortunate they do not know, and where they may lose their lives. A selfish age this may be, and greed of gain is corroding the souls of men. There is one profession which puts no price on many of its services to humanity, but which day by day supplies heroes who risk life at the call of duty—heroes whose heroism is unknown, save when one falls as Laughlin McFarlane fell. — *The Toronto Evening Telegram, March 3.*

Society Reports.

Toronto Medical Society.

Popliteal Aneurism.—Dr. W. J. WILSON presented a patient with popliteal aneurism. He had operated on the patient in 1884. The following were the notes taken at the time: J. M., aged 30, a plasterer. His father died at the age of fifty-two of heart disease. Mother alive and healthy. Brothers and sisters healthy. Patient says he had brain fever when a child. Always delicate. At the age of seventeen he had gonorrhœa with a chancre and suppurating bubo. Took medicine for two months—"a strengthening medicine," probably not antispecific. Has never had any venereal disease since. With the exception of faint spells from heat and overwork has had good health. Been married nine years. Wife healthy. She had one miscarriage about the second month, after jumping from a chair. At this time she suffered from considerable hæmorrhage. Has had five children; three living and healthy. Two died from convulsions. One was ill five weeks, the other five months. There was marked enlargement of the cervical glands of the patient and at the bend of the elbow. No history of secondary syphilis. Three weeks ago while standing at work at his bench, he felt a pain behind the right knee, which, although not severe at first, greatly increased in severity. Next morning he could not walk without suffering very great pain. A lump was noticed at the seat of the pain, which increased in size. It had a remarkable expansile movement. It grew to be about the size of a hen's egg. Compression was tried by the use of Esmarch's bandage for one hour, extending upward from the foot to the knee, skipping the knee, and then around the thigh. Digital compression was tried for a time, but for lack of hands was not kept up. The operation of tying the femoral at the apex of Scarpa's triangle was then done with good result. The tumor decreased in size quickly, and in three weeks the patient was walking about. The history since 1884 was, that he had had hæmorrhage from the lungs four years ago, and one or two since.

Lupus.—Dr. F. N. G. STARR presented a patient suffering from lupus. Two years ago a small spot appeared on the cheek, purple in color. No attention was paid to it until this winter, when it was noticed to increase and a number of other spots to grow on the face and legs. A discharge from the nose irritates the upper part of the lips. Complains of no pain unless he receives a blow on the cheek,

and then it stings for some time. The tongue slightly coated, the bowels regular. Has had cough for two years or more; worse at meal-time, probably indicating some irritation in the upper air passages. Expectorates large quantities. Streaks of blood have been noticed in the sputa during the last few days. The family history unimportant. Patient has had measles, whooping cough and malaria. Three years ago lost flesh from no apparent reason. He was weak and feverish. He complained of pain in his shoulders. This was six weeks after he had the measles. Six years ago had dropsy from no apparent cause. On the nasal septum and the tips of the inferior turbinated bones there are small greyish-white nodule pimples, like bubbles of mucus. They are also seen on the soft palate where the anterior pillar joins the uvula, and on the epiglottis. The resonance in the chest is not very good, but no lesion has been located. The mother says boy's flesh seems predisposed to sores. When vaccinated two years ago it was found difficult to get the wound to heal. Patient went to the country for three weeks. Came back with sores on calves of the legs, which were difficult to heal. The spots on the cheek vary in size from sago to split bean, which on superficial palpation cannot be felt, but on deeper palpation give a modular feeling. Some spots are covered with desquamating epithelium, and some of them are sunken in the centre. There are no characteristic apple jelly nodules. The nodules on the leg form a somewhat serpiginous outline. The age of the patient pointed to lupus. The lesions of the membrane would likely have ulcerated ere this had they been of a specific nature. The line of treatment suggested was that of scraping the nodules of the skin, cauterizing those of the mucous membrane, and administering fats. Iodide of potassium had been given six weeks with no effect.

Dr. CARVETH referred to a case he had seen some years ago in which the nodules had been scraped, and burnt with a thermo-cautery. This was followed by a similar treatment in St. Catharines, to which place the patient had removed. When Koch's lymph was introduced patient was given injections with no appreciable benefit. Patient seemed as healthy and strong as ten years ago.

Pleuro-Pneumonia.—Dr. A. R. GORDON read a paper on Pleurisy with Pneumonia, followed by Empyæma. J. M., aged 53, band sawyer. Patient was taken ill June 19th, 1894, suffering from pain in the right side. Had been in poor health for some time; had slight chill at commencement of the attack. When seen the following day his temperature was 103.8, pulse 98, respiration 54, short and catchy. Diagnosis of pleurisy and pneumonia over the right lower lobe.

Cough hacking and troublesome. Patient was a large man, but much emaciated, and appeared ten years older than he really was. Strapping was applied to the side. A quarter of a grain of morphia was injected over the seat of the pain. Cotton wool jacket applied and three grains of calomel ordered, to be followed by magnesia sulphate. Strapping was removed the fourth day. There was some effusion, though not marked. Owing to the character of pulse strychnine and strophanthus administered. No expectorant or antipyretic given. Magnesium sulphate was ordered for the bowels. Temperature fell greatly from the fifth to the twelfth day. The temperature varied from normal to 99 from the twelfth to the eighteenth day, and 97.8 to 101 from nineteenth to twenty-fourth day. Patient had decided chill. The pleuritic effusion steadily increased for five days, rising behind to the angle of the scapula. On the twenty-fifth day of the disease a hypodermic syringe was introduced, and pus found. Eight ounces of yellow pus withdrawn by aspiration, when aspirator became plugged. Two days later had another chill, temperature going from 97.3 to 102. Aspirated again. Ten ounces withdrawn when the aspirator again became plugged. Operation was performed the twenty-ninth day of the disease, pulse being 125, respirations 32, temperature 102. Cocaine was used with a local anæsthetic, an opening made in the eighth inter-space in the post-axillary line. Large quantities of pus poured out. On coughing, when the viscera pleura was touched by the drainage tube, quantities of caseous matter were expelled with more pus. Antiseptic absorbent dressing was applied. It soon became saturated. On the following day patient was attacked by a severe fit of coughing, followed by expectoration of a large quantity of purulent material like that from the wound—not offensive. Smaller masses like lung tissue continued to be expelled through the wound. All physical signs disappeared except in a limited area around the wound. The fifth day after the operation, pulse 108, respirations 26, temperature normal. It was then decided to wash out the cavity with solution of peroxide of hydrogen, and half an ounce of fifteen volume solution with one ounce of boiled water, was injected in half-ounce quantities. The patient cried out at once, "O my hands!" when the injection was stopped. The pulse was found to be 108, and in less than five minutes dropped to 90, 80, 70, to 58, in four consecutive minutes; gradually rose to 72 and remained there. Respirations dropped from 26 to 14, rising to and remaining at 18 or 20. The pain subsided and gave rise to a tingling and numbness over the distribution of the ulnar nerve. The curved director was then introduced to explore the wound. A cavity in the lung the size of an orange

