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EDITORIAL

THE NEW TREATMENT FOR TUBERCULOSIS.

For some time, Dr. Friedreich Frantz Friedmann has been very much under the public eye. The reasons for this are not far to seek. Anyone who claims to have discovered a cure for tuberculosis, or even an agent that can materially benefit those afflicted with this disease, must be placed among the real benefactors of mankind. Tuberculosis causes the death of one-eighth of the human race, and about one-fourth of the deaths under 20 years of age is due to its ravages. Here, truly, is a great opportunity.

So far, Dr. Friedmann has retained as a secret the method by which he prepares his living bacilli. Some facts are known, however, to the effect that he cultures the organisms in the turtle's body and by this means secures a mild strain of bacilli. These are claimed to be non-toxic and to possess immunizing qualities.

It is too soon yet to pass any definite opinion upon this treatment. It may prove useful in only a few instances, or it may be helpful in a large percentage of the cases. Time alone can determine the true position of the treatment. Should it only prove beneficial in the incipient forms of the disease, it would still rank as a cure, as in time the advanced cases would disappear in the ordinary course of the disease.

In Berlin the medical profession is not a unit on the benefits of the treatment, but the larger number seem to favor it. In Canada, Dr. Friedmann was well received. He met with a sympathetic frame of mind in the medical profession of Ottawa, Montreal, Toronto, and London. This is as it ought to be. There is every reason to regard Dr. Friedmann as thoroughly honest. He is, indeed, a genuine enthusiast. Never rests for a moment if there is anything for him to do. He scarcely takes time for his meals. He is frank and appears to be working as a true scientist.

Some criticisms have been made to the effect that he is keping the method of preparation a secret; but we must not be too hasty in find-

ing fault because of this. If he gave out his methods until they are thoroughly perfected they might be attempted by those with poor facilities and without proper training. The result might be disastrous to the patients and the reputation of the treatment. Dr. Ehrlich kept the preparation of his treatment for syphilis a secret for a considerable time, until he was satisfied by the numbers treated that he had made a real theropeutic advance. All will sincerely hope that Dr. Friedmann has added a genuine remedy to the world of medicine.

Dr. Friedmann declares that his treatment is for the whole world, and disclaims that he is actuated by any other than the highest humanitarian ideals in withholding temporarily his method of obtaining his strain of bacilli. Here are his own words:—

"The desired results I obtained immediately when I succeeded in finding a bacillus which originated from a cold-bolded animal, the turtle. This strain of turtle bacilli was originally almost avirulent and atoxic and it lost its last traces of virulence by frequent transplanations.

"When I had it in that condition—and not before—I applied the remedy to human beings. At first I injected myself with it at different times; after that I gave it to adults infected with tuberculosis, later on to tubercular children, and finally, when the curative effects were found invariably the same, to healthy children of tubercular surroundings for immunizing purposes.

"I have found this remedy harmless whenever I used it for patients from the earliest childhood to the most advanced age, in all forms of application—subcutaneous, intramuscular, and intravenous—even in big doses and equally efficient in all forms of tuberculosis, pulmonary, bone joint, glandular, and skin. Aside from absolutely hopeless cases whose fates were already sealed, the remedy has proved its efficiency in most instances.

"To obtain the ideal to eradicate tuberculosis as an endemic disease, it is necessary not only to cure the tubercular individuals now living, but also to protect the future generations from this infection by a method followed in principle Jenner's vaccination."

THE CENTENARY OF A GREAT PHYSICIAN.

Those who can cast their memories back on the past and bridge a half century arch of time, will be able to recall the name and fame of David Livingstone. He was born in the little village of Blantyre, Lanarkshire, Scotland, on 19th March, 1913; and died at Chitamba's

Village, Ilala, Africa, 1st May, 1873. He received some simple education from the age of ten to thirteen, when he was put to a trade in a cotton spinning and weaving factory. He kept his book at his side and would glance his eye over its pages, as he could snatch a moment. At twenty-four he went to Glasgow to study medicine, and secured accommodation in a room that cost him fifty cents a week. He secured his license in 1840, when he was twenty-seven years of age.

He landed in Africa in 1841, and till his death he made that dark continent the scene of his ceaseless labors for thirty-two years, with the exception of two brief visits home to Britain in 1856-59, and again for a few months in 1865. He was missionary, physician, teacher, explorer, guide, and friend to the tribes of Africa, among whom his name is still quite familiar. What he accomplished for that continent is beyond the power of words to tell!

No man ever faced greater trials and dangers These he met with a calm fortitude, believing that "man is immortal until his work is done." With rare skill he met the superstitions of the natives and won out by his scientific methods. It is a remarkable fact that in all his difficulties with the native chiefs he always succeeded in arriving at an understanding without resorting to force or violence. In this his mastery of the native languages was of the utmost value to him.

He was a close observer of natural phenomena, and his diary is full of information on the plant and animal life of the various parts of Africa he travelled through. Very many of the doubtful points in African geography he cleared up. During these long journeys extending for thousands of miles in various directions and covering several years at a time, he endured the greatest hardships and suffered severly from malaria and dysentery.

Nothing could deter him from his purpose. The burning thought in his mind was to abolish the horrors of the slave traffic, which he daily saw in all its hideousness. To millions in Africa he carried life and light and liberty. To few members of the medical profession has it ever been granted to do so much for suffering humanity. He rests in fame as one of the immortals of the medical profession.

HON. DR. ROCHE.

For some time past Dr. Roche has been in indifferent health. His duties as Minister of the Interior are by no means light, and he was compelled to go south for a rest prior to undergoing an operation for gallstones.

The operation was performed in St. Mary's Hospital, Rochester, Minn., on the eleventh of March. The reports state up to the present he is doing well. Since Dr. Roche entered the present Federal Cabinet he has engratiated himself into the esteem of the medical profession because of the keen and sympathetic interest he has taken in all questions of a medical character that have come before the Dominion House. We hope his health will soon be perfectly restored.

A PROPOSED NEW HOSPITAL IN TORONTO.

A numbr of medical practitioners in Toronto are agitating for a new hospital in the west end of the city. What do they hope to gain by this movement?

In the first place doctors are now permitted to send their patients into the existing hospitals and attend these if they pay their own way. This is all that could be secured in any new hospital.

Then the cost of a new hospital must be considered. It is not an easy matter to secure a site of at least two acres in a suitable place. Then buildings are required. Hospitals must be properly built and it has been found that this cannot be done for less than $1,000 per head. A small hospital for 50 patients would, therefore, cost $50,000. To this must be added the site, and a suitable home for the nurses. These two things would cost another $50,000 at the very lowest estimate.

But another serious question arises. How are these doctors going to secure recognition from the city and the government, and without these the hospital would only be a private concern. The matter of medical education comes in for consideration, and it is not likely that the government is going to make its grant to any hospital that does not open its wards to medical teaching, and this would be quite impracticable in the case of a hospital in the far out western part of the city.

If the doctors cannot secure the government grant, they would be compelled to charge at least $10 per week for the maintenance of patients in the cheapest wards. This would be no gain to the doctors, as they can now secure accommodation at $7 per week in hospitals already in operation, and no trouble about management.

Then, again, the city might possibly make further grants to hospitals already in existence; but would not at all be likely to do so to a new venture, where there would be all chances of failure, as compared with those already well established.

It must be borne in mind that the public has benn thoroughly can-

vassed of late years for donations. Those able to give have already made large contributions. They would not be very easily convinced that there was any present need for a new hospital.

Grant for the sake of argument that the government could not be convinced of the need for another public hospital in Toronto, the new institution would be regarded as a private affair. It would, however,, be called upon to take out a license, and would have to pay taxes on its assessable value.

The whole question appears to be very visionary, and impracticable. Should the doctors decide to go on with any such an enterprise, they will have long years of an uphill struggle in very inadequate accomodation. In the meantime, the hospitals that are now in existence will be receiving the donations of the wealthy, and gathering round them the sympathy of the influential, because they are meeting the needs of the public and affording the medical profession the accommodation they require.

THE GERM OF INFANTILE PARALYSIS.

Dr. Simon Flexner, of the Rockefeller Institute, of New York, announced before the Medical Society of Johns Hopkins Hospital, Baltimore, on the evening of 14th March, that the germ of infantile paralysis had been discovered and cultivated. The medical gathering greeted this statement with marked enthusiasm. It is worthy of note that Dr. Thomas Cullen, a former Toronto graduate, occupied the chair.

Dr. Flexner stated that the organism is one of the smallest yet known, and is found in the spinal cord in wavy chains. He went on to say that he had not been able to establish that the infection is conveyed by means of the stable fly. He would not state that this was not so, but that he had not been able to confirm the statement made by Dr. Roseneau to this effect. He had caused monkeys that were infected with the disease to be bitten by various insects, and in turn had these bite healthy monkeys, but had not imparted the disease in this way.

This discovery will likely lead to a complete knowledge of the habits of the organism and how it is conveyed to those who are not infected. It may be the means also of discovering preventive measures. Now that the germ has been isolated and cultivated, there is every reason to hope that a serum of active powers shall be elaborated. Already much splendid work has been done along this line, but a serum of therapeutic value has yet to be found.

What Dr. Flexner has already accomplished in the treatment of cerebrospinal meningitis is well known and everyone will wish that he may meet with even greater success in the case of infantile paralysis.

ORIGINAL CONTRIBUTIONS

CHRONIC INFECTIONS AS A CAUSE OF CHRONIC AND SUB-ACUTE RHEUMATISM. (*Arthritis*).

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IN a previous paper on this subject of rheumatism, (1) reference was made to its infectious origin, and the question was discussed chiefly with regard to intestinal conditions as a causative factor.

Further observation confirms me in the belief that all these chronic arthritic conditions are the result of infections, and that treatment must be based on this hypothesis.

This I believe is fairly well recognized, as for instance, the gonorrheal arthritis, is universally accepted as an infection, but still some types are excluded, as having other origins, chief of which are those supposed to be due to changes in the nerve mechanism, controlling a joint, as in Charcot joint and those of trauamatic origin, the trama usually being in the nature of a shock or injury to the nervous system.

The first, that of a Charcot joint, I believe might reasonably be included, since the condition is one recognized as a result of syphilis, which in turn is known to be an infection, and whether the joint disease results from direct infection, via the lymphatic and circulatory systems or indirectly through the injury produced in the nervous system, does not blind one to its true origin.

Of the other class so called traumatic, I might relate the case of a woman around fifty years of age, who was in reasonably good health until shortly after the sudden accidental death of her son. I need not describe the mental shock and anguish, with its worry, loss of sleep, appetite, etc., under such circumstances. The progressive arthritis which followed shortly on this injury, and which in a short time produced invalidism, was by more than one physician stated to be due to the nervous shock, and no doubt that had a bearing, but only a secondary part.

The real cause probably was due to a condition of mouth infection, which will be described later, and which even before any injury contained the potentiality of disease, but which was resisted until the immunity was lowered by deficient nourishment, through worry, loss of sleep, appetite, etc.

Immunity.—The question of immunity here becomes a consideration, in that it is generally recognized, that infections are ever present

with us, and were it not for our inherent immunity or resistance to them, our existence would be a short one.

It is also granted that small but constant doses of toxin tend to break down immunity, while large doses as in the acute diseases like typhoid, pneumonia, etc., tend to produce immunity, and it is by such efforts on nature's part that health is finally restored.

The infections observed, as having relation to these rheumatic conditions, are essentially chronic, and can often be demonstrated to have been present for years previous to the onset of their systemic expression, in the way of an arthritis or so-called rheumatism.

Further, this systemic expression of a local disease, may frequently occur following an injury, exposure to cold or wet, or, in fact, any circumstance which tends to suddenly lower the general resistance of the body. Consequently, the tributary cause often receives the blame, while the underlying, and ever present, original cause is overlooked.

As indicated the infective foci may be varied, but attention will be directed especially to mouth infection. Of these we will consider:

Infections resulting from

(A) Teeth proper,
  (1) Caries of teeth,
  (2) Buried roots,
  (3) Crowned teeth,
  (4) Bridges.

(B) Gums and alveolar processes,
  (1) Pyorrhoea,
  (2) Alveolar osteo-myelitis

In caries of the teeth, not infrequently, the pulp becomes infected, infact, this may be considered the rule where much destruction exists, and the familiar gumboil is a common expression of this condition where the infection is sufficiently acute to make its way through the alveolar process. Where infection is less virulent, the subject of such a condition may not be so fortunate, as I shall endeavor to demonstrate. Quite frequently instead of finding an exit through the alveolar process a chronic abscess is harbored at the base of the tooth, and this without subjective symptoms of its presence.

To show further this tendency to chronic abscess formation in bony structures, and their existence over a period of years with very slight symptoms, Fig. 1 illustrates an abscess in the tibia of a girl 17 years old, which had been present for four years, but not until then were symptoms sufficiently acute to demand treatment. At operation the pus removed gave pure culture of straphylococcus albus. In two other patients similar conditions in bones of the foot and leg observed within a year would show that they may not be considered entirely a rarity.

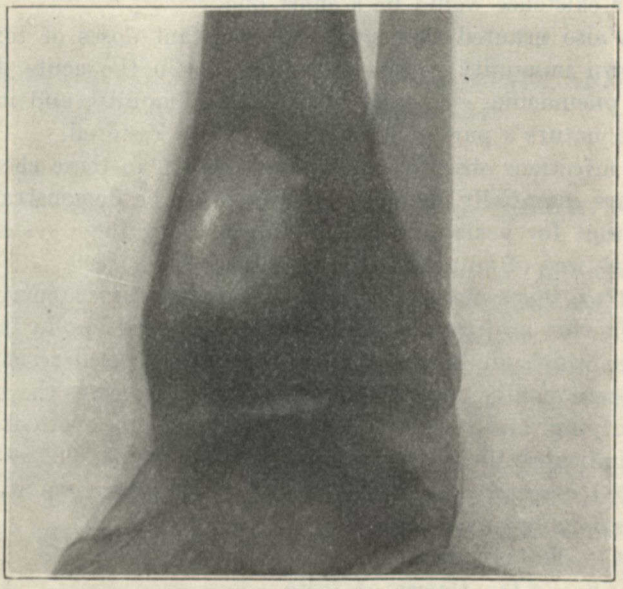

Fig. 1.
Abscess existing four years in Tibia. Illustrating Chronic Process.

These instances also help us, supposing we had not abundant objective evidence, to conceive of the possibility of similar infection in the jaw-bones in connection with the teeth, which when decayed afford a much more direct mode of infection.

These conditions also force us to consider the question of relative chronicity or relative virulence of infection. If we leave out such infections as syphilis and tuberculosis in which relative chronicity or virulence is well demonstrated, in that the disease may be latent for years, and we consider pus-producing organisms, our minds naturally portray something acute, which must express itself in quite a definite fashion. It is in this regard I believe we must remodel our mental picture, and be ready to conceive of pus-producing, or, if you like, toxine-producing organisms of very low virulence, or very chronic action, which may produce systemic effects in the absence of marked local symptoms. Admitting this, however, we cannot separate the infection from its host, and consequently, the relative resistance, immunity, is part of the consideration, and may be the chief determining factor as to when any infection may demonstrate itself as disease.

Now to consider a definite case of alveolar abscess. Fig. 5 illustrates the mouth condition of a patient with the following history:

Man, age 25, referred by Dr. R. H. for painful condition of right hip, both knees and feet. The left foot in particular was rigid, swollen, and so painful that walking was difficult, and the knees could not be completely straightened. He had taken ill suddenly with painful feet sixteen months previously, and had not been able to work since. He was treated at a hospital in the city of K. for three or four months, moved to C., his old home, and was under hospital treatment for a similar period. Then came to Toronto and continued treatment being referred at the time I saw him, owing to no improvement, and progress of the disease. During that sixteen months his difficulties had increased, in spite of all the medicines, anti-rheumatic and otherwise, which had been prescribed.

On searching for a cause, which is my custom in all these conditions, the mouth presented sufficient evidence. Twenty-two teeth were diseased and pus was exuding from a considerable portion of the gum margin.

Fig. 5
X Ray of Mouth where 22 Teeth were diseased, 4 with Chronic Abscesses.

Treatment.—A vaccine prepared from the pyorrhoea discharge of the gums.

(2) Dental treatment of teeth.

(3) Local treatment of affected joints, mainly by hot fomentations, massage, uniform warmth and rest.

(4) No medicine except for regulation of the bowels, and large quantities of water.

Following is the dental report of the twenty-two teeth requiring treatment. Nine were extracted, and of these four had chronic abscesses at the base; of thirteen filled, three were putrescent. Much of the gum was infected, mainly along teeth decayed to the gum margin, which improved quickly with treatment of the teeth. The striking feature is that all this was present with practically no subjective symptoms. The result of treatment thus directed at removing the cause was so rapid that in a month the patient walked with comparative ease, was relieved of all pain, the swelling had subsided, and the rigid foot had become quite flexible. There have been no retrogressive symptoms since commencement of treatment, and nature seems to be restoring normal conditions as fast as such fibrous changes permit.

In this class also is the dead tooth, possibly resulting from the irritation of large fillings, and sometimes relieving its infected base by a chronic discharging sinus.

Rheumatism or arthritis resuling from such a condition is illustrated in Figs. 3 and 4, showing a healthy foot, and one with arthritic adhesions. Eight teeth required treatment, three were extracted; of these two had abscesses, one with a chronic sinus. This patient four months after treatment reported again only a few days ago, showing very marked improvement in the way of increased flexibility, diminished swelling and tenderness, and, in fact, walking with comparative comfort. This we consider very satisfactory progress, considering the amount of involvement of the joint surfaces, and the fact that the whole process was becoming progressively worse before correction of the mouth condition.