was found, the rest of the lung being close to the thoracic wall without any adhesions. No more lotions were injected. Wound healed in seventeen days. Calcium sulphide was given till suppuration stopped, and then cod-liver oil and tonics were administered. The patient gained forty pounds in two months. Made a good recovery. Tingling and numbness in left arm disappeared in three days. That in the right arm persisted, and was followed by atrophy of the muscles, supplied by the ulnar nerve. Loss of sensation and muscular power has not been complete. Massage and the galvanic current were given with no good effect. The Doctor then reviewed the interesting points of the case, and asked for an explanation of the nervous phenomena.

Dr. W. J. WILSON said he thought these cases were more frequent since the advent of la grippe. He reported the history of a case.

Dr. HUNTER reported the history of two cases—two brothers in one family. The first boy was aged 18. There was threatened tubercular trouble present. Pleurisy developed. The chest was aspirated at once, but rapidly refilled and the fluid became purulent. A tube was introduced, but the drainage being insufficient, a portion of the rib was removed. The lung had become very much compressed, but it gradually regained its expansion and the boy recovered. The brother, who was similarly affected at the same time, was sent to the hospital and operated upon, and died.

Dr. OAKLEY reported the history of a case of pleurisy occurring in hearty man where empyema followed. No operation was allowed. The patient suffered a great deal of distress until the abscess burst into the bronchus, when the patient vomited an immense quantity of stinking pus. A good recovery followed.

Dr. WILSON suggested that the nervous phenomena in the case reported might possibly have been reflex in character.

Dr. GORDON gave it as a possible explanation, that the lower trunk of the brachial plexus had been affected by the irritating action of the oxygen through the pleura; or it might have been reflex from the cord; or simply a coincidence.

Diphtheritic Laryngitis.—Dr. HUNTER said that he had a case of diphtheritic laryngitis in which he was using calomel fumigation. The father had suggested to him the use of antitoxin. As he had heard little about its use of late in the city, he asked for opinions of members.

Dr. PETERS said the reports from Toronto had been different from the reports from any other part of the world. Unfortunately he had not been present at the meeting of the society in which antitoxin

treatment had been discussed last year. He was sorry to hear that the majority of the reports were against antitoxin. He had used it in every case he had had, and in only one case had death resulted and that from another cause, the patient having just been operated on for nephrectomy. The results were most gratifying in every case. In a case that he had seen recently where the toxic symptoms were shown—hebetude, depression, cyanosis, etc.; where the glandular enlargement of the neck was very marked and where the membrane was present on both tonsils and the nasal pharynx, 15 cc. of the antitoxin were administered the first day, 10 cc. administered the next day. Within twenty-four hours after the first dose the child was practically out of danger; in two or three days he was well. Personally, if he ever contracted the disease he would ask for the antitoxin treatment. Reports from all parts of the world were greatly in favor of its use. It had reduced mortality records 50 per cent. He knew of a number of medical men in Toronto who had used it with gratifying results and spoke of it in the highest terms. He had no experience of calomel fumigation, but was glad to hear of its value. He had heard of certain medical men who used no treatment. This, he thought, was criminal. He believed in its use as a preventive. He considered it to be the grandest discovery in medical science since vaccination.

Dr. W. J. WILSON reported a case in which he had used the serum with good results; 6 cc. were given on third day and 10 cc. on the next day. After the first injection there was marked improvement. In about twenty-four hours the membrane began to peel off. Recovery at once took place. He thought the case was one which would have lasted about a week had the new treatment not been used. The general condition was improved immediately after its use. With regard to the reports from the city last year, he noticed a number of defects. Many patients had been the subject of surgical operation. The kind of serum and the strength and the amount used was not mentioned. Early administration was necessary to have the best effects. It was very valuable in laryngeal cases which were usually very fatal.

Dr. MACCALLUM reported favorably on its use both as a curative and preventive agent.

Dr. OAKLEY spoke of the discontinuance of its use in the Isolation Hospital because it had not been found efficacious. He contended that it took a long time to establish the value of any new remedy, that medical men were prone to be carried away by fads. Among the reports from New York, some were found to be favorable and some were not. Enough data had not been secured to give medical men full faith in its use. In some cases it had proved positively injurious.

Payment of Annual Fee to College of Physicians and Surgeons.

Copy of a resolution passed at a regular meeting of the London Medical Association, February 10th, 1896 :

"Moved by Dr. Ferguson, seconded by Dr. Arnott, and resolved, That the London Medical Association recognizes the services rendered to the medical profession by the Council of the College of Physicians and Surgeons of Ontario in maintaining an efficient standard of medical education for students, providing for the registration of licentiates, guarding the rights of registered practitioners, prosecuting unlicensed practitioners guilty of infamous or disgraceful conduct in a professional respect.

"This Association accordingly holds it to be the duty of every member of the College of Physicians and Surgeons of Ontario, promptly and loyally to pay the annual assessment fee levied in accordance with the provisions of the Ontario Medical Act, for the maintenance of the general expenses of the College; and it is further claimed that members of the College taking exception to any of the administrative acts of the Council should seek reforms by way of the medical electorate, rather than by attempting to withhold the payment of assessments authorized by the statute and indispensable to the very existence of a council.

"Yet this Association begs to protest against By-law No. 69, passed by the Council on the 28th June, 1895, which suspends the penal clause of Section 41 of the amended Medical Act for Ontario until June 1st, 1896, then to come into force only 'in case a sufficient amount of dues is not paid in to cover the bank liability.' This Association submits that said qualification is grossly unjust to members of the profession who have paid, or may pay, their assessment prior to June 1st, 1896, and affords a loophole to delinquents who are disposed to shirk payment of their fees. The Association recommends the Ontario Medical Council either to rescind said clause of the by-law, or, otherwise, to furnish every member on payment of his fee, a guarantee that no other member shall be permitted to escape payment of his legal indebtedness to the Council.