A very interesting feature, however, on the recent examination, was to find one of the teeth filled at first treatment very tender, and painful to pressure. The dentist's report of this condition was a dead and infected pulp, which had probably died since the filling was placed four months previously. The possibilities of this condition in producing arthritis is well illustrated by the following record of a case reported by Dr. Goadby:

A girl, age 21, was attacked somewhat suddenly by swelling of the hands and feet and fever lasting two or three weeks. With the subsidence of the fever the joints did not return to their normal state, but remained painful and stiff, walking was almost impossible. The affection was bilateral, and the swelling was evidently peri-articular, and to a limited extent affected the synovia of the joints, but no fluid

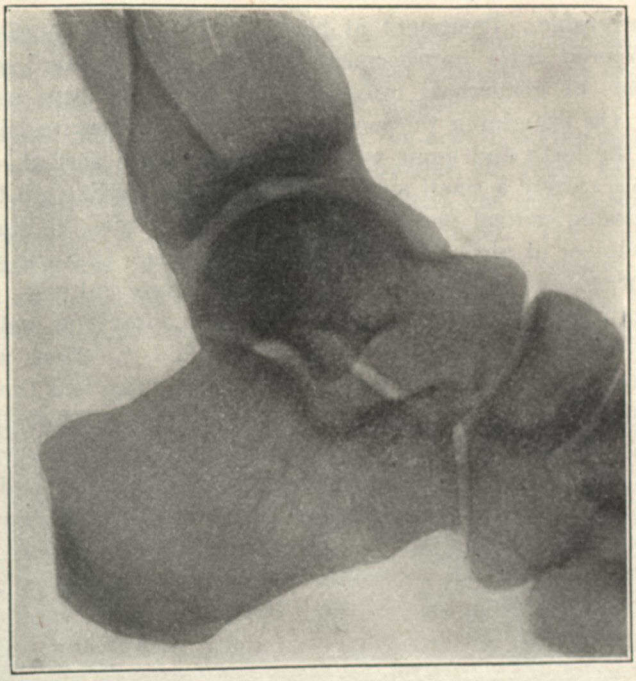

Fig. 3.
Normal Joint surfaces of healthy foot.

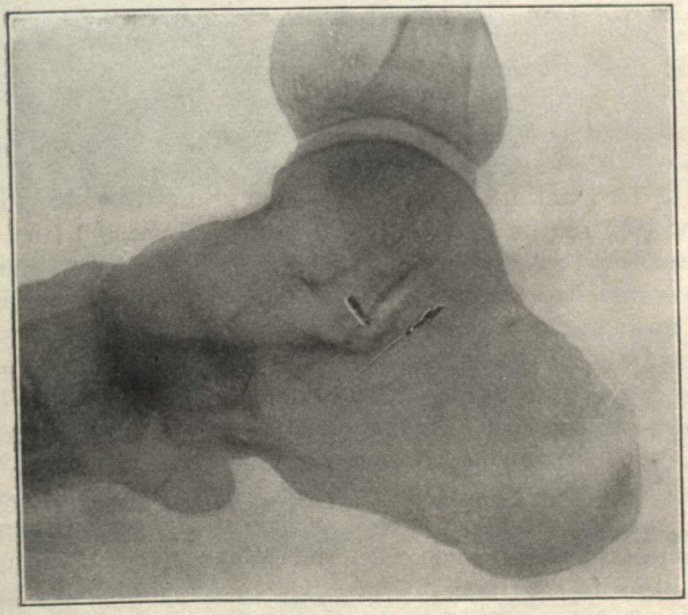

Fig. 4.
Arthritic Adhesions in diseased foot. Same patient as Fig. 3.

was discoverable. Treatment at baths, and the long course of salicylates produced little improvement. There was no famil yhistory of rheumatism or gonorrheal infection, and no septic focus was thought to exist. On examining the mouth the right upper central incisor was missing, the teeth and gums were apparently quite normal. On examining more closely a small sinus was discovered leading up to the root of the missing central incisor, and a film made from the sinus showed a large number of pus cells loaded with organism. Cultures were made and an organism was isolated in practically pure culture. The blood tested against this organism gave a very low opsonic as well as a low phagocytic index. A vaccine was prepared, and injections were given, commencing with ten million doses. After four injections the sinus was opened up under a general anaesthetic, and was found to lead into a cavity in the bone about the size of a small hazelnut. This was cleared, and the lateral incisor also was removed, the cavity extending under its roots and invading the periosteum of the tooth. The improvement of the joints, which had commenced with the innoculations, received a slight temporary setback, as the immediate result of the operation, but improvement was soon recommenced, with continued vaccine therapy and the patient has steadily improved, and is now almost well.

Crowned Teeth and Bridges.—It is not my intention to discuss the merits or the failure of the crowned tooth. No doubt it serves a purpose or it would not be used; but my own observation would lead me to advise its omission wherever possible. The gum in contact with a crowned tooth, I seldom find in a perfectly healthy condition, even when correctly fitted and shaped When not perfectly fitted they undoubtedly form ledges and crevices, for the harboring of detritus and bacterial organisms, and as such are a detriment to general health

The Following History May Illustrate.—Patient, age 25, referred by Dr. M. for painful feet, had an attack of rheumatism, affecting spine, hips and both feet, in December, 1911, supposedly caused from sleeping with insufficient covering and getting a chill. The attacks diminished, but never completely left the back and hips, and progressively increased in feet up to the time of seeing him in July, 1912. The feet were then quite painful, and he suffered great distress in walking. The X-ray revealed spurs or outgrowths of bone on the under surface, and back of the asalcis of both feet (Fig. 2), and he was unable to work.

At examination nothing was grossly apparent as a causative focus of infection, and as the spurs required removal for their mechanical effect, I assured the patient their removal could only give temporary relief unless the cause could be determined and removed, and requested that in order to allow time for investigation he be prepared to remain in the hospital for a few days for that purpose.

All the functions of the patient seemed quite normal, and by ex-

clusion suspicion rested on a gold-crowned tooth, which was ordered removed, owing to the congested state of gum adjacent, and the minute glandular swelling on the buccal surface opposite.

The patient mildly objected to losing the crown, saying it had been on six years, and never troubled him. However, six years' service was considered a reasonable reward, and the patient was sent to the dentist for its removal, and a report of the condition found. The dentist's report was that it was the most filthy cavity he had ever opened, exuding debris, pus and confined gases, which were sufficiently strong to be obnoxious even to the patient himself, and to elicit his comment that "he

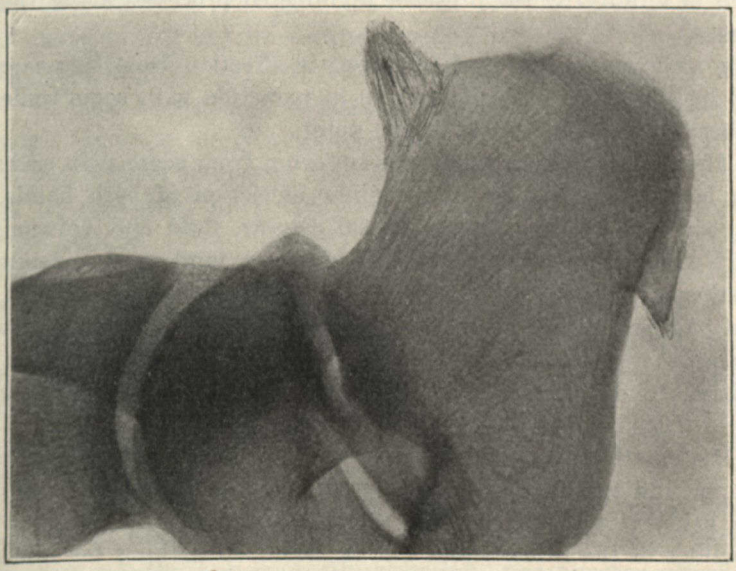

Fig. 2.
Spurs in Arthritis. X Ray of one foot with pencilled portion illustrating other foot of patient.

guessed the doctor was right, but that was a long way from the heels."

During the three weeks he remained in the hospital following the removal of spurs, all his rheumatic pains left him. On leaving he was advised to have the remaining part of the tooth extracted, which revealed a small abscess at the base. Four weeks later he reported as being quite well, except for very slight tenderness at point of operation, and has been following his regular occupation without complaint ever since.

Again, the question of bridges I will not discuss further than to say that I occasionally see much dentrifices which I consider quite an

interference with a clean healthy mouth. I, however, take the liberty to quote the opinion of a dental authority on the question (2), who says: "Artificial plates (dentures) are at times not above suspicion; especially is this the case when roots of carious or even sound teeth have been left in the jaw, and the whole covered over with a plate. Here, again, ulceration, chronic inflammation, and septic absorption take place, but a less obvious condition may be present. The bands or clasps for retaining the plates often cause ulceration and damage to the soft tissue, and even in a well-fitting denture, most frequently in the lower jaw behind the incisor teeth, large inflamed areas may be found, due to the mere pressure of the plates on the gums, already lowered in vitality by the presence of infected processes along the gum margins.

The following history of a rheumatic affection from this cause reported by the same authority agrees in principle with some under my own observation, and illustrates the point.

"The patient, a man of 38, was suffering from acute pain and swelling in both knees and both feet, ulnar deflection of both hands, and acute pain and swelling on the dorsal aspects, fluid and deformity of the left elbow joint, and of the left shoulder joint, and anaemia and neurasthenia, partly owing to constant pain, and partly toxic. The patient had been under all sorts of treatment, residence at continental and English Spas, had been to the Canary Islands, had taken vast quantities of iodide of potassium, had had massage, electric baths, ionisation and "Christian Science," and all with no avail.

"His mouth was a veritable gold mine, he had four bridges, two in the upper and two in the lower jaw, and four gold crowns in addition to the bridges; pus was welling up from his gums in all directions. The builder of the bridges told him he could do nothing for him as he had rheumatism in his gums He was treated by the removal of all the crowns and bridges, and by vaccines made from his own organisms. He made a slow but steady recovery, and is now able to resume his ordinary avocation, which he had been obliged to give up for three years." It is only fair to say, the expression in the above quotation, "that the condition was due to rheumatism of the gums," might only be expected from one who would insert such faulty work.

I have endeavored to show by a few specific cases, the definite connection which diseased conditions of the teeth have in causing rheumatism.

While this is a frequent cause and important to be recognized, a more frequent cause, and one sometimes difficult of recognition, is that condition of the gums and alveolar process usually described by the term—pyorrhea alveolaris.

This term, however, has a wide range, from that of a simple gingivitis, to an osteitis or osteo-myelitis, sometimes even to the extent of causing decay and destruction of a considerable portion of the alveolar process.

With pyogenic bacteria present in the mouth in such quantities as there must be when such a condition exists, being swallowed with every drop of salivia, and with every mouthful of food, and add to this the obsorbing surface presented to the lymphatic and circulatory system—for conveyance of their toxic product, is it possible to conceive of a healthy body ,which harbors such a hot-bed of disease?

The patients which we see in this connection are usually those with long-standing rheumatic conditions varying from months to thirty and more years, and presenting varying degrees of disability, with a large majority severely crippled and often almost complete invalids.

In these severe cases so much destruction has taken place that even though the cause be recognized, complete recovery could not be hoped for, but even in some very severe conditions a recognition of this cause and its treatment by proper dental means, and vaccine therapy—relieves pain so effectively, that orthopedic methods for correcting existing deformities may be conducted with very little distress to the patient, while previously they would have been unbearable.

Many such severe cases with this disease as a causative factor, might be reported, but their gain, while marked, and of great satisfaction to the patient, is as yet too far short of perfection to be conclusive. I, therefore, choose to report a moderately mild case from the rheumatic standpoint.

Patient referred by Dr. J. H , age 28, had an attack of rheumatism about three years ago, affecting back and shoulders, which troubled him for some months, but gradually subsided—had another attack in January, 1911, during which shoulders, hip, right knee, and feet involved. With this attack he also had quinsy, and on his doctor's advice, had the tonsils removed. Following this there was an improvement in his rheumatic condition, but it did not entirely clear up. When seen July, 1912, he was unable to work, due to the painful condition of the feet, and the right foot particularly was rigid, swollen and painful, and on attempting manipulation, adhesions could be heard giving away. His skin was particularly muddy in appearance.

On examination the gums were retracted, and pus could be seen oozing from every socket. The gums bled with the slightest pressure. An autogenous vaccine was prepared, dental treatment, local treatment for joints, with proper shoes to correct bad position of the feet, general instruction as to diet, etc.

In eight weeks the patient returned to work, and has not lost a day since. His feet are so flexible he takes some pride in showing them; he has gained ten pounds in weight, the muddy appearance of the skin is gone, and he claims to enjoy life to a degree unknown for several years past.

In this patient the teeth themselves were sound, and the gum condition obvious. In a considerable portion, however, one might easily overlook a pyorrhoeic process, as it may only involve a few teeth, or as in a patient observed a few weeks ago with arthritis of the elbow, only the inner surface of the gums were apparently involved. This possibility of oversight, and the association with rheumatism, is again well illustrated by Goadby.

History.—Patient, a man aged forty, had sudden attack of pain behind left ear, progressive stiffness, and muscular rheumatism, and stiffness of the right shoulder, and right hip joints Ten days later, rigor, temperature 102 degrees F., and evening temperature of 100 degrees F., for two or three weeks, which gradually subsided. Three months later another acute attack, with fever, pains in back of head and neck, lasting five weeks. An X-ray photograph of the chest was taken and it was thought that the case was one of early tuberculosis. The patient was sent to a sanitorium, where, however, he derived no benefit and left. He was in constant pain, unable to move his head, and had constant attacks of fever at night, the temperature running up to 100 degrees F., falling to sub-normal in the morning. He became wasted, losing more than a stone in weight, and had become greatly depressed mentally, and had to give up his work.

Hyper-æsthesia over all cranial nerves. The patient could only walk with difficulty.

The molar teeth had been lost on both sides in both jaws; the patient resented any suggestion that his mouth was at fault, as he had recently seen his dentist, who had pronounced his gums and teeth quite sound, and the gums appeared normal in color. Careful examination with a fine platinum probe brought to light several deficiencies between the remaining teeth, and passing down to the bare bone, and microscopically pus was demonstrated. A vaccine was prepared and inocculations were performed. The patient made an uninterrupted recovery, the temperature ceasing to rise at night after two or three inoculations. After six months the inocculations were discontinued, and a slight relapse took place. The vaccine was, therefore, continued for a further six months, and the patient made a complete recovery, and has remained perfectly well since.

Such conditions as reported above are among those who came for treatment because of rheumatic conditions. I now wish to refer to, and

report briefly the summaries of a very valuable paper. (3) (By Dr. Medalia, of Boston), where treatment was instituted for the pyorrhoea as such, and the cure of which in a great proportion resulted in a cure or great improvement of various accompanying systemic disorders. His paper presented the result of a great amount of work, and confirms the view that disease of the mouth and pyorrhoea, especially, is accountable for many chronic system disorders, and may be, and I believe is responsible for many other human ills, both acute and chronic, not yet definitely associated.

When we consider chronic skin diseases, such as psoriasis, eczema, the blood anaemias, and lenkæmias, nervous disorders, as the disseminated sclerois and progressive muscular atophies, should we not more constantly look for a cause? Should such unhealthy conditions be present even though in our mind, having a remote or no relation to the disease for which we may have been consulted, it is our duty to advise and urge that any unhealthy condition should be corrected. This is imperative to the physician and the dental surgeon should be as keenly alive to the importance of his work, and the effects a diseased mouth has on the system. If this were understood we would not so often get the reply, "My dentist noticed that, but said he could do nothing for it," now so frequent when recommending treatment for pyorrhoea.

Within the present month I have been given that reply by three different patients in three different towns in the province, and it is a common occurrence.

Dr. Medalia's summary of treatment is about as follows:

1. Vaccine or immuno therapy, usually antogenous, combined with stock vaccines.
2. Local treatment by dentists.
3. Systematic, consisting mainly of regulations of diet, plenty of water, at least two quarts daily—and in the case of intestinal complications—lactic acid milk.

115 cases reported. The results are given as folliws:

		Percentage			No. of cases.		
	Cases	Cured	Imp.	no imp.	Cured	Imp.	No imp.
Incipient	14	92	8	..	13	1	..
Mod. adv.	16	93	7	..	15	1	..
Far advanced	85	43	47	5	37	40	4

Of far advanced three dropped out, and of one no record was obtained.

The complications of systemic diseases in various groups were as follows:

Incipient—14.

Complications:
4 Rheumatism and gastro intestinal.
3 Gastro intestinal.
2 Asthma.
1 Rheumatism and asthma.
1 Chronic catarrh.
1 Secondary anaemia.
All were relieved of systematic symptoms when under local treatment.

Mod. Advanced—16.

4 Rheum. and gastro intestinal.
3 Gastro intestinal.
2 Rheumatism.
2 Chronic ferunculosis.
1 Asthma.
1 Chronic sore throat.
1 Nervous breakdown.
2 No gen. symptoms.
In rheumatic cases pain responded to vaccine therapy.

Far Advanced—85.

45 Rheumatism.
42 Gastro intestinal.
4 Eczema.
4 Post nasal catarrh, and chronic sore throat.
3 Chronic ferunclosis.
3 Nephritis.
3 Urticaria.
2 Diabetes.
1 Purpura hemorrhagica.
6 No general symptoms.