"And resolved further, that a copy of these resolutions be forwarded to the Registrar and to the medical journals of the Province."

Editorials.

The Management of Patients After Operation.

THE period following operations on patients is of much importance. There are two main dangers, viz., shock and exhaustion from vomiting. These may not be present to any extent, or they may be both or either very severe. These conditions may occur when least expected. Comparatively slight operations may be followed by them, while after the most severe operations patients may pass on to an easy recovery. The strong and vigorous may succumb, whereas the weak may escape. These being facts, no detail should be neglected.

There are many states of poor health and debility that predispose to shock; but shock may occur as a surprise. No operation should therefore be undertaken without the most careful study of the condition of the patient and the surroundings. The general state of a patient about to be submitted to an operation should never be overlooked.

In all operations the utmost effort ought to be made not to unduly prolong it. Shock is much more likely to follow protracted operations, and to be severe, than in most cases where the patients were not so long under the anæsthetic. When the anæsthesia has been prolonged there is danger of exhausting vomiting. For this reason, detail and conservative efforts must often be sacrificed, rather than keep the patient too long upon the table. Taking fully into account all the conditions, known and unknown, that predispose to shock, prolonged anæsthesia is the most usual provocative. The subsequent vomiting and exhaustion is generally in proportion to the duration of anæsthesia.

Shock and vomiting are so much due to the same causes that a somewhat similar treatment applies to both. The three main agents for the relief of shock are in order of value—heat, alcohol and opium. The application of warmth to the surface of the body is of first consideration. If the surface of the body can be maintained at usual temperature, usually there is no fear of danger from shock. Hot-water bottles, india-rubber bags, and mustard to the extremities, over solar plexus or heart, form a valuable armamentarium for the restoration of the patient. If these measures fail, or are acting too slowly,

recourse must be had to alcohol. This must be given by the rectum. In these cases there may be vomiting, or but little absorption from the stomach. Should these means not answer, morphine or opium must be administered — for rapid effects the hypodermic use of morphine; for less rapid action the rectal administration of opium. It must be borne in mind that opium is tolerated in large doses by those who are suffering from shock, or who have lost much blood. Dose after dose should be given and closely watched until the desired effect is obtained.

With regard to vomiting, there is no use wasting time by giving drugs by the mouth. Warmth, rectal stimulation and the hypodermic syringe again find their place. To these may be added rubefaction and mustard over the stomach. The cardinal remedy for this species of vomiting is the hypodermic injection of morphine.

Stimulants and aliment should not be introduced too early into the stomach of a person suffering from vomiting after anæthesia and an operation. These must be given by the rectum at regular intervals. It is noticed that when the skin is warm vomiting is usually absent. Warmth to the surface, therefore, is of the utmost value in vomiting as it is in shock.

It is inadvisable to attempt to relieve the distressing symptom of thirst by sucking ice. It can be best assuaged by warm water, two or three ounces, thrown into the rectum occasionally, and by frequently rinsing the mouth with hot water.

1. Guard against prolonging the operation.
2. In shock and vomiting trust to the rectum.
3. Heat, alcohol and opiates are our best remedies.
4. Remedies to allay vomiting by the mouth do harm.
5. Sucking ice does not relieve thirst.

The above invaluable hints and suggestions are based upon an address of Sir Thornly Stoker before the Royal Academy of Medicine for Ireland a short time ago. There are few men more competent to speak upon any surgical topic than Sir Thornly Stoker. It would be well for everyone who contemplates a surgical operation to weigh well the above points of advice. The distinguished speaker admitted that the neglect of some one or other of these points had caused him to lose patients that he could now save by adopting the rational methods laid down in his address.

ROENTGEN RAYS IN COURT.—The Court of Queen's Bench of the city of Montreal will be the first court on record where Prof. Roentgen's new photographic discovery will be used in evidence. A photograph of the leg of Tolson Cunning, who was shot on Christmas eve, will be filed, showing the location of the bullet. The photograph was taken by Prof. Cox, of McGill University. The case is now before the grand jury, in which one Geo. Holder is charged with having fired the shot with intent to murder Cunning.—*Mail, March 4.*

* * *

THE ONTARIO MEDICAL ASSOCIATION.—The programme of the annual meeting of the above Association, to be held in Windsor, June 3rd and 4th, is now being arranged for by the Committee on Papers, and a local committee of arrangements. The attendance has been steadily progressing since its inception sixteen years ago, and has now reached a membership of nine hundred. This splendid organization deserves the support of every physician in Ontario who has at heart the promotion of scientific medicine, and the maintenance of a high ethical standard among the members of the profession.

* * *

WE noticed in one of our dailies recently the statement that in a certain departmental store in Toronto "is to be established . . . a medical doctor's office, where consultation may be had for a quarter." Is it possible that in this city or province there is a medical man who would so bemean himself (and dishonor the profession) as to value his work as a diagnostician and a medical adviser at a quarter per patient. If he would, of course, that (25c) is infinitely more than he is worth. Instead of being trusted with looking after the health of the employees, he should be sent to the stables.

* * *

THE TORONTO WESTERN HOSPITAL.—For some time past a number of the medical men in the western half of the city have had under way the organization of a general hospital. Things have now assumed a definite shape. Two houses, Nos. 393 and 395 Manning Avenue, have been secured, and furnished in a very comfortable and attractive manner. One of the features of the institution is, that the wards are open to any physician who may desire to obtain good accommodation and nursing for his patient, and still retain the right to attend. The medical men of the western portion of the city will no doubt support such a hospital, having such liberal provisions as to attendance. Physicians are requested to pay the hospital a visit, when the lady superintendent will be glad to furnish all information.

Drs. Barton, P. Brown, J. Spence, J. Hunter, G. H. Carveth, J. B. Gullen, T. S. Webster, F. J. Dawson, J. McCullough, W. J. Wilson, N. A. Powell and J. Ferguson are those who are actively engaged in the work of organization.

* * *

MR. MASSEY'S MUNIFICENT BEQUESTS.—Among the many deserving charities remembered by the late Mr. H. A. Massey, there are some in which medical men are directly interested. His donations to these are as follows: $25,000 to the National Sanitarium Association, now being incorporated for the establishment of a hospital for consumptives in the Muskoka District; $5,000 to the Toronto Home for Incurables; $5,000 to the Hillcrest Convalescent Home; $5,000 to the Hospital for Sick Children, with this condition attached: That the trustees adopt and agree to carry out the principle of representation on its medical and surgical staff of the University Medical College, Trinity Medical College and of the city profession not connected with any of the medical colleges, with a less representation of the Woman's Medical College, upon the general lines of the plan of appointment now in operation at the General Hospital. If the trustees decline to do this within the twenty years allowed to pay the donation, then it shall go to the General Hospital for the increase and maintenance of private wards for surgical patients. Though the trustees, under the will, have twenty years in which to pay over these sums, we understand that they will all be settled in two years.

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ENDOMETRITIS.—Dr. John T. Jelks, Hot Springs, Ark., in *International Journal Surgery*, concludes his paper by making these remarks: Endometritis and metritis are practically the same disease. The endometritis is the result of infection by pathogenic micro-organisms. These may be introduced by unclean instruments, or by using sterilized instruments in an uncleaned vaginal canal, by the gonococcus, or the bacillus tuberculosis. That all these cases should be treated with a view to their ultimate results, salpingitis, ovaritis and peritonitis. That in order to prevent these latter results every case should be treated with the sharp curette and drainage with iodoform gauze. The diet of the patient must receive the greatest attention, and the bowels must be thoroughly regulated.

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LOCAL ANÆSTHESIA.—Dr. Theophilus Parvin (*Medical and Surgical Reporter*, February 8th) read a paper upon this subject, and Drs. Keen, Ashhurst, Morton and others took part in the discussion. Schleich's method of producing local anæsthesia was the text of the

paper. One of Schleich's tubes contains one and a half grains of cocaine, one-third of a grain of morphine, and three grains of common salt. This is dissolved in 100 cc. of sterilized water. The opinion was held that it was to a great extent the water that distended the tissues and mainly produced the anæsthesia. It further proved that the result, to a great extent, was due to the injection of the liquid with considerable force, as this distended the nerves and rendered them non-sensitive. Under this form of anæsthesia some severe operations had been performed, such as radical cure for hernia, inguinal colotomy for cancer of the rectum, ventrifixation of the uterus. Schleich employs this form of anæsthesia for abdominal sections. Opening abscesses and extraction of teeth can be performed in this way with comfort to the patient.

* * *

GOUTY ECZEMA.—Dr. H. H. Whitehouse, in a clinic on gouty eczema (*Post-Graduate*) recommends the ingestion of all the water that can be taken. The administration of a good purge, followed by the aperient:

℞ Magnesii sulphatis ..... ℥vi.
Ferri sulphatis ..... ℥i.
Acidi sulphurici diluti ..... ℥iii.
Syrupi zinziberis.

Locally:

℞ Ac. carbolici ..... ℥ss.
Pulv. calamini, prep .... ℥i.
Zinci oxidi ..... ℥ii.
Glycerini ..... ℥iii.
Liq. plumbi acet., dil ..... ℥iv.
Aquæ rosæ ..... ℥iv.

Followed by alkaline tonics. Alcohol and all stimulating foods are to be avoided.

* * *

DIPHTHERIA ANTITOXIN PRESENT STATUS.—In the discussion of a paper by Louis Fischer on "The Present Status of the Diphtheria Question" (*Post-Graduate*, February, '96). Dr. W. H. Porter reports Dr. W. H. Park as stating that where antitoxin had been used for immunizing supposedly healthy children, it frequently produced a pretty marked rise in temperature, accompanied by a moderate albuminuria. Was not such an agent damaging to the animal economy? As a curative agent it was admitted to be useless in cases of mixed infection, which were the ones needing treatment worst. The others were combated easily ordinarily. Fault was to be found with statistics. It had been said that in about 30 or 40 per cent. of the cases in which the clinical symptoms were those of diphtheria, the bacilli are not found, and in this class the mortality

often ran high; hence the mortality rate could be greatly decreased by excluding such cases. [We had no idea of the composition of antitoxin, and no guarantee that two samples were alike. Such therapeutics could not be scientifically accurate.] The more he studied the subject, the speaker said, the more he became convinced that the antitoxin must die the death of tuberculin.

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THE PASTEUR GERM-PROOF FILTER.—Probably no one man that ever lived, has left to the world more valuable discoveries in medical science than L. Pasteur, who occupied the chair of geology, physical science and chemistry in Paris, from 1863 to 1875, and afterwards the chair of chemistry at Sarbonne. During his numerous laboratory experiments, it was absolutely necessary to their success to separate germs from their cultivative media, and the knowledge of this induced both Pasteur and Dr. Charles E. Chamberland to study the problem of sterilization of liquids. In 1884 their efforts were crowned with success, when after years of experimenting, they perfected the "Bougie filtrante" or filtering tube, and it immediately became known that the germs of drinking water were susceptible to exclusion by, filtration through these tubes. In the following year these tubes, under the name of The Pasteur Germ-Proof Filter, were submitted to the Academy of Science of France, where they received unqualified endorsation, and immediately the Pasteur Filter became in Europe a staple article of trade. The appearance of a tube of a Pasteur Filter is cylindrical in shape, to which it owes its name, "bougie." It has henceforth the greatest possible filtering surface with the least possible volume. The filtration is carried on from the outside to the inside of this hollow tube; the inside of the "bougie" being in contact only with sterilized liquid, is kept entirely free from pollution. These "bougies" are made from a combination of peculiar clays found only at Sevres, France, and by having been baked at a very high temperature they are not affected by chemical process. The filters are made in various styles to suit the requirements of all classes of work. One of the most important features of the Pasteur Filter is the readiness with which it can be thoroughly cleaned. The bougies have simply to be removed and the outside scrubbed off with any kind of hard brush, its characteristic feature being that it cannot be penetrated by any form of suspended matter, liquids alone passing through its walls, leaving filth and germs on the outside without any exception. We here quote from a report prepared for the Parliamentary Bills Committee of the British Medical Association of England last July: "The very best filter yet devised cannot rid the water of all micro-organisms, with the sole exception of the Pasteur Filter.