Of the far advanced most had a combination of two or more of the above named symptoms. Almost all gastro intestinal symptoms were relieved or cured by diet, lactic acid milk, or vaccine. Twenty-three of the rheumatic cases were cured, eleven improved, others discontinued or were beyond hope.

The more frequent complications were as follows:

	Rheum. disease	Gastro intest.	Skin affections	Chronic catarrh
Incipient	35	50	14	7
Mod. advanced	38	50	12	6
Far advanced	53	50	13	5

These results speak for themselves. The last table is, I think, suggestive in showing the preponderence of gastro-intestinal symptoms over rheumatic in the incipient cases, and the marked increase of rheumatic symptoms in the far advanced. This seems most natural in that the intestinal is in direct line with infection, and would naturally suffer first.

In the condition first described, involving the teeth alone, to observe and remove the cause will often result in a cure. In the latter condition of pyorrhoea sufficient evidence is at hand to show it is a curable disease, but not without the skill and enthusiastic co-operation of the dental surgeon. With such recognition and co-operation not only are cures made possible, but what is infinitely more important is the prevention, the consequent saving of many from a life of suffering and invalidism, and not a few from homes for incurables. At the present time a large proportion of the inmates of such institutions are there as the results of rheumatism. Of fifteen such patients examined recently in one institution, eleven could have been due to mouth infection. He who has the power of preventing such disastrous results surely has a great mission to perform, far beyond the accumulation of wealth, and should be willing to make great sacrifices to that end. It is a combined responsibility. Are the professions willing to assume it?

In my own work on this subject I am indebted for their kindly and enthusiastic co-operation, to Dr. G. W. Ross, for his conduct of the

vaccine therapy; to Drs. G. A. Richardson, A. F. Webster, and W. Secombe for treatment and reports on teeth conditions, and to Dr. Andrew J. McDonough for his conduct of severe cases of pyorrhoea.

12 Bloor Street East.

(1). Rheumatoid arthritis, its coincidence with visceral ptosis, and value of X-ray in demonstrating ætiology.—C. Stewart Wright, M.B., Canada Lancet, January, 1912.

(2). The relation of Disease of the Mouth to Rheumatism.—Kenneth Goadby, D.P.H., Practitionar, January, 1912.

(3). Chronic Alveolar Osteo-Myelitis (Pyorrhoea Alveolaris), Its Causes and Treatment with Vaccines, with a Bacteriological Study and Report of One Hundred and Fifteen Cases.—Leon S. Medalia, M.D., Dental Cosmos, January and February, 1913.

CURRENT EVENTS IN MEDICAL SCIENCE.*

By Sir James Grant, M.D., K.C.M.G., Honorary President.

AT no time in this 20th century has greater advance been made in medical science, and for the relief of suffering humanity. Sir James Barr's presidential address to British Medical Association, Liverpool, asks the question, "What are we doing here, and is the world any happier for our presence?" True we subsist on the misery of others, but we do not create misery, but relieve it. We cut the ground zealously from under our own feet, and actually do away with sources of personal revenue, chiefly in the line of prevention and elleviation of disease. Cuba of a few years ago, a pestilential centre from yellow fever, now entirely free, in that particular, the result of sanitary science. Panama Canal, abandoned by France in its construction owing to excessive death rate, from malarial influences, now entirely changed to a perfect state of health, by our profession, truly remarkable. So Ross counteracted goats milk influence as a cause of Mediterranean fever among British troops. The work of Almroth Wright, chiefly with pyogenic organisms, in typhoid fever, influenza, and pneumonia, is worthy of the highest commendation. Dr. Forbes Tullach fell a victim to "sleeping sickness," the result of scientific enquiry in South Africa, and Turner, as the outcome of his heroic efforts in Rhodesia now suffering from leprosy. Such is the evidence of truly noble and philanthropic work on the part of the profession. Tropical

*Address to Medico-Chirurgical Society, Ottawa.

medicine might well be established as a branch of study in Canada So many of our graduates find their way into distant colonies of the Empire, where such information could be turned to practical account. New continents and a new departure in civilization has thus been opened up.

Professor Metchnikoff, "Institute Pasteur," Paris, recently addressed the National Health Society, London, surrounded by interviewers, asked the greatest message in contemporary science. Replied in regard to the plague, consumption, "I am confident that man will triumph over the minute plant that has assailed him." Above all, the great things are coming along the path of physical sciences, discoveries in new phases of electricity, and kindred sciences. As to sour milk, and Bulgarians, I do not say it has given them strength to win battles, but it has not interfered with their victories. With them centenarians are numerous. The microbes of sour milk fight against the bacteria of decay, and the germ that leads to health, and long life is termed the "Bulgarian microbe." In London, Hamburg and Copenhagen, the death rate from tuberculosis in 12 years has fallen from 24 in the thousand, to 13 in the thousand, not the result of sanitation, or scientific treatment, but the progressive self inocculation of the people, with feeble strains of the bacillus, which has become ubiquitous in European countries. There is every reason to hope that thus in the end, man will triumph over his most redoubtable enemy, the minute plant "bacillus tuberculosis."

In October, 1902, Rockefeller site chosen, in New York City. The Hospital and Isolation Pavillion endowment, moderate at first, reached the magificent gift of $7,180.000 in 1911, and in addition, a farm of 100 acres, for laboratory animals, for research work, and farm products, the entire equipment not surpassed in the present day, to add to our knowledge of disease, and relief of the same. To those entering the profession, it is a privilege to visit this institute, so perfect in arrangement, and so charmingly presided over by the highest class of intellectual experts, ready and willing to impart information. Dr. Alexis Carrel here commenced his laboratory investigations, and turned to account the practical work of Dr. Ross Grenville Harrison, of Yale University, the first to grow animal tissue outside the body, the starting point of Dr. Carrel's investigations. The opinion now expressed is that by his researches, the boundary of experiment in the prologation of life, has been pushed forward another degree, and opens up a vista as significant as those which came when Virchow established cellular pathology, and Pasteur laid the foundation of bacteriology. Dr. Carrel has devoted this last year to the preservation of life in cold storage, the chief object in view being to prolong life, and relieve

human suffering. The *London Lancet* asserts, little of Carrel's work is known in England, and that his discoveries in the surgery of the blood vessels, has gone far to revolutionize this branch of medicine, and may almost be said to have created the surgery of the vascular system, and the Noble trustees have done well to recognize his research work.

Professor Flexner's Huxley lecture, Charing Cross Hospital, London, recently, on problems in infection, and its control, has brought to light facts of rare interest in science, particularly bacteriological investigation. The sudden conquest of syphilis, in which a great victory was won, when it was ascertained that anthropoid apes can be infected experimentally, followed by discovery of the causative spirochete, and the drug salvarsan, so remarkable in its causative action. That the spirochete is a parasite, adjusted to living tissues, is clear from the experimental investigation of animals. Owing to the research work of Noguchi the S. pallida has yielded to artificial culture. Flexner is truly a master mind in all that concerns poliomyelitis, or infantile paralysis, epidemic in northern Europe for many years, has within the past five years about encircled the globe, the Scandanavians being first in the field, to recognize its essentially infectious nature. The natural spontaneous disease, and the induced disease, in monkeys are so alike that microscopic study of the spinal cord and brain defines the changes as identical. The virus of poliomyelitis is remarkable, as the activity of a filtrate of a portion of the spinal cord of a recently paralyzed monkey, made into an emulsion with sterile distilled water, will transmit the disease, and a fraction of a cubic centimetre will cause paralysis, and death. The first filtrable parasite was discovered by Loeffler 14 years ago, in fluid lymph obtained from the vesicles of cattle, with foot, and mouth disease. Fully eighteen diseases, chiefly of cattle, are now known and caused by minute living organisms. These are human yellow fever, dengue, and poliomyelitis. The maladies in domestic animals are foot and mouth disease; horse sickness, cattle plague. The viruses producing these diseases are now subjects of careful research, and in time the entire problem will be defined. In poliomyelitis the conclusion is that the virus ascends by nerves of smell to the brain, and then to cerebro-spinal liquid, and thus carried to the entire body, so the nasal mucous membrane is actually the site both of ingress, and egress, of this disease. The most frequently observed coincidental paralytic diseases are between hens and human beings. Death in this disease is caused solely by paralysis of the respiratory function, without obscuring consciousness, almost to the very last. As to cure, no serum so far has more than touched the edge of this disease. As a remedial agent Urotropin, said to possess antiseptic action, is now under careful consideration. In 1876 Huxley lectured in Johns

Hopkins on biological science, and what a remarkable advance since his day, in the whole domain of bacteriology. An interesting feature in poliomyelitis is its close association with insect life. At present the Massachusetts Board of Health and Harvard University are investigating the life history of the "stable fly," *stomoxys calcitrans,* as a carrier of this disease. Dr. Rosenau, of Washington, states that the stable fly can take up the virus from blood of infected monkeys and reinoculate it into healthy ones, which will become paralyzed, thus establishing the fact that this fly actually carries the virus of the disease.

Who more charmingly than Burns stamped the character of insect life, when he saw a louse on a lady's bonnet?

> Ha! where ye gaun ye crawlin' ferlie,
> O wad some power the giftie gee us,
> To see oursels as others see us,
> It wad frae monie a blunder free us,
> And foolish notion.

Salvarsan as a therapeutic agent is attracting increasing interest. Lenzman (*Wen. Med. Klin.,* Nov., 1912), has tried the effect of this remedy in cases of severe scarlet fever by intravenous injections. The effect was quite typical after injections of a weak alkaline solution, subcutaneously under chloroform, the rash quickly lost its vivid color, appearing only sparingly on arms and legs. The speedy relief in throat symptoms was even more remarkable. The conclusion thus far arrived at is that treatment of scarlet fever by intravenous injections of salvarsan, or by subcutaneous injections, of weak alkaline solutions, exercise a favorable influence on the cause of this disease. Epilepsy is now being treated successfully by the inoculation of patients, with the venom of the rattler of the rattlesnake. The alleged cure of a Texas epileptic from a rattlesnake bite originated this idea. Dr. Spangler, of Chicago, has made fully 2,000 injections of the venom in solution, in 110 cases of epilepsy, with marked benefit, and already institutions for this venom treatment will be opened in Philadelphia, and Germany. In every case which Dr. Spangler treated with venom, there resulted not only permanent cures, and a decrease in the epileptic attacks, followed by a general building up of the physical and mental condition of the epileptic.

In educational matters the London County Council, England, has taken an advanced step of considerable interest, recommending the appointment of a psychologist, to assist head masters of the schools in the detection of mentally deficient children. Every teacher who

has studied problems of the brain, must be aware that mentally defective children present many special mental faults. This educational experiment is on a line with modern thought, and if a process of curing recognized mental incapabilities can be achieved for a new generation, a truly great advance will be brought about, and more especially as the presence among normal children, of those mentally deficient, is a most serious obstacle to educational progress. This educational recommendation is welcome as evidence of a progressive spirit in mental development, and that in due time the example will be widespread in Canada.

The scientific world of medicine is well represented in Oxford, England, by Sir Wm. Osler, whose recent address at Glasgow, on "High Blood Pressure" is of deep interest. At the present day this subject is passing rapidly around world-wide scientific circles. Life insurance associations have grasped the sphygmograph and demand blood pressure tests in all life policies at the present time. The force with which blood circulates is the pendulum regulating the organic activity of the entire system. What a propelling power the heart pump is, and throughout the varied vicissitudes of life, almost unobserved. How few think of the relief to a heart occasional rest in the recumbent posture imparts a change from the uphill pumping process of daily life, fatiguing, tiring and exhausting, frequently placed in sad record, by death from heart failure. This is a chief point where the untiring and strenuous efforts of the profession are tested, and valuable lives so frequently cut short, at the 50th to 54th year—Gibson, of Edinburgh. 54; Sir James Sympson, 58; Pepper, Philadelphia, 50; Wright, Ottawa, 52, in fact, numerous professional lights in middle life and prime. How true is the aphorism, "A man's life may be said to be a gift of his blood pressure, just as Egypt is a gift of the Nile." What an important function the vasomotor centres play in regulating the average pressure, in various sections of the body, in fact, the nervous system is the hoop that holds the varied staves of the system together. "The advantages of a trace of albumen and a few tube casts, in the urine of men at 50 years of age,"* aroused the thoughtfulness of our generation. The opinion is now accepted, that the presence of these abnormal products does not always indicate serious disease, or unnecessary alarm. Just in the same line, high blood pressure in a strong, vigorous and robust constitution requires a careful and judicious expression of opinion. What does permanent high blood pressure mean? Here everything is in a nutshell, as defined by Osler. High tension without signs of arterial or renal disease. High tension with renal, heart changes, and arterio-sclerosis, and chronic nephritis, with secondary high pres-

*Paper by Osler.

sure, arterio-sclerosis, and heart changes. These are the conditions, and no snap diagnosis should be expressed. Trouble frequently sets in from an altered condition of the vessels of the splanchnic area; a bowel toxemia, or an over-secretion of doubtfuls, by renals and adrenals, a chief source of difficulty existing "in the capillary cell, and the lymph spaces, in the working area of the body.". The pace of modern life contributes in no small degree to an increased death rate, when arterio-sclerosis is present. The rush in athletic sports, straining and overtaxing cardiac and general vascular action, frequently cuts short life in prime. It is puzzling how long a man will live with disease beyond doubt, in heart and arteries, associated with well-defined high blood pressure. Much depends on the parenchyma of the arterial system and its functionally active part, the middle or muscular coat; in fact, the *regulator mechanism* of the *entire arterial system.* A patient may be free for years from symptoms referable to the vascular system, so long as the increased peripheral resistance is adequately compensated for, by the ventricular hypertrophy. I have known a case of extensive cardiac disease at 45 years, asociated with well-defined arterio-selerosis, and moderately swelled limbs, live to 70 years, discharging architectural duties, with skill, and marked ability, that entire period, contrary to my expectations, and finally died of erysipelas attacking the brain. In such states of the system failure of cardiac compensation is a point we require to be constantly on the outlook for. No one at 50 has kidneys completely normal histologically. In all these kidney conditions, extending over a wide range of observation, what a noble confession on the part of Osler, is the following statement: "I have not infrequently been mistaken, led astray usually by the robustness of the patient, and forgetting that chronic interstitial nephritis, leading to extreme contraction of the organ, may be consistent with good health, up to the very onset of fatal uraemic convulsions." What a piece of work is man, and how a change in a few cells will occasionally knock one out. Such is life.

For years I have observed cork-screw vessels in the conjunctional mucous membrane, and frequently associated with, much the same condition in the temporal arteries. This vascular irregularity, associated with arterio-sclirosis, is most important. The cork-screw condition is an effort of nature to overcome high cardiac pressure, and ultimate rupture. A horse descending a high hill, driven from side to side of the road, arrives safely, and so the cork-screw state of the vessels, lessens pressure, and saves life. "A touch of nature makes the whole world akin."

AURAL VERTIGO (NON-SUPPURATIVE): A CLINICAL AND THERAPEUTICAL STUDY.

By Richard Lake, *F.R.C.S.* (Eng.)

Surgeon to the Royal Ear Hospital; Aural Surgeon to the Seamen's Hospital, Greenwich.

FOR some years it has been obvious to me that a definite clinical classification of cases of aural vertigo was most desirable. Much attention, as we all know, has been directed to the study of aural vertigo when complicating suppurative conditions. Much interesting work has been done in the endeavour to explain satisfactorily the mechanism, pathology, and histology of the semicircular canals and their influence on equilibrium. It is quite true that in England the number of cases operated upon for supprative labyrinthitis has been remarkably small in proportion to the number of ears operated upon for chronic suppurative disease as compared with the Continent. Especially this is so when one considers the operative work of the large teaching schools of Germany and Austria.

Perhaps the primary reason for my desire to obtain a working clinical grouping or classification was more for personal than general use, but without the stimulus of an invitation, such as your chairman extended to me, it is probable that I should have been still waiting for somebody else to do the work. For when one commences such a classification one sees only too clearly the limitations of one's personal horizon and the great difficulties which must be faced if one is to accomplish one's self-imposed task with any satisfaction. Equally evident it must be that the classification such as I am attempting is but an expression of personal views, wanting the light of kindly criticism combined with the enormous advantages to be derived from an aggregation of the views of intelligent and practical men. For it must have struck, and must strike, all of you how hard it is for any writer on such a subject as aural surgery and therapeutics to place in a book new theories, as hereby he lays himself open to the very possible experience of finding that before his book has been long in the hands of his confréres some fact has come to light which materially alters his views, and his book remains a standing monument of a good endeavour which has failed.

One of the chief difficulties that we deal with—in fact, I presume one may say the prinicipal difficulty—is that all our reasoning

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*Read at the Otological Section of the New York Academy of Medicine, 19 Dec., 1912.

about many pathological conditions, especially aural vertigo and tinnitus, is based upon hypotheses, and these hypotheses being but the expression of the thought of an individual, such cannot appeal to everybody. But after all the human race is more content to accept than to speculate. Otherwise we should see much more marked progress in the elucidation of the abstruse problems of hearing and equilibrium than hitherto.

What I have said with regard to pathological states being equally true of most of the normal physiology of the part, our difficulties are materially enhanced, and that is why I have chosen the tital of clinical. For I believe that with our present limited vista we must be content for the time being with careful clinical observation and careful clinical records, aided by deductive argument, until such time as may, and I trust will, come when definite, clear, and instructive pathological evidence will be obtained which will shed so clear a ray of light upon our branch of the healing art, now shrouded in mystery, that those who live to see it will correct our speculations with their knowledge.

Vertigo only seems to have been considered as an aural symptom for a mattter of some 160 years, and even then more from a physiological than from a pathological and clinical standpoint. As far as I have been able to ascertain, by a somewhat cursory and casual investigation, none of the works upon aural surgery published in England until the middle of the nineteenth century had any specific allusion to vertigo; even Toynbee, that astute and far-seeing observer is, as far as I can find, silent on this subject, and as an absolute matter of fact we must, I believe, look upon Menière as the first man ever known to give a definite account of a case of the kind, by a careful pathological report of a case of aural vertigo, which aroused the interest of aurists and pointed out to them the value of vertigo as a symptom. This symptom, however, has, as you know, taken many years to arrive at its present importance.

Vertigo, from an aural standpoint, became, and was for many years, only considered as Menière's disease. The result, of course, was confusion, and the lack of physiological, clinical, and pathological investigation forced that confusion to continue, which it did until the enormous stimulus to labyrinthine surgery was given by Jansen by his work on the labyrinth in suppurative disease. We began, as you know, in about 1904, to operate for intractable vertigo, and the very fact that one had commenced to operate entailed a closer examination and investigation of those cases of vertigo which presented themselves for treatment. For the purpose of this paper I have taken the cases of vertigo which have come to my consulting-rooms during the

last six years, some seventy in all, many having been sent to me solely for the purpose of deciding whether or not the case was a suitable one for operation. And I think, when I say that with two hospital appointments and my own private work the total number of cases on which I have operated for this condition is only fourteen. you will see that operation cannot be so very frequently demanded.

Of course, the large majority of the vertiginous cases occur as a complication of chronic progressive middle-ear deafness. Equally truly, a further fair proportion are caused by the effect of arterio-sclerosis. The exact pathology, as I have before indicated, is quite unknown in many cases. What part is borne, for example, by changes taking place in the calibre of the aquae ductus vestibuli, the canalis reuniens or semicircular canals, we are unable to say, but it has always seemed to me extremely probable that pathological contraction of either of these tubes may have a distinct bearing on the question. I shall now, however, proceed to deal with these cases under the grouping which I present to you, not as a final solution of the clinical problems, but as a basis upon which to start.

AURAL VERTIGO.

Section I.—Peripherial causes: (a) Chronic progressive middle-ear deafness; (b) Haemorrhage into labyrinth and embolism; (c) Traumatism.

Section II.—Aural vertigo due to altered state of blood pressure: (a) Increased blood pressure; and (b) diminished blood pressure.

Section III.—Aural vertigo due to general systemic causes: (a) Leukaemia; (b) Occasional; (c) With ocular symptoms; (d) specific; (e) Cerebral anaemia.

SECTION I.

Group A. Vertigo as a symptom in choronic progressive middle-ear deafness.—In other words, vertigo accompanied by a high-grade deafness occuring in patients usually below the age of forty. This arbitrary age limit enables us to eliminate the effect of arterio-sclerosis. The group that we take first under consideration is one of very great importance, for it is within its confines that we find those cases in every way most suitable for operative relief, cases which are untouched by any other form of treatment. The typical cases may be divided into two classes: those which yield to treatment and those which do not. There is no need of, or advantage to be derived from, detailing cases of aural vertigo occurring in chronic progressive middle-ear disease, they are so common. When such a case presents itself one must investigate not only the patient's aural condition, but also carefully search for contributory factors capable of acting as the immediate stimulus to cause the vertigo, for in many

of these cases stomachic or similar pathological conditions may be contributory factors, and it is necessary that these be corrected before proceeding to treat the aural condition. When, however, there are no such contributory factors to be found, or when the case is clearly peripheral, one finds small doses of quinine combined with one of the mineral bases, are also efficacious. Electrical treatment is usually ineffective, though the effect of the high frequency current may certainly be tried.

When, however, one meets with patients in whom the vertigo is severe and often repeated, where the deafnss is of a high grade, where the stapes is obviously fixed by osseous formation, where internal and external medication are unavailing, and where the patient's state is such that a continuation of life under such conditions is impossible by reason of their inability to earn their own livelihood, or some equally potent cause, then one should without hesitation place before them the advisability of operation. In no case should operation be considered where the hearing is good, nor, I think, where it is useful. Where it is so reduced as to be a negligible quantity the matter is different, and stands on the same footing as if the patient were completely deaf. For obvious reasons, one finds these patients usually amongst the lower social grades. Thus, out of fourteen operations which I have performed, two were sailors, three clerks, three domestic servants, one seamstress, one hospital nurse, one medical man, one business man, and one a woman of independent means. The effect of the operation is certain. The relief is immediate and lasting, and the danger *nil,* of course provided that the minutest care and attention to detail is observed. And at this point I would wish to emphasize my strong adherence to antiseptic surgery, in contradistinction to aseptic surgery. First, I can see no advantage that aseptic surgery has over antiseptic surgery in this operation; secondly, as the great bulk of our aural surgery pertains to septic lesions, our staff, both medical and nursing, are more cognizant, at any rate in England, with antiseptic surgery; and finally—and this I take to be the most important point of all—it is, in my opinion, almost, if not quite, impossible to cut off the wound cavity from risk of infection, this risk being due to the existence of the Eustachian tube, often abnormally free in these cases. I think that fourteen consecutive operations showing no mortality is not the least argument in favor of my contention. I purposely mention this, being a point that deserves attention and consideration.

Group B, .Labyrinthine haemorrhage and embolism.—Although these two forms occur under widely separated conditions, it appears to me, for the sake of simplicity, to group them together rather than

to separate them, thereby lessening the number of subdivisions. Haemorrhage takes place in patients beyond the prime of life, and is a direct result of arterio-sclerosis and is sudden in its onset. The chief evidence which one finds to corroborate the diagnosis of peripheral lesion lies in the use of the rotation test, aided by the caloric, which will show a diminished irritability of the labyrinth—that is, if the former test be employed fairly soon after the lesion has occurred, and before compensatory nystagmus has time to be established. It is also to be proven by the presenece of a small island or islands of tuning-fork perception still remaining in the cochlea, a condition which is seen also in traumatic affections of the labyrinth. The following is a case in point:

The patient was a man, aged 55, previously in good health. He was seen in September, 1911, and said that five weeks previously he got up one morning in his usal state of health, but while stretching himself "something went bang in his ear," immediately followed by right-sided deafness accompanied by vertigo and sickness, though the deafness was not noticed for 24 hourse—that is to say, at the time the sickness ceased The vertigo itself lasted two or three days, and he still has at times a sense of loss of co-ordination. The rotation tests and caloric tests showed a loss of irritability on the right side, while he was able to perceive the tuning-forks between 64 and 256 double vibrations. The fact that deafness was not noted for 24 hours may either have been due to his being very unwell from the sickness, or on account of the blood having taken some time to find its way into the cochlea, but I think the former is more probable.

As a subdivision of this condition, we have cases of spontaneous vertigo which occur in quite young people, ages at which necessarily one cannot expect any arterial disease, and sometimes absolutely unassociated with mumps or any specific fever In some of these one can only grope blindly for the causation, but when the patient is suffering from mumps at the time of the commencement of the vertigo, one is certain that an embolus has occurred, and, as in the third case, one is inclined to suspect that an embolus may occur in the labyrinth from septic conditions present even as far away as the other ear, but not proceed to endolabyrinthine suppuration.

1. A boy, aged 16 years, felt giddy on rising one morning. The floor seemed to go up and down, and he noticed that he was deaf in the left ear. There was no tinnitus. Three weeks afterwards, on examination, one found that he was totally deaf in the left side.

2. A female, aged 28. During a mild attack of mumps, one year previously, she awoke with vertigo, left-sided deafness, and tinnitus, the latter symptom persisting. There was feeble but distinct bone

conduction, and complete aerial deafness. The rotation test in this case showed no vertigo, but normal length of nystagmus. and the caloric test was normal on both sides.

3. A female, aged 28, gave the following history: She had left-sided aural suppuration as the result of an acute otitis occurring during scarlet fever at the age of 10. At the age of 14 she woke up deaf in the right ear one morning, with vertigo and vomiting, and rushing tinnitus, which lasted ever since. She was confined to her bed for two or three weeks with vertigo and sickness. On examination, one found that bone conduction still persisted, and that she could hear the tuning forks 512, 1024, and 2048 double vibrations.

These four cases are all similar, and yet dissimilar; in all there is distinct evidences of a peripheral form of lesion. In all one prominent symptom is noticed, not peculiar to this class, but, as we mentioned before, practically always noticed in oto-sclerosis—that is, the attacks always occurred in the early morning, the same reason doubtless occurring, except in the case of haemorrhage. That is, in the cases under the latter category, where embolism is the lesion, the heart action and the vital functions are at their lowest during the 24 hours, which would scarcely be the exciting cause in the case of a haemorrhage.

With regard to the therapeutical aspect of these cases, one must consider at once that cases of haemorrhage are absolutely beyond our reach. In all the other cases hypodermic exhibition of pilocarpin should be tried, if the patient is seen soon after the recurrence of vertigo—unless the use of pilocarpin is prohibited by the general state of the patient. But if one employs pilocarpin, it is my opinion that the size of the dose should be increased as rapidly as is consistent with safety, and that it should be persisted in for about two weeks. If one bears in mind the dangers likely to occur from its administration, and by means of other therapeutic agents one counteracts those dangers, and at the same time does not interfere with its action, one can make these doses much larger than would otherwise be the case. It has occurred to me only once to see a patient sufficiently early to be able to employ this remedy, and that was in a case which followed or occurred during an attack of influenza, in which the drug employed in the way I have suggested seemed to produce a very beneficial effect.

Group C, Traumatic aural vertigo.—Not infrequently one finds that in fracture of the base of the skull vertigo is complained of, though frequently as a transitory symptom, It is rare that this symptom lasts for more than six months, and then frequently when the patient turns his head away from the affected side, though inability

to walk in the dark may last for some years. This symptom of inability to walk in the dark must, I believe, be due to a neuritis of the vestibular nerve, for it is found under two other pathological states of the labyrinth, one that of chronic suppuration, and the other occasionally after an operation for labyrinthectomy. In the latter event it would seem possible that the destruction of the vestibular filaments has not been complete.

As an example of this a man, aged 50, was knocked down in the street by a motor-car, and suffered from fractured base with haemorrhage from both ears. He was rendered completely deaf by the accident, and whenever he was moved in bed he was very giddy. When seen two years later, if he put his feet together and shut his eyes, he fell, usually towards his right front. Nystagmus could be elicited, more marked in the right side, by fixing the eyes on the finger, and moving it rapidly from side to side. Both the caloric and rotation tests were negative. He was able to hear, or rather perceive, C, 512, 1024, and 2048 on the right side. Here again one notices the small island of the cochlea remaining that was capable of stimulation. Vertigo is also a symptom occasionally in rupture of the tympanic membrane; it is due, no doubt, to the forcible action of the compressed air upon the oval window or footplate of the stapes.

As another occasional cause of vertigo one finds the severe pressure of impacted cerumen upon the tympanic membrane and malleus, and still another cause is that of vigorous and persistent nose-blowing. But it is a condition which one can frequently meet with, especially in subjects of nasal obstruction, and not only is this a condition which we meet with not infrequently, but it is doubtless far more common than one thinks. For most people, on finding so obvious a connexion between cause and effect, carefully avoid a repetition of so unpleasant an occurence. What undoubtedly happens is that the violent inflation drives in with a sudden shock the footplate of the stapes, with the consequence that either the whole labyrinthine fluid undergoes a momentary increase in pressure—a phrase, by the way, one must be most careful of using—or a wave is suddenly started which stimulates the hair cells, and one would never find vertigo as a symptom in instances where the tympanic membrane has stretched and become flaccid.

SECTION II.

Group A. .Vertigo caused by increased Blood Pressure.—Arteriosclerosis often exhibits its first symptom or symptoms in the internal ear, and for this reason one frequently finds cases in which vertigo, as well as other aural symptoms, will lead to the diagnosis of arteriosclerosis in the patient. It will make its presence felt according to the

age of the patient, not necessarily the actual age, but the age relative to the vigor of the patient, the activity of his mind and body, and the amount of work performed, whether corporeal or mental. One must in the majority of cases, at least, in which arterio-sclerosis is complicated with vertigo, assume that the lesion is peripheral. This is actually so, I believe. In early cases all the signs and symptoms point in this direction, and they remain so, so long as there is *increased blood pressure.* Also, we know that, especially in those cases which start in relatively early adult life, there is a natural tendency for these most distressing symptoms eventually to disappear This disappearance may be coupled with the loss of the hearing power in the affected ear. So in arterio-sclerotic vertiginous patients, we must consider each case on its own merits, and we must not indulge too freely in inductive argument. For whilst, as I have said, cases do proceed in the way described, the great number do not exhibit that tendency. Also we cannot legislate for a class of patients whose ages vary from 40 years to the very extreme of life by any single rule.

Again, when we are considering, as we must consider, the question of treatment, especially when dealing with operative treatment, it is not only the problems of the disease, but the station, mode of life, and the importance of the wage-earning power of the individual that weighs down the scale. We must take into consideration also the patient's actual age, and his apparent age, his blood pressure, and his reactions to the various therapeutic agents to whose influence we submit him. We must not entirely omit in such a consideration even such obvious points as his habits, the condition of his digestive organs, of his teeth, of his bowels, and of his kidneys. But, again, we must not allow any *apparent* cause for the trouble to be considered the cause, unless we are able fully to convince ourselves of its importance. Especially as regards the age, it has appeared to me from what I have seen that it is not advisable to speculate upon the probability of the disappearance of the vertigo by the gradual destruction of the vestibular nerve ending, as that is at the best a long process. This applies less, as already noted, in the earlier periods at which arterio-sclerosis may affect the vestibular nerve, than it does when the patient has reached a more mature age, that again resolving itself into a question of the importance of the possession of stable equilibrium to the patient. For the younger the patient, in most instances, the greater the necessity for relatively rapid relief, though operation of itself should present no inherent veto, however old the patient.

Arterio-sclerosis, however, presents in later adult life and at the commencement of old age another aspect of considerable importance, and that is that the vessels are now more universally affected, and so

it is not always easy to determine with accuracy as to whether or not the disease is entirely peripheral, or it would be better to say as to whether the symptom of vertigo is due chiefly to a central or peripheral cause. Out of 70 cases, over 20 come under this category, though I am not proposing to give you the numbers of the cases which come under each of my headings, chiefly for the reason that with so small a number the permissible error of proportions is so enormous as to render such figures quite useless. When I referred to the central origin of vertigo as a symptom I referred, of course, to a deficient supply of nourishment being supplied to the vestibular nuclei.

All these cases suffer with deafnes in varying degree, and most of them would find it hard to classify under any other group except that of the chronic progressive middle-ear disease, but I believe the vertigo in all these cases to be distinctly due to the effect of arterio-sclerosis. As examples of the gradual subsidence of the symptom, with its eventual disappearance, I will quote you two cases:

1. A male, aged 43. A stockbroker. First visit January 1st, 1908. Slight deafness since January, 1907. Some tinnitus. First attack of vertigo and sickness put right by blue pill (July, 1907): One bad attack beginning in bed in morning. Still slight nystagmus to left. November 22nd two attacks, one on golf course and one after dinner (two have now been after dinner). January, 1908, another severe attack. Blood pressure, 170. December, 1909, no further attack.

The chief points of interest here were—the patient, a man with early arterio-sclerosis, although quite young for that; he lived an extremely strenuous life, carrying always an enormous amount of speculative stock, and working more than hard in attempting to alleviate the conditions of life of those more humble and penurious. His bone conduction was reduced to but a small percentage, about one-fourth of the average. All seemed to me to point to a rapid loss of vitality in the terminal filaments of the right auditory and vestibular nerves. He was told to sell his stock, to go to the country, and to live a quiet, healthy life, with outdoor exercise. The patient in two years lost his vertigo, but he lost his hearing. Incidentally, he preferred this to operation and quick recovery.

2. A female, aged 46. Seen March 20th, 1908. History of tinnitus (right) commenced March. Vertigo one month—six attacks up to the time I saw patient. Seen again in October, 1908. Patient had had 22 attacks in interval, but tinnitus was better By February, 1909, total attacks 38, when they suddenly ceased. December, 1909, caloric test (cold) on right side negative, and rotation test very much reduced. Bone conduction, C. (128) equal 38-25 seconds. Rinné negative. Air conduction C2 to C4.

In this case the patient undoubtedly suffered from arterio-sclerosis, and the same result was obtained by waiting. It is to be remembered that in 1908 I had only performed the operation eight times, and although the results had all been satisfactory the number was a small one, and I have no doubt the operation was not pressed. Also, neither of these patients neded to consider the problem of their livelihood; they were both of ample means.