Book Notices.

An Atlas of the Normal and Pathological Nervous System, together with a Sketch of the Anatomy, Pathology and Therapy of the Same. By CHRISTFRIED JAKOB, of Bamburg. Translated and edited by JOSEPH COLLINS, M.D., of New York Post graduate School. New York: William Wood Co. 1896.

It rarely falls to the lot of the reviewer to look over the pages of a more interesting book. It may be stated once for all that it is not light reading, as this is a thoroughly scientific work. The illustrations, of course, are the great feature of the book. These plates are, without doubt, very fine. Many questions that cannot be made clear by verbal descriptions, are made clear by the aid of these excellent plates. There are seventy-eight, covering almost every point in the anatomy and pathology of the central nervous system. Reading matter is scholarly and reliable. The printing and binding are all that could be desired by the most fastidious. The price is $3.50. We can cordially recommend the work.

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Syphilis in the Middle Ages and in Modern Times. By DR. F. BURET, Paris, France. Translated from the French, with notes, by A. H. OHMANN-DUMESNIL, M.D., Professor of Dermatology and Syphilology in the Marion Sims College of Medicine; Consulting Dermatologist to the St. Louis City Hospital, to the St. Louis Female Hospital; Physician for Cutaneous Diseases to the Alexian Brothers' Hospital; Dermatologist to Pius Hospital, to the Rebekah Hospital, to the St. Louis Polyclinic and Emergency Hospital, etc., etc. Being Volumes II. and III. of "Syphilis To-day and Among the Ancients," complete in three volumes. 12mo, 300 pages. Extra cloth, $1.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street. Canadian Agent: Watts & Co., 10 College Street, Toronto.

This is certainly a neat and attractive little volume, in the "Ready Reference Series." The former volume dealt with the same subject in ancient times. The present issue brings the subject to the present. The discussion on the alleged American origin of the disease is full and complete, and settles fully that syphilis was not introduced into Europe from the New World. The portion of the book dealing with the existence of syphilis in Babylon and Egypt is very interesting, and the arguments well stated and convincing. To those who wish to look into the history of the disease this work will prove of much interest.

A Text-Book upon the Pathogenic Bacteria for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D., Demonstrator of Pathological Histology and Lecturer on Bacteriology in the medical department of the University of Pennyslvania, etc., etc. With 113 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1896.

This work conveys to the reader a concise account of the technical procedures necessary in the study of bacteriology, a brief description of the life-history of the important pathogenic bacteria, and sufficient description of the pathological lesions accompanying the micro-organismal invasions to give an idea of the origin of symptoms, and the cause of death. It is a work of 350 pages, and deals with such diseases as tuberculosis, leprosy, glanders, syphilis, actinomycosis, madura foot, rhinoscleroma, diphtheria, tetanus, rabies, anthrax, typhoid fever, cholera, pneumonia, relapsing fever, influenza, malignant œdema, measles, bubonic plague, chicken cholera, mouse septicæmia, typhus, and the various septic conditions induced by germs found in suppurative processes. The illustrations are of the best. We cordially recommend this work for beginners.

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Atlas of Traumatic Fractures and Luxations. With a Brief Treatise. By H. HELFERICH, M.D. Greifswald. With 166 illustrations after original drawings, by Dr. Jos. TRUMPP. New York: William Wood & Co. 1896.

This is one of a series of atlases on medical and surgical science which, as the publishers say, "for accuracy, beauty and compactness is believed to exceed anything heretofore produced." This is the finest work of the sort we have seen. The plates are in varied tints and colors, and are splendid reproductions of the lesions. There are from fifty to seventy-five or more full-page plates in each volume, and accompanied by a condensed outline of the subject to which it is devoted. We heartily recommend this publication.

INEBRIETY.—Montyel concludes that inebriety is curable in one-third the cases. The basis of treatment is complete, compulsory, prolonged abstinence—without which there is no chance of recovery. Abstinence should be supplemented by treatment of the condition of the nervous system of which inebriety is the symptom. The patient should be placed under discipline, subjected to an efficacious surveillance, for at least one year.—*Alienist and Neurologist.*

Obituary.

Dr. Laughlin McFarlane.

WE deeply regret to have to record the death of Dr. L. McFarlane, one of the oldest and most active members of the medical profession in Toronto. The circumstances surrounding his last illness are of such a nature as to command the sympathy of every doctor, and to touch the heart of the entire community. They were as follows: In operating in his hospital capacity, upon toes which had become gangrenous after frost-bite, he pricked his finger with a needle, and although at the time he took the ordinary precautions, he became inoculated with the poison, which rapidly spread through his system. Twenty-two hours afterwards his finger was much swollen, and although free incisions were made into it, and into the arm as the inflammation extended, his general system became so deeply affected that in a few days his case was regarded as hopeless, and he gradually sank, until a week after, when death ensued.

The deceased gentleman was a Canadian by birth, being a native of Caledon township. He was just in the prime of life, fifty-six years. He was ever of a studious, ambitious and genial disposition. In 1864 he entered as a student the old Toronto School of Medicine, and in 1867, when but twenty years of age, graduated as Bachelor of Medicine. Shortly afterwards he was appoined assistant demonstrator of anatomy in the school, and when the reorganization of the Medical Faculty took place he was given the chair of the professor of clinical surgery. In 1880 he became a member of the hospital staff. He was an honored and valued member of many medical associations. In the Ontario Association he was at one time president, and he also occupied the president's chair in the Toronto Clinical Society, and was a member of the University Senate for twenty-two years. Dr. McFarlane's professional connection was among the very best people in the city, his high position and practice combining as a tribute to his undoubted skill. He leaves a widow to mourn him, but no family. He was married in 1876 to Miss Bond, a sister of John Bond, of Guelph. The following gentlemen acted as honorary pall-bearers: William Mulock, M.P., Vice-Chancellor Toronto University, representing that institution; Judge Falconbridge, representing the University Senate; Dr. Temple, representing Trinity Medical School;

Dr. E. J. Barrick, representing the general profession in the city; Dr. Oldright, representing Medical Faculty; Dr. Charles O'Reilly, representing the General Hospital staff; Dr. Brock, of Guelph, representing the profession outside the city; Walter S. Lee, representing the trustees of the General Hospital.

"He died facing his duty."

Dr. J. H. Saunders.