The clinical aspect of an ordinary case of arterio-sclerosis vertigo, I think, is much as follows. The special period for vertigo occurring is practically always found in the early morning. (This, however, as you will no doubt recall, is not absolutely peculiar to arterio-sclerosis.) It occurs in patients over the age of 40, but occasionally slightly younger, sometimes without any pervious aural affection, but usually in a patient who is deaf to a greater or less extent. It is almost invariably accompanied by an increase in the deafness. The blood pressure upon examination will be always found to be raised. Occasionally there will be symptoms found which point to other organs being affected, notably the kidney. The attacks usually tend to diminish in violence, and still more frequently it will be found that if the patients are subjected to treatment with a view to lessening their arterial pressure and towards the checking of the disease of the arterioles, the tendency is for the patient to recover as far as the vertigo is concerned. The partcular line of treatment which should be adopted I do not think it within the scope of our specialty. Personally, I invariably confine myself to the exhibition of three drugs—hydrobromic acid, with a small dose of quinine, or iodide of potassium. If these drugs fail to afford relief I invariably advise the medical attendant of the patient that the patient's best interests are concerned by placing them under the care of a general physician. It is largely, if not entirely, due to Dr. Schaumberg that one has been able to speak with such great certainty on this point, for we all remember and appreciate his valuable work on the arterial supply of the inner ear. And it is, I take it, to the fact that the internal auditory artery is devoid of anastomosis that this organ is so easily affected in this way.

Group B. Vertigo occurring in patients suffering from aural disease who have a diminished blood pressure.—This group is an extremely interesting one. I only quote two cases again, as being fairly pathogonomic. One finds in the first case a hyper-excitable labyrinth to the caloric test, and in the second case diminished excitability. Both showed an extraordinary reaction on rotation, both becoming very markedly giddy, so much so that some period of time elapsed before they recovered, and in both the blood pressure was still further diminished by rotation. Although I have not given the exact figures, as

the state of the patients made exact investigation impossible, yet in view of the excellent work done by Dr. Byrne of New York, it is interesting to mention the fact. And it is also interesting to notice that it is very rarely that one obtains exaggerated vertigo on rotation where the patients are suffering from increased blood pressure. But of one thing one may be quite certain, and that is these cases are not at all suitable for operation, unless one fails to relieve the patient by drugs and other appropriate treatment, given with a view to restoring the blood pressure to its normal. Nor even when one fails can operation always be considered, as in both these patients, for example, where the disease was bilateral, a diminished blood pressure, if at all marked, would, I think, militate against operation. Again, we are not, I think, prepared to say definitely that the effect is entirely due to peripheral trouble. Is it not equally probable that a want of nutrition to the central nuclei, at least, plays a part in producing this symptom of vertigo? I think we must answer this question in the affirmative.

With regard to the therapeutical aspect, the drug which has given me the best results is ernutine, and as you will see in the second case, it is only by the constant administration of that drug that the symptom is kept in abeyance.

1. A man, aged 55, a clerk, looking at least 65 to 70, and certainly of a nervous temperament, came complaining of vertigo and deafness. The deafness, which was not very severe, had existed 20 years; the giddiness had been noticed for the last few years. During the attacks the objects moved from left to right more frequently than in any other direction. The patient frequently staggered and could not walk straight. February 23rd and March 5th, 1912, rotation test, 10 times in 20 seconds. Terrific vertigo, vomited once. On checking the chair he almost shot out, falling to one side in a state of collapse. Caloric test. Irrigation with cold water gave rise to a similar severe attack. Blood pressure. This was abnormally low, only 105. It seemed quite probable that the low blood pressure was directly connected with the vertigo. In consequence the patient was given ernutine, 10 grains three times daily, with the most satisfactory results. Since the commencement of the treatment no attack of vertigo has been recorded, and on April 1st, 1912, he was reported as quite well.

2 A female, aged 49, of poor physique, was first seen on May 2nd, 1912. She had moderate bilateral deafness of eight years' duration and bilateral tinnitus. Parecusis Willisii and double incipient cataract. (Premature senility.) Vertigo for three years. Since her first attack she has had great difficulty in walking straight, staggers, and often almost falls. Each time that she has one of these attacks

vertigo and nausea are well marked. She tends to fall to the right side, and objects appear to move from right to left. Turning the head usually produces an attack of intense vertigo, with movement of objects from right to left, and a tendency to fall to the side towards which the head was turned. This also is the case when the patient is lying down. In walking the patient must walk straight and not attempt to turn her head. She has only actually fallen once. She knows what may happen, and holds to something until the attack passes off. Rotation test, 10 times in 20 seconds. Excessive reaction; intense vertigo; nystagmus. Blood pressure, after rotation, 95 clockwise, 105 counter clockwise. Caloric test, slight nystagmus only. Strychnine and atropine (Byrne) seemed to make the patient worse. She has now been on ernutine seven months, and is very much better. Whether she is well remains uncertain, but after she was at one time apparently well we found on stopping the administration of the drug that her trouble returned.

SECTION III.

Group. Leukaemia.—Meniére's disease is, of course, the best known form of aural vertigo. It is most clearly defined, and its pathology accurately known. For this reason I shall treat it briefly. It is only found in cases of leukaemia, or allied conditions, such as pernicious anaemia. The patient is attacked with sudden deafness and vertigo. The deafness is immediate and complete, the vertigo transitory, though extremely severe. Should the patient be erect at the time of the occurrence of the lesion he falls. Vomiting and sickness are practically always present. Should the patient live for any length of time, as I have said, the symptom of vertigo disappears, but the deafness remains. The only case I have seen—which has been published eleswhere—is that of a woman who was suffering from leukaemia and presented all the symptims above referred to. She lived for some six weeks after the hemorrhag into th labrinth. Treatment here is quite useless and need not be considered.

Group B, Casual or occasional causes.—The most usual casual cause of aural vertigo I consider to be gout or gouty dyspepsia, which is also a frequent or casual cause of deafness and tinnitus. These cases are apparently aural, but they have one peculiarity. At the time, or frequently some time before the attack of vertigo, deafness and tinnitus are increased and become pronounced. After the attack of vertigo the deafness gradually disappears, and the hearing becomes as it was before the attack. The following is a itse in point:

The patient was a man of full habit, 46 years of age, who had suffered from slight right catarrhal otitis media. He gradually became subject to severe attacks of vertigo, which for some time I was

at a loss to account for. I found that for some short time before his attack of vertigo his deafness was markedly increased, and that after his attack his deafness lessened, and his hearing rapidly returned to what it had been a few weeks previously. As I knew him to be of gouty habit, and found that when his attacks of vertigo were commencing he suffered extremely from flatulence, I sent him to a physician for general treatment, with the result that as soon as his gouty diathesis was got under control his attacks of vertigo ceased.

In such a case, of course, it is an open question as to whether the condition was partly peripheral, and I am inclined to think that his vertigo was not entirely due to his stomach condition, as it frequently is in cases of vertigo occuring during severe bilious attacks, where it is probably the result of a much lowered blood pressure.

Group C, Cases in which vertigo is combined with ocular symptoms.—These may be classed under two headings—the first that class described as aural epilepsy, in which the patients have a visual aura that gradually involves the auditory vestibular nerve. These cases are not very common, at any rate in our consulting rooms. I have only seen one case, in which the patient suddenly had the most extraordinary optical aura, seeing a sort of mirage, with a brightly colored sun and waving fields, which was followed rapidly by intense vertigo and sickness. These cases yield very readily to treatment; small doses of quinine with hydrobromic acid seem to act a a pecific. The other class of case in which ocular symptoms are combined with vertigo are most distinctly obscure, and the following is an example. The patient, a male, 54 years of age, had long resided in India, and returned to England in 1906. On his arrival he contracted a severe cold, which was followed by tinnitus. He had an operation in 1907, when his left kidney was removed. In the following year vertigo commenced, and ever since he has been subject to attacks of vertigo whenever he was subjected to a bright light. Also, curiously enough, loud noises are able to cause the same result. The left ear was markedly deaf, and he was examined carefully by great oculists, who have been unable to find any cause for the condition, and I must admit that I was in the same plight. The patient's very indifferent health would have precluded operation, if one had felt inclined to suggest it, of which I have some grave doubts. For the rest no treatment seemed to give him the slightest relief.

Group D. Specific.—No doubt if one were able to have the control of the examination of numbers of cases of nerve disease of specific origin, such as occurs in the large hospitals for diseases of the nervous system, one would come across many cases of vertigo, especially in tabes dorsalis. In Tabes, vertiginous attacks occur combined with deaf-

ness and severe tinnitus in the form of a crisis. It is quite likely that they are as much due to the central lesion as to a neuritis of the auditory nerve, and as far as my experience goes one notices in these patients other ocular symptoms of knee-jerk, although the tabetic gait may not be noticeable. It is rarely that one finds vertigo as a symptom of aural specific disease unless there are at the same time symptoms of a graver lesion in the cord.

Inherited specific disease, more than the acquired, produces a form of nerve deafness frequently associated with vertigo, and in these cases, so far as my own experience goes, the vertigo is not a lasting symptom, but with the disappearance of the vertigo the hearing is destroyed. I am inclined to consider that in the acquired one finds a more hopeful prognosis than in the hereditary. But here, as in all forms of specific nerve lesions, treatment must be very prolonged, and a careful watch kept for any return, or threatening return, of the symptom, and it is well after the regular treatment has ceased that the patients submit to a six weeks' course every twelve months, using for choice either iodoform in 5-grain pills or one of the modern iodine preparations.

Group E. Cases in which Cerebral Anaemia Simulates Aural Vertigo.—The group we now deal with is one which, strictly speaking, you perhaps will consider should not have been introduced; but my reasons for introducing it are its value as a contrast, and that the group itself seems to me to be of interest, besides which, these patients are sent to us as aural cases, for in all of them deafness is present. These cases appear to me to be due to cerebral anæmia affecting, at any rate principally, the deep nuclei of the eighth pair of nerves, though whether or not you will agree with my hypothesis, as I am afraid it is, I shall no doubt learn. These cases seem to show one sign in particular, which makes it extremely difficult for me to consider that these are due to a peripheral and not to a central disturbance, and that is a feeling of general surface warmth and of flushing, sometimes accompanied by sweating, which was present in the attacks, a condition which those of you who have suffered from *mal-de-mer* may possibly recall as a not infrequent concomitant, and a symptom also which I have not elicited in cases of obvious aural vertigo. And I believe that the reason that we see these patients is because they are suffering from deafness, and the not unnatural assumption is that they are suffering from aural vertigo.

1. The first was a well-known physician, aged 61, with only one (the right) serviceable ear. He worked extremely hard, he travelled all over the country, often sleeping in trains, or getting but little sleep. He lectured on medicine, and of late had been extremely hard put to prepare a new series of lectures. The hearing in his right ear began

to deteriorate, and this no doubt added its quotum to the overstrain. Easter, 1910, he went for a golfing holiday, forgetful of his age and of the age of his arteries, and played three rounds a day. A few mornings later he awoke with violent vertigo, retching and vomiting. His body felt very warm. The vomit was bilious, and the direction of objects left to right. He recovered completely. His blood pressure was 150. Again, in July of the same year the same series of events led to a second attack. They were always in the morning. Yet the patient did not take warning, and late one night he fell, seized with sudden vertigo. He sweated freely and vomited (note sea-sickness). He could not be moved for three hours. When I saw the gentleman in question he was still going ahead as if he were in the prime of life. He had occasionally a severe attack. He got quite over his attacks by taking his life less strenuously, and by the addition of a little alcohol to his dietary.

2. A female, aged 62. A great sufferer from rheumatoid arthritis, and almost complete deafness in the right ear. The patient, despite here severe handicap, was a most energetic and hard-working person, busy with good works. September 3rd, 1912. For about three years she had suffered with left Eustachian obstruction, gradually becoming more and more deaf. On January 1st, 1912, the patient had a severe attack of vertigo in bed in the morning, with objects rotating clockwise in a vertical plane. She has had four or five severe attacks since, and many mild ones. The attacks are heralded by flushing and by a feeling of surface warmth, and at times this is accompanied by perspiration. The patient has, however, had three attacks of vertigo without these symptoms. She could hear a whisper on the left side four inches, and C. 32 to C. 4096 double vibrations. Her blood pressure was 100.

Resume.

Chronic progressive middle-ear deafness and arterio-sclerosis are thus, according to my investigations, the most frequent causes of aural vertigo, and fortunately one finds that a large amount of benefit can be derived from the use of drugs in these cases, though by no means all of them are capable of this relief. We have also seen that operative interference is justified, and where it is used it should be uniformly successful.

There are two points which I expect will have struck you in my paper; one is the small reliance placed on the rotary and caloric reactions, and the other is the total omission of that so-called group in which increased labyrinthine pressure is said to exist. It is not, perhaps, quite within the scope of the paper to give at all at length my reasons for not employing the tests, nor for placing more reliance upon

them. I am convinced in my own mind that one is able to make one's diagnosis and one's prognoses in the class of case under consideration equally well without their employment. I must, however, admit that, especially in cases of low arterial tension, the results were most extraordinarily interesting. With regard to increased intralabyrinthine pressure, although I have operated on at least twenty cases of labyrinthine vertigo where there had been no perforation into the labyrinth—14 of them where there had been no previous suppuration, and the rest where there had—I have only twice seen any fluid on opening the labyrinth. In these two cases there was a considerable amount of fluid; one of them also had an extremely large external semi-circular canal, apparently four or five times greater than normal. But even then I am not prepared to say that these cases contained fluid under pressure, and I have consequently thought it better, as the matter is treated entirely clinically, to omit this possible factor. But it is rather difficult, indeed, to understand, from a purely mechanical point of view, how fluid can be retained under pressure in such a non-vascular bony cavity as the labyrinth, especially with regard to the propriety of including some instances of what possibly are not strictly aural cases, but it seems very hard to quite exclude them from the list. Certainly as contrasts and as points of interest they are useful. The pulse tracings which I show you were prepared for me by my friend, Dr. Milligan, for which I should like to express my gratitude. The use of ernutine was suggested by my senior clinical assistant, Mr. A. F. Penny, of London. I found it impossible even in so lengthy an analysis, to contrast and apply Dr. Kerrison's classification to that I adopted, so preferred to leave it, hoping at some future time to give it the place it deserves and derive from it the benefits is possesses. And, in conclusion, I must thank you again for your very flattering invitation to me, and for the kind and sympathetic attention with which you have listened to my lengthy paper.

Harley Street, W.

Before deciding to go to the British Medical Association or the International Medical Congress, it would be of interest to communicate with the editor of *The Canada Lancet* for special information regarding sailing rates.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

PHYSIOLOGY OF ERYTHROCYTES.

Iscovesco, *Semain Medical,* Sept. 25, showed experimentally that the red corpuscles have the power to absorb free hemoglobin from the blood. This process appears to take place not only through the physical agency absorption, but also through a specific activity of the cell. Lipoids are likewise absorbed by the erythrocytes. These facts are illustrated in hemolytic anemias, in which the remaining red cells may be much richer in hemoglobin and lipoids than normally. In anemias, as result of hemorrhage, on the other hand, the hemoglobin and lipoids are not increased. Iscovesco looks upon the erythrocytes as monocellular internally secreting glands, which, from substances circulating in the blood, build up their own hemoglobin. In support of this he argues that hemoglobin formation does not necessarily correspond with red cell production in the bone marrow, the hemoglobin content of the cells increasing less rapidly in hemorrhagic anemia than their number, no matter how great the amount of iron present in the liver and spleen at the time. Iscovesco found that one of the lipoids in the red cells had the power, when injected into bled animals, of markedly stimulating the red cell forming organs (liver, spleen, bone marrow) and the formation of hemoglobin in the erythrocytes themselves. This affords an explanation of the facts that in hemoglobin anemias repair is much more prompt than in hemorrhagic anemias, and that in some anemic patients, injection of whole blood or of hemolyzed blood has given excellent results, while injection of blood serum alone—in the same cases—has proved valueless.

NEW DATA ON LEAD POISONING.

A recent issue of the *Survey* notes the fact that a certain New York factory uses large quantities of molten lead as a tempering agent. Nine men were employed here and in the one year of its operation nine cases of lead-poisoning have developed. The *Survey* quotes Edward E. Pratt who has recently made a study of occupational

diseases for the New York Factory Investigation Commission. Pratt found 376 cases of lead poisoning in New York within the last three years. It is estimated that this represents not over half of all the cases. A striking feature of the report is the ignorance and indifference shown by factory officials and the companies concerned as well as by the workmen themselves regarding the dangers of lead and the necessary precautions.

One hundred and nine cases were thoroughly investigated. Of these, 62 ate their lunch in the work-room; 22 had not been in the habit of washing before eating; 45 who did wash used only cold water and in some cases they provided none. In only 17 instances had any instructions been given as to the danger of the work or as to proper hygienic measures.

EARLY PARESIS.

Alfred Gordon, Philadelphia (*Journal A. M. A.*, February 1) says that, while the clinical picture of paresis is characteristic in its advanced stages, the same cannot be said of the early period of the disease. Hence need of proper measures taken in time, the neglect of which may produce deplorable results. Its beginnings are insidious and always progressive. The earliest psychic manifestation is the slow irregularly progressive dementia which is naturally first observed in cultured individuals. Memory is usually affected early in the disease. The patient shows defects in his work, mistakes in figures and in writing; with these may be seen neglect of his personal appearance and oddities in behavior and irregularity in habits. The character and disposition are changed. There may be apparent a neurasthenic depression or in others a hypermanic exaltation and perversion of the moral sense. The defective memory, impaired attention and observation, judgment and disposition constitute he most important psychic alterations in the early stage. There are three types of bodily manifestations that is not infrequently announce the oncoming paresis—apoplectic and epileptic seizures and attacks of aphasia. Vertigo is another manfestation. Another early bodily symptom is pupillary inequality which Gordon considers almost pathognomonic. The characteristic speech and tremor are infrequent in the early stages. He goes at length into the differential diagnosis and lays special stress on the lymphocytosis in the cerebrospinal fluid, the Noguchi precipitation test and the Wassermann reaction in the diagnosis from neurasthenia. In case of cerebral syphilis there is more difficulty, but the character of the progressive dementia

is different and the presence of headache and local symptoms will often aid the diagnosis. In chronic alcholism and in lead-poisoning syndromes occur closely simulating paresis, but if the Wassermann and other tests mentioned are absent and these symptoms disappear after the withdrawal of alcohol the differentiation can usually be made. In lead encephalopthy the dementia seems to dominate from the onset and the physical symptoms aid the diagnosis. The effects of treatment is one of the best means of differentiation. In conclusion Gordon speaks of the medicolegal considerations involved and the importance of recognition of the condition in view of the possible actions of the patient.

CONJUGAL SPECIFIC CHRONIC MENINGITIS.

Babinski (*Jour. des practiciens,* December 14th, 1912) refers to several cases which he says some under this heading. The first is that of a woman who suffered from violent headaches, vomiting, and a certain weakness of intelligence. There was papillary congestion and other indication of intracranial pressure. The cebro-spinal fluid showed a lymphocytosis, and the Wassermann test was positive. Under the influence of iodo-mercurial treatment she much improved. Her husband, on examination, was proved to be suffering from tabes. Another case was that of a woman of 31, who developed interstitial keratitis. There was abolition of the left knee-jerk, and dilation and immobility of the pupils. An examination of the cerebro-spinal fluid showed lymphocytosis, and the blood serum gave a positive Wassermann reaction. The history of the case was that the father had contracted syphilis during the pregnancy of his wife. The child was infected but the mother escaped. A third case was that of a little girl who had partial epileptic crises, and suffered also from hemiparesis of the left side. Lumbar puncture showed a lymphocytosis, and the Wassermann reaction was positive. The father had contracted syphilis five years before. He contaminated his wife and they both contaminated the child. This is a case of familial rather than hereditary transmission. According to the author, it is well to examine all the members of a family when one of them displays nervous manifestations of an organic character. The perpetuation of nervous affections in the transmission of syphilis is a striking fact, and it has been suggested that the virus of syphilis is selective as to the nervous system in certain cases. It is certain that if two individuals have contracted syphilis from the same source, one may develop organic disease of the nervous system and the other escape. It is desirable to examine thoroughly suspected sub-

jects, as, for example, the wife of a man who suffers from tabes. The treatment in these cases ought to be thorough, and the author makes a point of submitting all cases of tabes in his practice to mercurial treatment. It has been noted of late years that the general aspect of tabes dorsates has been less grave than formerly, and this is to be attributed in large measure to early antisyphilitis treatment.

ABDOMINAL PTOSIS.

H. A. Oldenborg, Chicago (*Journal A. M. A.*, March 1), briefly calls attention to contributions on the subject of abdominal ptosis and says that, while most writers have recommended gymnastic exercises, few have given directions as to how they should be performed. All agree that the adbominal walls are relaxed and that there is more or less pronounced lumbar lordosis, round shoulders, flat-chestedness and acuteness of the so-called epigastric angle attending ptosis of the abdominal organs. To correct these conditions it would consequently be necessary to strengthen the upper spine, develop the chest and increase lordosis. He asks if there is enough attention paid to predisposed children and to those that have inherited the weakness. Another class would be women whose abdominal walls have become relaxed from frequent pregnancies and those of both sexes who have acquired the condition on account of accident or nature of their occupation. With children, good hygiene, plenty of outdoor air and regulated gymnastics during their school years would do much to lessen, or perhaps remove, the liability from inheritance or perdisposition. After the physical development is complete the same means can be used, but the patients have less time and perseverance, and with these, according to his experience, we have the least success. His description in detail of the routine methods at the Central Free Dispensary in Chicago for the treatment of those who have acquired the condition cannot be well condensed. They can be used as after-treatment of surgical intervention and long confinement to bed and have the advantage that they can be employed and produce their beneficial effects before the vicissitudes of the erect position are encountered. He lays special stress on the point that the patients should not be allowed to hold their breath. The illustrations in the article usefully supplement the description of these special methods.

The Ontario Medical Association this year should be well patronized by the profession.

THEORY AND TREATMENT OF DIABETES.

Carl von Noorden emphasizes the fact that diabetes is a complicated disease and that little benefit accrues to the patient if attention is fixed upon the glycosuria alone. The functional powers of all the organs must be considered which presupposes a knowledge of physiology and pathology that the extent of the anatomical and physiological disturbances and the effect of distant organs upon the sugar production be discovered. Each case must be studied by itself for variations from type often occur. There is always present an enormous irritability of *the sugar forming apparatus of the liver.* Lack of coordination between the intensity of stimulus and extent of response is the characteristic feature of the disturbed metabolism in diabetes . The extent of difference between stimulus and response determines the severity of the case. The stimuli which act as irritants to sugar production are the instreaming of carbohydrates and the digestive products of proteins into the liver, acceleration of general metabolic processes by excessive and tiring muscular work or acute fevers, psychic and other nervous excitements, adrenalin injections, thyroid gland feeding, etc. In the matter of treatment the excessive irritability of the sugar mechanism must be calmed and every burden avoided. In slight cases a wise choice of food and the exclusion of other irritants will suffice to maintain sugar production within normal limits, and although not cured and liable to get out of order through any indiscretion, the new conditions make for healing or at least a real and persisting improvement, during which Nature can effect a cure. Carbohydrates may be given in amounts of eighty to 100 grammes in most cases, protein in lessened quantities, and an increased ration of fats. Alchol acts as a food and appears to diminish the formation of sugar. The use of opium is limited by its many drawbacks. The value of the mineral water cures is that for a month patients, live, eat, and drink rationally, in an environment free from worry and care. Overindulgence in food must always be guarded against.—*N. Y. Med. Journ.*, March 1st.

THE POSITION OF THE STOMACH AND GASTROPTOSIS.

R. F. Chase in the *Journ. A. M. A.*, February 8th, states that there should be a change in present views as to gastroptosis and its relations to digestive disturbances, neurasthenia, etc. From his examinations and other data he finds that in the horizontal position the greater curvature of the stomach is found a little above the umbilicus in the aver-

age individual, though the normal limits range from two and one-half inches above to one inch below. In the vertical position the X-ray shows it to be considerably lower. By any reliable determination it would seem that in diagnosing gastroptosis one must find the greater curvature at least one inch below the umbilicus. The generally accepted views must therefore be modified and gastroptosis be less frequently diagnosed. Instead of considering it as present in 33 per cent. of females one will have to reckon on the percentage at somewhere about 10 per cent. The observed infrequency of digestive disturbances in alleged gastroptosis is thus easily accounted for. Fenwick estimates that gastroptosis may be the cause of indigestion in about 5 per cent. of cases. The author also appears to question its importance as a cause of stasis. Even in marked cases of gastroptosis the stomach sometimes empties itself prematurely, notwithstanding the "duodenal hill" over which its contents must be forced. The radiograph will teach more rational treatment and do away with much needless surgery. Far less attention will be paid to the position of the stomach as a cause of symptoms elsewhere as long as it is known to be properly doing its work.

ATROPINE REACTION IN CARDIAC DISEASE.

Talley (*Amer. Journ. of Med. Sciences,* October, 1912), discusses the prognostic significance of the atropine reaction in cardias disease, the throat dryness and impaired vision resulting from 1-50 to 1-25 of a grain hypodermically, soon passing off without any untoward effect. This method of releasing the vagus action, and of comparing the effect on normal and diseased hearts, led to the use of the reaction in the study and treatment of cardiac disease and showed its prognostic significance in cardiac cases, especially auricular fibrillation, and how it may be used in the study of digitalis action, since it was found to be unusual for cases giving small reactions to respond well to digitalis. Patients with rheumatic mitral disease developing auricular fibrillation with rapid pulse-rate, gave large atropine reactions, the pulse-rate, with the vagal influence abolished, depending upon either stimulus production of conduction. Cases of auricular fibrillation showed marked slowing under digitalis, many small beats, disappearing, the remainder being more even in height and the diastolic pauses more regular. Under atropine many of the small beats reappear at the expense of the diastolic pauses as the pulse accelerates. The atropine reaction in the normal heart is probably from 30 to 40, and a reaction of 20 or less, in a heart not recently subjected to exhausting disease, points to degeneration of

the cardiac muscle, and makes the chance of improvement under treatment unpromising. Cases of auricular fibrillation, with responses normal or above, are promising subjects for treatment, two reactions, one before and one on full digitalis, enabling a determination possible as to whether the vagal or the cardiac tissue factor is the greater. Those cases with a large cardiac tissue factor are usually the nose sufficiently improved by treatment to return to their occupations.

LUMBAR PUNCTURE IN THE TREATMENT OF HEADACHES.

H. Roger and J. Baumel allude to the value of lumbar puncture in the relief of the intense headaches associated with the various infectious diseases. In these cases, whether the conditions be called one of meningism or of meningeal reaction, or of serious meningitis, or of chemical meningitis, there is distinct evidence of a mild degree of inflammation of the meninges. This evidence consists in the increase in the content of albumin in the cerebrospinal fluid. A later stage of of the inflammatory process is accompanied by the exudation of leucocytes, and finally by the actual passage of bacteria into the cerebrospinal fluid. At the same time there is an increased tension in the cerebrospinal fluid. If this is marked one may safely remove by lumbar puncture as much as 20 to 20 c.c. of the fluid. In the ordinary run of cases the removal of 10 c.c. of fluid is sufficient. Relief follows a few minutes after the operation and in some cases the headache diseappears entirely. In certain instances, as in some cases of typhoid fever, several punctures may be necessary. Syphilitic headaches, particularly those belonging to the secondary period of this disease, are markedly relieved by this procedure.—*Revue de Médecine,* January 10, 1913.

TREATMENT OF ACUTE CORYZA.

Garel, in *Archives générales de médicine* for July, 1912, is credited with the statement that for the "abortion" of a cold, the inhalation for five minutes, three or four times daily of a boiling solution of hydrogen peroxide, preceded by the application of two or three drops of a one to 1,000 epinephrine solution to the mucous membranes, constitutes an effective measure. Atropine sulphate in the dose of 0.25 milligramme, morning and evening, will antagonize the excessive flow of secretions.

Hayem has advised that a few drops of the following mixture be placed on blotting paper and the fumes inhaled for a few seconds:

℞ Phenol,
Ammonia water ..... of each 5 grammes
Alcohol ..... 10 grammes
Distilled water ..... 15 grammes
M. ft. solutio.

Some caution should, perhaps, be exercised in the use of the foregoing preparation, as Moldenhauer has shown that caustic inhalations favor ear complications.

In overcoming nasal obstruction, the following snuff gives good results:

℞ Cocaine hydrochloride,
Menthol ..... of each 0.3 gramme
Roasted and powdered coffee beans ..... 1.0 gramme
Boric acid ..... 10.0 grammes
M. fiat pulvis.

In this preparation the menthol prolongs the effects of the cocaine, while the coffee is introduced to make the powder more palpable and more easily inhaled.

Another useful combination is:

℞ Menthol ..... 0.5 gramme
Ammonium chloride or phenyl salicylate..2.0 grammes
Boric acid ..... 8 grammes
M. fiat pulvis.

Since the swelling of the mucous membranes renders the snuffing up of the powder difficult, the patient will find it advantageous to use a piece of rubber tubing about twenty cm. long; the powder is placed in it at one end, and air blown through from the other end by the mouth.

Spraying the membranes for a very short period with a one or two per cent. cocaine solution gives good results, but the toxicity of the drug is to be remembered. A better procedure is to apply two or three drops of a cone to 2,000 or 3,000 solution of epinephrine with a camel's hair brush. Unna has recommended the following solution for brief spraying into the nose:

℞ Ichthyol ..... 0.5 gramme
Ether
Alcohol ..... of each 50.0 grammes
M. fiat solutio.

It is probably safer, and equally effective, to use a one to thirty solution of menthol in liquid petroleum. A spray of 0.2 or 0.4 per cent. antipyrine may also be used, preferably preceded by cocaine.

Where the lips or nostrils become irritated and inflamed, the following ointment is advised:

℞ Cocaine hydrochloride ..... 0.5 gramme
Tannic acid ..... 5.0 grammes
Rose water ointment ..... 20.0 grammes
M. ft. unguentum.

ACUTE POLIOMYELITIS.

Thure Hellstrom (*Prag, med. Woch.*, 1912, xxxvii, p, 203) gives a short account of the Swedish epidemic which broke out in the spring of 1911. The majority of the patients in the hospital were children from seven weeks to eleven months old. The initial symptoms were fever, vomiting, and headache. Diarrhœe were unusual. There were several cases of difficulty in micturition requiring the catheter. Sleeplessness was a troublesome symptom in the older children and adults. Paralysis was, of course, the most terrible symptom. There was extraordinary diversity in the character of the disease. Paralysis of the lower extremity was the commonest form; paralysis of the cerebral nerves occurred, and some patients died from a hindrance to respiration either through the paralysis of the muscles or of the respiratory centre. The mortality was 20 per cent. No proof of direct contakion could be obtained in men or monkeys . The patients were kept as a rule four weeks in the hospital, and compulsory notification was ordered. Every care was taken to avoid contagion through the staff or the patients. When a case occurred in a school the whole class, including the teachers, had to remain fourteen days at home; the schoolroom and the books, furniture, etc., were disinfected. When circumstances allow the unaffected children, after control, should be sent away from the infected area, but visits must be forbidden.

TUBERCULOSIS OF THE LARYNX IN CHILDREN.

M. Edouard (*Thèses de Lyon*, 1911-12, No. 91). Laryngeal tuberculosis is relatively rare in children. Its frequency in tuberculosis children ranges from 2 or 4 per cent. according to the clinical symptoms only, to 13 per cent. as ascertained by post-mortem examination. A primary form is most exceptional. The condition is chiefly found in miliary tuberculosis and in advanced pulmonary and generalized tuber-

culosis. Its pathogeny varies. In miliary tuberculosis infection occurs by the blood-stream, while in some of the cases where the pharynx is simultaneously involved the lymphatics convey the infection. Inoculation by the sputum may take place in children as in adults. The earliest symptom is usually dysphonia, and is followed by laryngeal pain, dysphagia, and an intermittent, dry, hoarse cough. Dyspnœa, however, which may be of sudden onset, is the predominant symptom, and is more marked than in the adult, partly from the narrowness of the larynx and partly from the frequency of spasmodic phenomena in children. The clinical forms are the granular (the most frequent), the infiltrating and ulcerative, the ulcero-œdematous, the pharyngo-laryngeal, the vegetative, tuberculous tumour of the larynx, the subglottic and the perichondritic. Diagnosis must be made in a few rare cases of sudden onset from diphtheria and suffocative laryngitis, in the vegetative forms from papilloma, and in other cases from congenital syphilis of the larynx and compression by lymphatic glands. The prognosis is very grave. The course is always rapid and rarely exceeds eighteen months. Death frequently occurs in a few months or even weeks. In Nobécourt and Tixier's *vide British Journal of Children's Diseases,* 1910, vii., p. 27) the duration was only four days. The treatment is that of pulmonary tuberculosis. Owing to the difficulty of local applications and the frequency of asphyxial attacks tracheotomy is often indicated. The thesis contains the histories of eleven cases, four of which are original, in children, five males, six females, aged from 1½ months to 14 years. —*British Jour. Children's Diseases.*

THE CEREBRO-SPINAL FLUID AND BLOOD IN ACUTE POLIOMYELITIS.

G. Draper and F. W. Peabody (*Jour, Dis. Child.,* 1912, iii., p. 153) examined 233 cerebro-spinal fluids from 69 cases and the blood of 71 cases with the following results: The cerebro-spinal fluid luring the first few weeks after onset of symptoms shows in the great majority of cases deviation from the normal. Fluids in the early stages, especially before the onset of paralysis, show an increased cell count with a low or normal globular content. The polymorphonuclears at this stage may form 90 per cent. of the total, but most fluids show lyhphocytes and large mononuclears almost exclusively. After the first few weeks the cell count usually drops to normal, and there is frequently an increase in the globulin content. A slight increase in globulin may persist for seven weeks or more. Analogous changes are found in the cerebro-

spinal fluid of abortive cases. The blood showed a constant and marked leucocytosis, in several cases as high as 30,000. In only one was there leucopenia. Besides the increase in total cells there is an equally constant increase of polymorphonuclears in 10 to 15 per cent. above the normal, and a diminution of lymphocytes of 15 to 20 per cent. The other forms of leucocytes show no abnormalities.—*British Jour. Children's Diseases.*

SURGERY

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

THE SKIN-GRAFTING OPERATION FOR CANCER OF THE BREAST.