We are pained to say that another good man has fallen in the ranks of the medical profession of the Province, Dr. J. H. Saunders, of Kingston, who died on the 19th ult., from an attack of septic pneumonia, the sequelæ of a septic throat.

Dr. Saunders' position as professor of clinical medicine at Queen's, as examiner in the College of Physicians and Surgeons, and his activity in the Ontario and Canadian Medical Associations proclaim his status and his interest in the profession.

Dr. Saunders was born in London, England, in 1847, and was the son of a Church of England clergyman. At the age of seventeen he entered the medical department of Queen's College, and graduated in 1869. He went to England in 1870, and passed his examination in the Royal College of Surgeons. Returning to Kingston the same year, he was appointed Demonstrator of Anatomy. In 1871 he removed from Kingston to Deseronto, and established a practice. After practising for a few years in that place he removed to Montreal. He then returned to Kingston, where he entered into partnership with Dr. Yates. Early in the "eighties" he was appointed Professor of Medical Jurisprudence in Queen's Medical College. He retained this chair till last year, when he accepted the position of Professor of Clinical Medicine. He was one of the attending physicians in the General Hospital, and for a number of years served as a member of the Board of Governors. Dr. Saunders was married to Miss Bristol, Napanee. He leaves a widow and eight children to mourn his loss. During the past twenty-three years he had acted as surgeon of the Kingston Field Battery, and at his death held the rank of Surgeon-Major.

Professionally, Dr. Saunders struck one as being a man of much self-command, painstaking, good judgment and kind heart. He was quiet and unostentatious in his demeanor, with much reserve force. He was a thorough worker, and kept himself in touch with every advancement made in the healing art.

Dr. John Sangster Atkinson.

DR. ATKINSON, of Gananoque, died February 24th, at the residence of his brother-in-law, Lieut.-Colonel Moore, in Hamilton. The deceased gentleman was engaged in practice until a few months ago, when failing health caused him to retire from active work. He took his membership in the College of Physicians and Surgeons of Ontario in 1875.

Dr. W. R. Wade

IT is strange that the profession in Ontario this winter is losing so many of its prominent members, and the greater number of these young men. or those of mid-life. It is an added sadness to chronicle the death of W. R. Wade, of Dunchurch, aged 33, a distinguished graduate of Trinity, who for six short years has been practising with much success in Parry Sound District. The doctor contracted a cold in the latter end of January, complicated with a sore throat. An urgent call took him a long distance in the country. This so aggravated matters as to make his condition serious. Everything was done, even to intubation and tracheotomy, but without avail. An index of the doctor's great popularity was shown by the fact that he had been unanimously chosen Conservative candidate for the coming elections for the House of Commons.

Dr. A. E. Yelland.

IN the death of Dr. Albert E. Yelland, of Peterboro', son of Wm. Yelland, Esq., mayor of that town, the profession has lost a very promising young member.

Dr. Yelland took a brilliant course through Trinity Medical College. Although the youngest member of the class of '87 he was gold medallist. After two years spent abroad he returned and located in his home town, where he had established a splendid practice, his natural qualifications, together with his skill, securing a large and respectable clientele. The doctor was stricken with appendicitis on Friday, February 21st. On Saturday night he was operated on, but it was too late. Death took place on the Thursday following.

The demise of a young, bright, ambitious physician has a peculiar sadness in it. The sorrowing friends have our sympathy, and that of the profession at large.

Walter Thom, M.B.

Dr. THOM, of Dumbarton, who succumbed to phthisis, January 29th, was a last year's graduate from the Toronto University Medical College. He was a hard and faithful worker, and was highly respected by his teachers and his fellow-students. He was modest and unassuming in manner, upright in his walk and conversation, and kind-hearted to a degree. His college chum, F. K. Merritt, a brilliant student, died a few months since. Together in their final year they staged nobly onward to the long-coveted graduation, although silent sufferers from serious maladies. The coincidence was peculiarly sad.

Dr. K. N. Fenwick.

To the members of the profession in Ontario the announcement of the death of Dr. K. N. Fenwick came with a sad shock, both on account of the circumstances connected with its causation and its unexpected suddenness. A slight cut of the finger while operating on a case of septic peritonitis was the simple beginning of so disastrous a result. Within a week the strong man was overcome by the fell destroyer, whom he had so often driven back in his faithful duties for others.

Dr. Fenwick was an eminent man, one who stood in the vanguard of the profession. A successful college course both in arts and medicine, together with post-graduate work, had well fitted him for his life's labors. Beside his large practice he was actively engaged in college and hospital work. He occupied the chair of obstetrics and gynæcology in the medical faculty of Queen's, and had written a creditable work on his specialty. His memory will always be held sacred by his work for Kingston General Hospital. Dr. Fenwick also was a prominent worker in the Ontario and Canadian Medical Associations, but the man who led the discussion in obstetrics in the last meeting of the former, and assisted so heartily to welcome and entertain the members at the meeting of the latter in his city last August, has read his last paper, and given his last handshake. Although we mourn his loss keenly, his influence is still with us.

Personals.

DR. J. H. WESLEY, late of Keswick, has removed to Newmarket.

DR. S. SCOTT, of Newmarket, has returned from a three months' trip to the Old Country.

DR. HERALD has been appointed Professor of Clinical Medicine, Queen's University, in place of the late Dr. Saunders.

DR. JAMES THIRD, Trinity '91, House Surgeon Toronto General Hospital, '91-'92, who has been practising in Trenton for the past three years, has received the appointment of superintendent to Kingston General Hospital. We congratulate the hospital authorities and Dr. Third.

Selections.