W. S. Halsted describes in the *J. A. M. A.*, Feb. 8th, his latest technique as follows: The incision down the arm, made shorter and shorter, was finally abandoned. The vertical cut to the clavicle is made as short as feasible and when considerable skin has been removed above is omitted. Not infrequently the only incision of the skin is the circular one surrounding the tumor, but as a rule the one or the other of the vertical incisions has been made. By means of the two vertical incisions, one above and one below, the dissection of the axilla is, of course, facilitated. Thus the triangular flap has been definitely abolished. The skin of the outer flap between the two vertical incisions is utilized primarily to cover completely, without any tension whatever, and redundantly the vessels of the axilla. The edge of this flap is stitched by interrupted, buried sutures of very fine silk to the fascia just below the first rib in along the entire circumference of the wound, the free edge of the skin is sutured to the underlying structures of the chest wall, the wound being made as small as desirable in the process of closure, and tension on the upper or axillary part of the outer flap assiruously avoided. Considerable traction may, however, be exercised on the mesial flap and on the lower portion of the outer flap. Whatever the size and shape of the grafted defect, it should usually extend to the top of the axillary fornix. Thus the thoracic or inner wall of the apex of the axilla is always lined with skin-grafts. The advantages of skin-grafts are given by the author practically as follows: An almost unlimited amount of skin may be removed, and from his experience the results have been better the larger the areas of skin taken away, and the wider berth given the tumor. Skin-grafts present a definite obstacle to the spreading of

cancer metastasis, as the growth does not tend as much to invade the grafted area. In some cases when there is a special tendency to dissemination in the skin, which he formerly regarded as hopeless, it occurred to the author that by surrounding the denuded and grafted area, more or less completely, according to the case, with a kind of moat this tendency to spread might be confined to the intervenning region between the two grafted areas, the operation wound and the grafted area. The moat is formed by the excision of a narrow strip of the skin with its uderlying fat and loose tissues. Possibly the gap made by the mere incision through the skin to the sheaths of the underlying muscles might sometimes be sufficient. If the moat is made at the primary operation the grafts on it should be covered with silver foil, which is an admirable dressing for uninfected surfaces when it is desired to leave them undisturbed for a week or more, as in breast cancer operation. For infected or granulating surfaces some other permeable and non-adhesive dressing like rubber should be used. If the grafting of the moat is delayed the Reverdin grafts are preferable to the Thiersch grafts. Recurrence in the deeper planes can be promptly detected under the thin grafted skin and should be burnt away, down to the pleura if necessary, by the actual cautery. Halsted disapproves of the suggestion of covering the defect by transferring the opposite breast, as it would conceal any deep recurrences. The inner or thoracic wall of the axilla being covered to the apex of the axilla by grafts, the skin of the outer flap can be used, in redundant fashion, for covering the axillary vessels, for obliterating the subclavian dead space, and for elevating the auxillary fornix.

CONCLUSIONS ON OUR EXPERIENCE WITH SALVARSAN.

O. Kren, in the *Wiener Klinischer Wochen Schrift,* Jan. 25th, draws the following conclusions as the result of his experience with this therapeutic agent:

Salvarsan is the best anti-syphilitis, its administration changes the course of the disease. Best therapeutic results are obtained when it is adminsitered in the first stage. It is in certain first stage cases in which the serum reaction is not yet positive that its use prevents second stage; several such cases have been under observation two years without secondary symptoms. Also in some primary cases with positive reaction will the secondary stage be aborted, but as a rule the early skin lesions, as well as the later skin and mucous lesions, must be expected.

In secondary syphilis salvarsan should be used over a longer period, and in larger doses. If its use here does not give the desired result mercury should be used with it. Results of salvarsan therapy are especially good in third stage and hereditary syphilis. Large single doses of salvarsan are dangerous.

Successful results depend on a strict observance of the contraindication. Death never followed its use in the author's case.

Parasyphilitis nervous conditions do not contraindicate salvarsan therapy. Best results come from energetic salvarsan-mercury treatment; these results are of course not especially good.

The contraindications to the use of salvarsan are:—1. High blood-pressure, as in arterial sclerosis, aneurysm, myocardial degeneration, nephritis. 2. Severe, non-specific nervous affections, as high grade neurasthenia and serious forms of hysteria. 3. Occupational exposure to noise and explosions, as locksmiths, artillerymen, chauffeurs, machinists. 4. Inflammatory and adhesive middle and inner ear disease, non-specific. 5. Disseminated lymph gland disease, as disseminated glandular tuberculosis, disseminated abdominal lymph gland disease, the danger being pneumonia or peritonitis. 6. All localizations of syphilis which follow Jackish-Herxheimer swelling, as high grade perichondritis or syphiloma of the trachea.

These conclusions are based on 600 injections in 285 cases.

TREATMENT OF INOPERABLE CANCER.

Sir Alfred Pearce Gould in the *Lancet*, Jan. 25th, discusses this subject under the two headings: (1) the general treatment of cases of inoperable cancer, and (2) the special treatment of cancer other than by operation for its removal. In the general treatment the importance of physical and mental rest is emphasized. Strict cleanliness must be Alcoholic stimulants of all kinds are to be avoided. The regular action of the bowels must be attended to. The following palliative operations are referred to: Gastronomy is a most valuable procedure in cases of malignant stenosis of the gullet. In the case of irremovable cancer of the colon or rectum, colostomy is to be performed if there is marked obstruction, severe pain, or free hemorrhage. Cystostomy is sometimes of value in cancer of the bladder or prostate. Gastroenterostomy in cases of irremovable phyloric stenosis is generally attended with great benefit and notable prolongation of life. Neurectomy for the relief of severe pain in properly selected cases has a place in surgery. Diathermic coagulation as a means of removing sloughing and ulcerating growths without pain and without hemorrhage is superior to all forms of curettage or cauterization. Among the non-operative measures the author speaks first of the X-rays. By the use of these in cancer of the breast he has seen foul ulcers cleaned, and some of them have healed up entirely. The following cases are reported by the author as having responded favorably to the action of radium, adenocarcinoma of the

abdominal wall, malignant growth of the superior maxilla, tumor of the parotid gland, sarcoma of the femur, and a malignant growth in the right groin.

CANCER GRAFTING.

W. J. Mayo, Rochester, Minn, (*Journal A. M. A.*, February 15), says that cancer grafting may occur spontaneously, especially at points large intestine, at least, grafting may occur not only by direct contact, but by the detachment of cancerous cells and their carriage to distant points. These possiblities have been recognized since the days of Rokitansky and Virchow, but little has been written about them in recent years. Admitting the possibility of spontaneous grafting, one must also recognize that it may occur from surgical manipulations, and Mayo gives illustrations of where it is liable to occur. Since one of his early experiences he has practised searing the raw surfaces of the stomach and duodenal stumps following partial gastrectomy for cancer, because he believes grafting may happen from the bits of loosened cancer tissue freed at the operation and left in the stomach cavity. Cancer occurs frequently and is especially common in Douglas' pouch, and the ovaries are specially susceptible and the original focus may be obscured. Two cases are here reported. Such pathologic accidents may occur in skin grafting as epithelial cancer has protential initiative far in advance of normal epithelium. One cause of the small percentage of cures of cancer of the cervix is the proximity of the ureters to the cancerous growth. While they are not often involved primarily, we cannot push them away from their contact with the cancerous growth without risking infection. Traumatic dissemination of cancer growth is not rare, and may occur through ignorant handling of the cancer tumor. Embolic vascular dissemination is also common, especially in cancer of the rectum, the in fected thrombi being carried through the derivatives of the portal vein to the liver. For nearly fifteen years Mayo has abandoned cutting instruments and used the cautery in performing vaginal hysterectomy for cervical cancer, and has had with it a better percentage of cures. The better results of abdominal hysterectomy for cancer of the cervix may not be due so much to the pelvic and iliac lymphatics as to the thorough cauterization of the cervix very probably before opening the abdomen. The removal of pieces of tumor for microscopic examination should be done with some precautions and, if possible, preparations made for the immediate removal of the growth if malignancy is detected. In any operative dork on cancers a specialized technic should be used, considering them as foci of virulent infection. The first and most important

thing in these operations is wide local dissection, and Heidenhain's rule of cutting at least 3 cm. away from the visible disease is now considered too narrow for safety. The second principle is the removal of the tributary lymphatics, and the third is to avoid traumatic dissemination of malignant cells during the operation and preventing the possibility of postoperative grafting by proper prophylaxis.

DIAGNOSIS, PROGNOSIS, AND TREATMENT OF CERVICAL ABSCESSES OF AURAL ORIGIN.

Deodato de Carli in the *Jour. of Larnygology Rhinology, Otology,* gives as the pathognomonic finding the fact that gentle pressure on the neck forces out pus from the external auditory canal or from some mastoid fistula. Prognosis is guarded, even in superficial abscesses; extremely so in lateral sinus thrombosis and perisinus abscesses. Untreated, these abscesses tend toward the mediastinum; they may spread via the lymphatics and may even end in the axilla or the back. Treatment should include mastoid operation, simple or radical, except when the mastoid is not involved, as in adenitis or abscesses about the pharynx. Used early, rest, hot application, and antiseptics about the infected area may abort them. Carbolic injections, in three per cent, strength, into a lymphoadenitis will at times arrest its development. After suppuration, incision (with or without mastoid operation, *v. supra*) must be done. Cauterization may supplement early free incisions in adenophlegmon. In lateral sinus or jugular suppuration, the vessels should be opened and ligated below the thrombus. Ligation of the jugular is done by incision about three inches long in a line running from the angle of the lower jaw parallel with the anterior border of the sternomastoid toward the clavicle, the patient's shoulders being raised, neck extended, and face turned toward the opposite side. Beneath the skin and superficial fascia the anterior border of the muscle is found, and by blunt dissection, the vascular packet is opened, the vein lying behind and opposite the artery. Double ligature is passed beneath the vein, which is then cut; the pus escapes or the thrombus is removed. The wound is allowed to close by second intention. Superficial cervical abscesses may be simply incised. Deep submastoid abscesses require removal of the mastoid tip. Lateral pharyngeal abscesses may result from extension from the neck, or may extend from the middle ear via the Eustachian tube. These should be opened externally, either premastoid or retromastoid. The premastoid method means incision along the lateral border of the muscle, and blunt dissection through the apon-

eurosis and past the great vessels (which are pushed toward the mesial aspect) to the involved peripharyngeal cellular tissue. By the retro-mastoid route, cutaneous incision, about two inches long, follows the posterior border two fingers' breadth below the mastoid tip, through the aponeurosis and retracting outward the muscles and great vessels, thus reaching the abscess. Retropharyngeal abscesses are best opened with the patient sitting upright, by a free incision half an inch long, made over the prominent part of the swelling, from below upward. The head is bent forward immediately following the incision to prevent inspiration of pus. Suboccipital abscesses may be incised through the thickness of the neck down to the bone. In all these cases the point of most efficient darinage is to be selected for incising the abscess.—*N.Y. Med. Jour.*, Feb. 22nd.

GYNÆCOLOGY

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNAECOLOGIST TO THE TORONTO WESTERN HOSPITAL.

TREATMENT OF ECLAMPSIA.

Veit (*Berlin Klin. Wochen*, Jan. 27th), endeavors to cover this subject very briefly. He is quite convinced that the toxin of eclampsia comes from the albumin of the periphery of the placenta, and predicts that this view will soon be universally accepted. Abderhalden's optical serodiagnosis of pregnancy seems to have turned the scale in placing the source of the toxin. The phenomenon is in no wise due to the entrance of villi into the blood stream which is known to occur in special cases. The human female is the only one who suffers from puerperal eclampsia, and the penetration of the villi is not without significance in eclampsia, for this phenomenon does not occur in animals until we descend very low in the scale of organization—to the leech, for example, in which the villi also enter the maternal placenta. When foreign and toxic albumin enters the blood a counter poison must form, but as yet nothing is known of it, nor under what conditions it fails to form. We cannot, therefore, prevent or antidote this poison directly. As for cutting off its source this is what we have been striving to do for years by accouchment forcé or at least by rapid delivery, which, of course, is not always practicable or available. Since the more convulsions the worse the outlook, it is right to suppress them by narcotics. Venesection with or without subsequent saline infusion is an antitoxic resource, since the

woman can in most cases well undergo the loss of blood. Statistics show well that all three of these resources make for a reduced morality. In regard to emptying the uterus instantly both abdominal and vaginal hysterectomy have been recommended in recent years and the statistics of Dührrsen show practically no operative mortality so that there is no increase of risk. The loss of blood has only the force of a venesection and hence two of the three resources are combined at once. But vaginal hysterotomy must be done by an expert with trained assistance and under favorable conditions. The family practitioner can do no more than expedite labor and add to this a venesection and the narcotic method of Stroganow. Even these measures make a good statistical showing. Rapid delivery naturally implies a variety of procedures depending on the case. The narcotic method goes well with methods for operative delivery, as version and extraction, high forceps, etc. Our three main resources back one another up admirably, so that instead of competition numerous combinations are possible.—*Medical Record*, March 1st.

SALPINGITIS.

The conservative treatment of salpingitis by uterine and tubal injections is the subject of an article by I. S. Etone, Washington, D.C., in *The Journal A. M. A.*, March 1, who describes the method and reports the results of such treatment in the Columbia Hospital for Women, in Washington. Preference is given to subacute cases, but the more acute also give satisfactory results. The description of the method of sterilizing the uterine mucous and the tubes is thus given: "The cervix uteri is seized with tenaculum forceps, carefully dilated, and a blunt curet used if necessary. A 2-ounce glass syringe with a conical point which will reach through the internal os uteri is selected. An ounce of diluted tincture of iodin (1 part to 3 of alcohol) is drawn into the syringe and the uterine cavity is thoroughly distended by strong pressure on the handle of the piston. The pressure is continued for at least two minutes—a matter entirely under the control of the assistant who makes the application. The conical point of the syringe held firmly prevents the escape of the fiuid until the operator is satisfied that the work has been well completed. The patient is then placed in the moderately high pelvis position, the abdomen opened and the pathologic conditions observed. If no visible infection of the ovaries is seen they are invariably retained. The tube is separated and brought into the wound and, if to be retained, is carefully irrigated and distended with strong pressure of the piston from its distal extremity,

whether the fluid has passed through the cornu or not. Afterward the mutilated pavilion may be excised if hopelessly injured during the enucleation. A phimosis operation may be done for the purpose of imitating a fimbriated extremity if the tube is resected. As a matter of routine we leave one tube and ovary whenever possible, and even a portion of either may be advantageously retained." Stone says the iodin injection is far more efficacious than the common packing with gauze tapes soaked in an antiseptic or the use of a return-flow catheter. In many cases, especially of infected uteri, it is possible to project some of the fluid through the cornu into the tube. He has not observed any unusual pain, shock or severe reaction and in only one instance a delayed cure. He has, however, not observed subsequent pregnancy in his patients as yet. Several years' experience has nevertheless convinced him that many pus-tubes can be made perfectly innocent and germ-free even though not physiologically perfect. Two cases are reported.

PERSONAL AND NEWS ITEMS

Ontario.

Dr. J. C. Connell some time ago resigned his position as Dean of the Medical Faculty of Queen's University. He has been prevailed upon to withdraw his resignation, and he continues as head of the Faculty. Those interested in the medical department of Queen's will be glad to hear that Dr. Connell remains in his old post. He succeeded the late Dr. Fife Fowler in 1903. He was offered the position of Medical Health Officer for Ottawa at a salary of $5,000 a year, but he refused this.

Miss Elliott, a nurse in the smallpox hospital in Berlin, contracted a mild attack of the disease while looking after patients in the hospital.

Mayor Revell, of Walkerville, and those associated with him, have met with gratifying success in securing subscriptions for the proposed Walkerville General Hospital. The nucleus was raised by the Local Council of Women, who have now about $2,000 on hand. The Walker firm has made a handsome donation of $10,000, and will provide a site, probably where the golf links are located. The Canadian Bridge Company has pledged $2,000, while the Studebaker Corporation has subscribed $500, with the possibility of increasing this amount.

For the present things are moving smoothly in London between the Medical College and the Institute of Public Health. There was

some discontent on the part of the medical students to the effect that they were not receiving sufficient laboratory training at the institute.

Some of the painfully said items that one sees from time to time in the press is to the effect that some doctor has been appointed medical health officer at ridiculously small remuneration. It would be well if doctors would refuse to act unless the compensation is a fair one.

A surgical wing is to be added to the hospital at Oshawa, at a cost of $10,000, the gift of Mr. Pedlar.

In Kingston special attention is to be devoted to the water supply. Last year there was considerable decrease in the infectious diseases.

Drs. E. J. Fowler, R. E. Johnson and M. E. Reid, all of Toronto, have secured the membership of the Royal College of Surgeons, England.

Dr. M. H. Limbert has been appointed medical health officer for Parry Sound, at a salary of $200 a year.

The Victoria Hospital Trust, of London, has asked the city council for a grant of $15,000.

The medical officer of health for Petrolea reports that in 1912 there were 69 births, 54 deaths, 15 cases of measles, 1 of scarlet fever, and 2 of tuberculosis.

Dr. R. L. Sanderson has resigned his position of medical health officer for Sparta on account of ill health, and has been succeeded by Dr. Shannon.

Smallpox has been prevalent in Waterloo for some time. There have also been a number of cases in the Niagara district.

The tuberculosis hospital for Brantford is progressing well and will soon be ready for patients. The cost is $25,000.

In Guelph last year there were 63 cases of diphtheria, 15 of scarlet fever, 4 of measles, 15 of chickenpox.

The Pembroke General Hospital is going to add a new wing to its present accommodation.

An isolation hospital is to be erected in St. Thomas. The cost will be about $6,000 for two cottages.

The John H. Stratford Hospital, in Brantford, last year treated 776 patients. A new nurses' home is being added to it by the ladies.

Dr. William Oldright, of Toronto, has spent the winter in the West Indies.

The Toronto branch of the Victorian Order of Nurses had a deficit of $639 last year. The total disbursements amounted to $10,248. The property owned by the order is worth nearly $10,000.

Dr. J. W. Edwards, M.P. for Frontenac, was presented with a gold watch and chain by his friends of 20th February, and a silver tea service was presented to Mrs. Edwards.