DIET IN DIABETES.—For a long time there has been a growing sentiment throughout Germany that diabetes has not been properly treated. Hirschfeld says he believes that diabetic coma is favored by the exclusion of carbohydrates from the diet. Schmitz allows his diabetic patients a small quantity of albumen, while he orders the free use of food containing starch and fat in large amount. Grube impregnates the system with carbohydrates. Williamston, of Manchester, says that homemade bread is much better than specially prepared diabetic bread. A number of American physicians are following this line of treatment with better results than they have had heretofore.—*National Medical Review.*

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THE DURATION OF ANTISYPHILITIC TREATMENT.—In an article, entitled "The Dangers of Syphilis, and How to Avoid Them," published in the *Journal of the American Medical Association* for January 25th, Dr. Algernon S. Garnett, of Hot Springs, Arkansas, a gentleman of large experience in the treatment of syphilis, asks how we can measure the duration of diseases induced by micro-organisms that may sleep for years before wakening to a destroying activity. It is our inability to answer this question, he remarks, that should make us hold every case of syphilis *sub judice* for at least seven years. Active treat-

ment need not be employed for so long a time; after three years of active treatment with mercury, "the mixed treatment," followed by mercurial treatment for a month twice a year for three years more, will serve, he thinks, to prevent any further destructive action in ordinary cases.—*The New York Medical Journal.*

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THE TREATMENT OF HYPERIDROSIS.—At a recent meeting of the Dermatological Union in Berlin (*Monatshefte fur praktische Dermatologie*, Feb. 1, 1896), Herr Frank said that an alcoholic solution of formalin, of the strength of from ten to twenty per cent., would speedily check excessive sweating. Tannoform, he added, was a mixture of formalin and tannin that had lately been put upon the market by Merck, of Darmstadt. This powder, dusted on the affected part, acted very favorably in cases of hyperidrosis or bromidrosis. He had used it in about fifty cases with strikingly good results, especially in cases of offensive perspiration of the fee..—*The New York Medical Journal.*

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GONORRHŒA IN WOMEN.—The course of gonorrhœa in the female (*Philadelphia Polyclinic*) is a rapidly progressing one, the infection quickly spreading from the vagina to the endometrium and then to the Fallopian tubes. Appreciating this fact and also that the danger to the patient increases in an alarming ratio with the progress of the infection, the aim of the physician would naturally be to prevent the spread and to destroy the disease in the parts already infected. When the disease is limited to the vagina, Dr. Talley recommends the daily washing of the mucous membrane with solution of *mercuric chlorid* (1-2000) and the filling of the upper part of the vagina with dry powdered *tannic acid.* A dry cotton tampon is then introduced to secure the retention of the powder. The cervix must be carefully watched for evidence of the infection of the endometrium, which will be shown by a red or granular condition of the external os and the flowing of mucus from the cervical canal. Should this be noticed, irrigation of the uterus with one or two gallons of a mild alkaline antiseptic solution at a temperature of 110° F., followed by the injection of equal parts of Churchill's iodin and carbolic acid, will, in the majority of cases, prevent the spread to the tubes.—*Buffalo Medical Journal.*

Miscellaneous.

THE JEWEL INHALER CO., of Peterboro', is introducing to the profession an excellent inhaler which excels for simplicity, efficiency and reasonable cost. As the inhalation method of treatment has passed the experimental stage and is recognized as necessary in many affections, this safe, simple and durable vaporizer ought to command a large sale.

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THE DANGERS OF ADVERTISING.—Dr. Krause has resigned his position of privat-docent of the Berlin Medical University owing to a difficulty with the faculty, who had asked him to give his reasons for allowing his name to appear at the foot of a testimonial for a certain brand of soap. On his refusal to do this, the faculty inflicted the severest reprimand in its power, and he resigned.—*Boston Medical and Surgical Journal.*

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THE enterprise displayed by the Aikenhead Hardware Co., in the way they have taken hold of the Canadian Agency for *Pasteur Filters*, certainly shows their faith that the Filters are all the inventors claim them to be. They have fitted up at their warehouse, 6 Adelaide St. E., Toronto, a special department for the sale and display of Pasteur Filters, having the different styles in operation, and it will pay anyone interested in bacteriological subjects to visit their exhibition.

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SANMETTO IN RETENTION OF URINE.—Have given Sanmetto a good trial and find it one of the best preparations I have ever used. Case No. 1.—John D., aged 70, Ireland—has been troubled for a long time—unable to pass his urine. After treatment with other remedies with no benefit, placed him on Sanmetto with following results: The first day the pus increased in quantity, on second day diminished, by fourth day could urinate himself—before this he had to be catheterized. Dose one drachm every four hours for the first three days, afterwards one drachm three times a day. Discharged in ten days, a complete cure of cystitis.—A. C. FORMAN, M.D., House Physician Bayonne Hospital, Bayonne, N.J.

APROPOS of woman's limitations as a doctor, the late Dr. W. C. van Bibbert, of Baltimore, used to tell this story. Awakened late one night by a ring at his bell, he called down the speaking-tube to know who it was. "It's I, doctor, Mr. ——. I want you to come at once to my wife. She is in labor." "Yes, but I don't attend your family. Why don't you go for your own physician?" And back came the reply: "I did, doctor; but she's about to be confined herself."—*Boston Medical and Surgical Journal.*

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THE New York School of Clinical Medicine has succeeded in introducing a modified form of the European manner of personal instruction, suited to the needs of busy American practitioners, who need brushing up in the specialties, but who can afford only a few weeks' time for the purpose. The method consists essentially in limiting the class to a very few students and having them act as assistants in attendance on the vast clinical material at the school's disposal. As soon as qualified the matriculants examine, treat and operate on patients themselves, the teachers acting as assistants. The school itself as well as the hospital and dispensaries at which its teaching is done, are fitted with everything to meet the requirements of most modern science.

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"NEW YORK, Aug. 12, 1871.—Mr. S. H. Kennedy, Johnstown, N.Y. My Dear Sir,—Replying to your favor of the 5th, regarding the use I made with the 'White Oak Extract, Q. Alba,' will say: After using it to my entire satisfaction, I gave it to one of my professional brethren, and asked him to use it and give me the benefit of his opinion of it as a medicinal. He has done so, and agrees with me, that it is the article you should have introduced to the medical profession, in the place of the 'Hemlock Extract, Pinus Canadensis.' It is superior as a medicinal. 'White Oak Tannin' in powder form is well known to the profession, but in this form of Concentrated Extract it is more effective and convenient for use. I make this suggestion now, and, if your business interests will permit, I advise you to substitute the 'White Oak, Q. Alba,' in place of the 'Hemlock, Pinus Canadensis,' for if some enterprising chemist should find out your process for making the 'Oak Extract, Q. Alba,' he would be a formidable competitor, and would embarrass your efforts in securing the physicians' confidence in the 'Pinus Canadensis.' I bespeak for this new 'Oak Extract, Q. Alba,' a cordial reception by the profession. Yours very truly, J. MARION SIMS, M.D."

Some Clinical Notes on the So called Alkaloids of Cod-liver Oil.

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SOME time ago I began clinical observations on the use of the so-called alkaloids of cod-liver oil, with the view of determining whether the effects of these much exploited substances were reliable and to be compared in utility to the oil itself, as we are at present able to administer it. The cases selected comprised chronic catarrhal conditions of the lungs of various associations, various grades and types of pulmonary tuberculosis, chronic rheumatism, anæmia, also mal-assimilation associated with catarrhal disturbances of the digestive tract. The results have been such as to interest me to a certain extent in the current dispute as to the nature and derivation of these alleged alkaloids.

The chemical investigation of cod-liver oil dates back to 1822, since which time there have been upwards of twenty investigators whose experiments were, for a time at least, more or less authoritative, and each of whom discovered something to which he attributed the specific virtues of the oil. The most of these observations are only of historical interest at present, and it would be useless to recount them.

Aside from the claims of morrhul as advocated by Chapoteau, to be considered as the active principle of cod-liver oil, we are chiefly interested in the investigations of Gautier and Mourgues. It is not necessary to recount the various substances which these observers found in cod-liver oil, the results of their investigations have been scattered broadcast. The therapeutic results are, however, said to be mainly due to the presence of morrhuine and morrhuic acid (gaduine).

The recent investigations of Heyerdahl have resulted in the discovery of two new glycerides—therapin and jecolein, also a small amount of palmitic acid. Moller points out that Heyerdahl's experiments would show that the fats of the oil which solidify at a low temperature, contain neither stearine or palmatin, but are glycerides of new unsaturated acids not yet understood; that rancidity is due to the formation of hydroxy acids and not to free acids; that the value of the oil lies in the contained free acids in the form of glycerides, and that these free acids must be preserved absolutely unchanged. Moller, along with other opponents of the so-called alkaloids, claims that there are no alkaloids found in the oil from perfectly fresh livers, and that they are plentiful in proportion to the extent to which decomposition has occurred, and that they are, therefore, poisonous ptomaines.

On recent physiological data, Moller reasons out a natural selection on the part of lecithin in the economy, for these newly discovered therapic and jecoleic acids, and claims that the therapeutic virtue of the oil depends upon maintaining the integrity of these glycerides in the natural oil by certain improved methods (Moller's), and that there is no active principle in cod-liver oil which can be isolated.

In Heyerdahl's examination for ptomaines, after the method of Gautier and Mourgues, using the light colored raw medicinal oil, he concludes that ptomaines have not had time to form. Gautier and Mourgues classify the alkaloids discovered by them as katabolic products formed during life (leucomaines). Moller claims that these products cannot be found in steam-prepared oil, but only in oil in which there has been opportunity for decomposition to occur—the light brown oil. In the case of the darker oil the temperature at which it is prepared volatilizes these substances, and therefore they are absent.

The clinician in searching for facts in the various investigations of cod-liver oil will get somewhat mixed. On the face of chemical arguments the opponents of the alleged alkaloids appear to have the best of the discussion. However, most of the arguments, both pro and con, are clouded with the appearance of commercialism, and must be taken for what they are worth. On the other hand, there are numerous reports on the clinical use of the so-called alkaloids giving favorable results, and while the majority of these reports appear to have been made on rather superficial observations, some credit must be given them. On account of the difficulty of administering cod-liver oil, I have for several years discarded its use. The clinical exhibition of the so-called alkaloids was undertaken with the view of determining their value, if any, as a substitue for the oil itself. The preparation used was Stearns' Wine of Cod-liver Oil, which is said to contain the alkaloids as isolated by Gautier and Mourgues. During a period of eighteen months this preparation has been administered to about seventy-five patients, private and clinical. The duration of treatment varied from three weeks to four months' continuous administration in each case. Some five or six cases have been more or less continuously under treatment for over a year. The nature of these cases has been already stated, and with the exception of two or three cases of gastro-intestinal troubles, were all such as are eligible for the administration of cod-liver oil. The general result noted in all such cases was increased facility in digestion and assimilation, and corresponding gain in strength and weight, with an improved appetite. The specific result noted in different classes of cases was as follows: In chronic bronchitis, either occurring alone or as complicating

emphysema, asthma, or tubercular conditions, besides the improvement in nutrition, there was more or less improvement in the bronchial catarrh, with lessening of cough and expectoration; especially in some cases of obstinate localized bronchitis in the lower lobes, where persistent treatment with the usual alterative and expectorant remedies had accomplished little, was there satisfactory improvement under the use of wine. In some of the most chronic cases of localized bronchitis guaiacol was also given, though this was not usually done unless tubercular development was present or was considered as imminent. In the cases of pulmonary tuberculosis, guaiacol was given in addition to the alkaloids, because while there was improvement in the digestion by the wine alone, and these patients expressed themselves as feeling much better, there was relatively much more improvement in the cough, fever, night sweats and associated catarrh when the guaiacol was given.

The general improvement in some of these cases, especially in the early stages, was quite marked. The wine was used as a menstruum for the guaiacol unless the odor of the latter was objected to, in which case it was given separately. The guaiacol is dissolved in an equal quantity of alcohol and added to the wine; five drops of guaiacol in a teaspoonful of wine was usually given three or four times daily. Larger doses of guaiacol were seldom given, as in our experience, patients do as well or better on small doses than where the guaiacol is pushed to the limit of toleration.

In cases of anæmia in young girls treated with the wine alone, there was general improvement in the appetite and strength, with marked improvement in the gastric disturbances incident to these cases. The percentage of hæmoglobin, however, showed slight or no change, and functional hæmic murmurs were persistent. The improvements in these cases on the alkaloids alone were temporary, and they relapsed unless placed on more energetic treatment with iron. In chronic rheumatism, beyond the general improvement in assimilation and nutrition, there was little result. In cases of mal-assimilation from faulty intestinal digestion there were satisfactory results. The best results from the wine alone were noted in the cases of chronic bronchial catarrh, such as usually respond to the treatment of iodine in some form. It is admitted that the small amount of peptonate of iron contained in the wine, and even the wine itself, would, to an extent, be beneficial; but some of the results were not in conformity with the probable effects of such medication, especially in view of the fact that in some of the cases tonics and stimulants had previously been administered without satisfactory results. *Kansas City Medical Index.*