Stringent precautions are being taken by the Provincial health authorities to prevent the spread of an outbreak of smallpox in Exeter. Dr. Bell, inspector of the Provincial Board of Health, has returned from Exeter, and reports that several cases of small pox have been detected.

Dr. Adam H. Wright's twenty-five years' service as professor of obstetrics in the University of Toronto, and his many years' devotion to science and medical education in this city, are to be recognized by the city council in the form of an engrossed address, which is to be presented to Dr. Wright on his retirement from the University professorship. This has been decided upon by the Board of Control.

Twenty cases of smallpox have developed in the little town of Earlton, on the T. & N. O. Railway, and two general stores, two pool rooms, a restaurant, and several dwelling-houses have been quarantined.

Manager Dr. Orr, of the Exhibition, is going to England for six weeks to seek attractions for the fair.

Sveral cases of smallpox appeared recently at Brantford, but they were promptly isolated.

Dr. Hastings, H. O. H., for Toronto, has finished his estimates which ask for $200,000, against $180,000 last year.

An epidemic of scarlet fever has broken out at Ridley College, St. Catharines, and eight senior scholars have developed the disease.

The new wing of the Berlin and Waterloo Hospital has been completed, and the formal opening will take place on April 5. Lieutenant-Governor Sir John Gibson, who opened the hospital in 1893, has been invited to be present, together with Dr. Bruce Smith, Provincial Inspector of Hospitals, and representatives of hospital boards in the Province.

M. J. Haffey, M.B., M.R.C.S., England, L.R,C,P,, London, late of London and Vienna hospitals, desires to announce that he will begin the practice of diseases of the eye, ear, nose and throat at 152 Carlton Street, Toronto.

Dr. Alex. D. McKelvey, University of Toronto, 1908, ex-house surgeon Toronto General Hospital, and for over two years senior resident aural surgeon Massachusetts Charitable Eye and Ear Infirmary, and assistant to the out-patient laryngological department of the Massachusetts General Hospital, Boston, has sailed for an extended visit to the European clinics.

In 1911 the Province of Ontario spent $1,200,000 in the maintenance of Hospitals for the Insane, and $2,050,000 for the maintenance of general hospitals, or a total of three and a quarter millions of dollars.

Mr. Andrew Carnegie has sent a cheque for $100,000 to complete the half million endowment that was being raised for Queen's University. This was sent as an Easter gift.

Quebec.

The medical graduates of McGill University are now permitted to take the New York State Board examinations. It will be remembered that the medical course in McGill is now one of five years. It was on this account mainly that the foregoing recognition was granted.

At the annual dinner of the Societe Medicale de Montreal the suggestion was made that the Provincial Government should establish a bureau of legal medical research. The Provincial Attorney, Hon. Mr. Decarie, has promised to give the matter consideration.

During January there were 185 deaths in Montreal from contagious diseases. Many of these deaths were due to tuberculosis.

Montreal has increased the civic grant to the Hospital for Incurables from 35 to 50 cents per day.

In the Royal Victoria Hospital, Montreal, there were treated last year 5,566 patients. There were 298 deaths. There was a deficit of $11,328 at the end of the year, which the members of board paid off.

In the Western Hospital, Montreal, there were 1,416 patients last year. The deaths numbered 74.

During the first week of February there were reported 250 cases of contagious diseases in Montreal. Of these 44 were tuberculosis and 7 smallpox.

Dr. Albert Lesage has been appointed to the chair of pathology in Laval University, in place of Dr. Hervieux, recently deceased.

The Board of Control of Montreal recently voted grants to hospitals and charities amounting to $34,400.

Dr. H. D. Hamilton has returned to Montreal after his visit abroad.

The net result of the recent house-to-house campaign conducted throughout the city of Montreal on behalf of the Victorian Order of Nurses amounts to $10,733.09.

Maritime Provinces.

The establishment of a tuberculosis hospital for Halifax is making some progress. Active committees are engaged upon the question. It is hoped to secure money from the city, the Government and citizens.

The county council made a grant of $2,000 to the Moncton Hospital. There was a request for $3,000, but this was refused.

Sydney is much in need of a hospital. It has been proposed to erect a fireproof building, with beds for 50 patients. No definite action has been arrived at. For some years Sydney has paid $300 a year for the care of patients in the hospital of the Dominion Iron and Steel Company.

The Pictou Hospital has raised the fees for public ward patients from $3.50 per week to $5, and for private ward patients from $8 to $10.

In the St. Boniface Hospital there were treated last year 6,527 patients, with 243 deaths.

Western Provinces.

Dr. A. H. Taylor has been selected by the governing body of the General Hospital at Calgary to succeed Dr. Lincoln, whose resignation takes effect April 1. The new superintendent was born in Goderich, Ont., in 1886, and graduated from the University of Toronto in 1900. Since graduating he has been in St. Michael's Hospital in Toronto, and is at present assistant superintendent of Toronto General Hospital. He is unmarried and will arrive in Calgary shortly before April 1st.

Sir Charles Tupper, M.D., now residing in Vancouver, proposes visiting Britain this coming summer. He is now 92 years of age.

There has been some friction in Vancouver over the medical inspection of school children. The inspector contended that reports should be made to him, while the board held that it was the proper body to receive these. It has been settled that the medical inspectors shall report direct to the board. This plan will save misunderstands and delays.

The Premier of Manitoba is considering the advisability of permitting hospitals to charge $1.50 a day for patients, and if they do not pay, to have power to charge the municipalities $1 a day.

The new asylum building in Brandon, which takes the place of the one burned down some time ago, has been formally opened.

Plans are prepared for a hospital at Alsack, Sask. Five municipalities are asked to contribute $3,000 each.

The smallpox hospital at Saskatoon has now been completed.

The Presbyterian Board of Home Missions are going to erect a Waddell Memorial Hospital at Canora.

The Lady Minto Hospital at Melford has accommodation for 20 patients.

The Government of Manitoba has sanctioned the following: That secretaries of hospitals shall send bills for patients to the municipalities concerned; that the district health officer shall make a monthly inspection of school children in villages and towns and a quarterly inspection of country schools, and that liability of parents for the care of contagious cases be defined.

The infant mortality in Manitoba for 1912 was 145 per 1,000, and

in 1911 it was 128.

It has been decided that the hospital in Brandon must be enlarged, and that there must be a maternity hospital.

Dr. A. E. Walker has been appointed medical health officer for Portage la Prairie in place of Dr. MacKinnon, who resigned. The salary is $200 a year.

The hospital at Big River was burned down a short time ago. The patients were all removed safely.

The Victoria Hospital, Prince Albert, has been undergoing some important reorganization in the staff and the nursing.

The number of infectious cases in Moose Jaw during 1912 was 344, as compared with 552 in 1911.

Land and a building has been secured for a hospital at Lloydminster.

It has been urged that Calgary should vote $150,000 for increased hospital accommodation, and appoint six persons to the board of trustees.

Vancouver has made a grant of $325,000 for better hospital accommodation, especially for scarlet fever, diphtheria, tuberculosis, measles and chickenpox.

The management of the Sanitarium for Consumptives at Tranquille, B.C., has asked the Government for $150,000 for the purpose of enlarging the institution. The Government was also asked to make the per capita grant $1 per day.

Dr. Bapty, of Victoria, has been appointed inspector of hospitals for the Province of British Columbia.

Dr. C. J. Fagan, health officer for British Columbia, has returned from France, where he spent some time recuperating his health.

The epidemic of smallpox at Big River, Sask., has been checked and the quarantine has been removed. There was resort to extensive vaccination.

The Edmonton electors recently voted down a by-law for a grant to the Misericordia Hospital, operated by the nuns.

From Abroad.

Report from Berlin states that the heirs of the late Adolf Schwabacher, a German banker, have established a fund of 100,000 marks, from the income of which a quinquennial prize in medicine is to be awarded.

In a report to the committee on school inquiry of the Board of

Estimate and Apportionment, just made public, the statement is made that 15,000, or 2 per cent., of the pupils in the public schools of New York are feeble-minded.

The annual report of the German Hospital and Dispensary, New York, gives the total number of patients treated during the past year as 48,228, of whom 6,935 were in the hospital department, receiving 80,040 days of care, while in the dispensary department 106,849 consultations and treatments were given. At the annual meeting held last week, Mr. Adolph Kuttroff was elected president of the hospital.

The Committee on Indian Affairs of the United Staates Senate has approved an Indian appropriation bill providing for hospitals and other means for treating tuberculosis among the Indians. The appropriations amount to $307,000.

By the will of the late Dr. Orville Horwitz, of Philadelphia, the sum of $15,000 is bequeathed to the Jefferson Hospital, of that city, for the endowmet of three free beds.

In a statement recently forwarded by the Secretary of the Treasury to the United States Senate, it is made known that the annual cost of maintaining the health division of the War Department is $5,714,090; that of the Navy Department, $3,730,522; that of the Department of Agriculture, $3,899,202; and that of the Panama Canal, $1,620,391, a total of $19,800,086. The entire health service of all these departments employs 15,632 persons.

There is now one physician in Germany to every 1976 persons, and the profession is said to be overcrowded.

New Zealand has one death in every eleven deaths due to consumption. Recently an effort has been made to form an organization to educate the public and do what may be best to lessen the frequency of the disease. The island has nearly 800 deaths yearly from this disease.

The Right Hon. A. P. Bolfour, Chancellor of the University of Edinburgh accepted for the University a portrait of Principal Sir William Turner.

The Edinburgh Medical Journal directs attention to the marked decrease in the amount of alcoholic stimulants used in hospitals.

In a number of places in Britain the terms of the Insurance Act re tuberculosis are being put to practical purposes, and much is being expected therefrom.

Sir Thomas F. Chavasse, medical consulting surgeon to the Birmingham General Hospital, died on 17th February.

American alienists are in the thick of a heated controversy on the subject of Swift's sanity. They have arrived at the conclusion that he long suffered from maniac- depressive insanity and ended his days in a condition of arterio-sclerotic dementia. The words of contempora-

ries, whose benign delicacy of expression almost equals Swift's happiest efforts at invective, are quoted in support of the theory.

Report from Bucharest states that a preliminary operation for cataract was performed there last week in Carmen Sylva, the Queen of Roumania, by Dr. Landolt, of Strassburg.

Report from Paris states that Dr. Alexis Carrel, of the Rockefeller Institute for Medical Research, New York, has recently been decorated with the cross of the French Legion of Honor.

The mortality of English physicians, according to the Registrar General's statistics of 1860-61-71, was very high at ages under 34, then more moderate, and only averaged from age 45 to the end of life. The statistics for 1880-82 give a lower mortality rate for ages 25 to 45. Finally, the statistics for 1890-92 and 1900-02 show a rather low mortality at all ages.

During the year 1912 the general death rate of New York City was reduced from 15.12 per cent. to 14.11 per cent., or a little over 1 per cent. The rate for infants under 1 year was reduced from 111 to 105, or 6 per cent. In 1911 there were 15,053 deaths of babies under 1 year from all causes. In 1912 there were 14,289 similar deaths. The difference was 764. The number of births increased by 1,081. Had the deaths of babies increased in the same proprotion there would have been 120 more baby funerals in 1912 instead of 764 less than in 1911, so that 884 infant lives were saved.

At a meeting of the Council of Bristol University recently a letter was read from Mr. George Alfred Wills (chairman of the Imperial Tobacco Company), and Mr. Henry H. Wills, his brother, written to Mr. Lewis Fry, chairman of the Council. In it they offer the sum of £150,000 for the extension of the University buildings.

Mrs. Mary Ann Batchelor, of Bramham Garden, South Kensington, who died on November 19th, bequeathed £6,000 to King Edward Hospital, fund for London; £500 to the London Hospital, Whitechapel, and £1,000 on trust for one life, with remainder to the London Hospital.

The report presented to the annual meeting of the Dublin Committee for the Prevention of Infantile Mortality stated that 200 ladies were working as voluntary health visitors, under the auspices of the committee, and that during the year 22,500 visits had been paid by those visitors to mothers and their children. As there were no paid officials, all the money subscribed was spent on the poor.

The late Lord Ilkeston (Sir Michael Foster), by his will left a sum of £800 to the University of Durham upon trust, to apply the income in memory of his late daughter by the foundation of a Winifred Foster scholarship for a woman student who requires help to maintain herself

at the university. The net personalty was proved at £18,784, and he left certain American property to his son and successor in the title.

Dr. John Kirk, now Sir John, who was with David Livingstone in some of his travels in Africa, is alive and in fairly good health at the age of 80 years.

Sir Ronald Ross, so famous in the study of tropical diseases, has gone to Cyprus to study the causes of malaria, which is prevalent there.

Dr. John S. Billings died in New York on 11th March, at the age of seventy-four. He was a distinguished writer on medical subjects, and had been honored by a number of university degrees of merit.

Dr. Manuel Bonilla, who became President of Honduras about two years ago, died 21st March, of Bright's disease. He was 70 years of age.

The Mainton Springs, Colo., are yielding good results. Those who go to these springs and enjoy the healthy climate of the district, are greatly benefited. Great care is taken to prevent the appearance of any form of infectious disease, and there is no malaria in the place.

OBITUARY

JESSE E. WILSON.

Dr. Jesse E. Wilson passed away at his residence in Rochester, Michigan, 8th March, in his 86th year. Dr. Wilson was a twin brother of the late Hon. Senator Wilson, of St. Thomas, and was born near Ottawa. He graduated in medicine in Canada and practised his profession in St. Thomas in the sixties.

The late Dr. Wilson was the last member of the notable Wilson family, which included eminent physicians. His twin brother, Dr. Jerry Wilson, with whom he was associated for 50 years, died six years ago.

Dr. Wilson leaves two daughters.

B. W. FERRIER.

Dr. B. W. Ferrier, of Toronto, aged 80 years, who was hit by a westbound street car at the corner of Leuty Avenue and Queen Street last week, died in Grace Hospital on 27th February.

Dr. Ferrier was born in Markham and graduated from the Toronto Medical School, in Toronto, over 50 years ago. He is survived by one brother, Mr. O. P. Ferrier, Green River; one sister, Mrs. John Bell, Locust Hill; three sons, George W., and John W., Toronto, and Allen M., Alberta; three daughters, Mrs. Margarette Moffat, Winnipeg; Mrs. John Darling, Alberta, and Miss Jessie I. Ferrier, 434 West Marion Avenue.

FRED W. BIRKETT.

Dr. Fred W. Birkett, son of Mr. Thomas Birkett, ex-M.P., of Ottawa, died at San Diego, Cal., aged 37 years. He was well known in Toronto.

THOMAS A. McDOUGALL.

Dr. McDougall, of London, Ont., died suddenly in his 64th year of age. He was taking a rest and, as he arose, he dropped dead.

C. E. COKE.

Dr. Chauncey Coke, of Winnipeg, died 7th February. He was a graduate of Trinity Medical College, Toronto, of the class 1898. He practised for a number of years at Beausejour, Manitoba. He took post-graduate course at Edinburgh and Glasgow.

W. O. EASTWOOD.

Dr. Eastwood died at his home in Whitby on 22nd March. He was in his 82nd year, and had lived and practised in Whitby for many years.

BOOK REVIEWS

TABULAR DIAGNOSIS.

An Aid to the Rapid Differential Diagnosis of Diseases. By Ralph Winnington Leftwich, M.D., late assistant physician to the East London Children's Hospital, author of "An Index of Symptoms" (Fourth Edition), "A Pocketbook of Treatment," etc. London: Edward Arnold, 1913. Price 7 & 6 net.

This small volume arranges the salient features of the diagnosis of diseases in tabular form. The points of resemblance and difference are well set out, and put in such a form as to speedily appeal to the eye and to be readily fixed upon the memory. The first table contrasts acromegaly and criticism; the second, acromegaly and osteitis deformans; the third, acromegaly and pulmonary osteoarthropy; the fourth, actinomycosis and dental abscess. These are samples of the plan of the author. Two diseases head the page. On the left-hand side of the page are the signs and symptoms, while under the disease is stated what to expect. Take, for example, the table differentiating myxœdema from obesity.

Swelling	Hard, extends to ears	Soft ears, except lobe unaffected.
Sex	Females chiefly	Either sex.
Age	35 to 50	Any age.
Speech	Slow, thick and monotonous	Unaffected.
Mind	Dull	Unaffected.
Tongue	Swollen	Unaltered.
Temperature	Often subnormal	Normal.
Hair	Rough, brittle, and scanty	Unaltered.
Expression	Stupid	Little altered.

The book can be recommended to those who wish to study diagnosis in this most interesting form.

MALINGERING AND FEIGNED SICKNESS.

By Sir John Collie, M.D., J.P., Medical Examiner, London County Council; Chief Medical Officer, Metropolitan Water Board; Consulting Medical Examiner to the Shipping Federation; Medical Examiner to the Sun Insurance Office; Central Insurance Company, London, Liverpool and Globe Insurance Company, and other accident offices; late Home Office Medical Referee Workmen's Compensation Act. Assisted by Arthur H. Spicer, M.B., B.Sc., Lond. D.P.H. Illustrated. London: Edward Arnold. Price, 10 and 6. 1913.

There are very few medical practitioners who have not had their troubles with the malingerer. This book sets to work to put the earmarks upon such, and to enable one to surely detect such a person. The various diseases and states that are likely to be feigned are set forth in

clear style, and how the real condition and the pretended one may be distinguished from each other. Much attention is devoted to the methods of conducting the examination so as to detect any attempt at simulation. But to do this the author takes into sareful consideration the points of differential diagnosis. The normal is taken as the starting point in the study. Take, for example, insanity and malingering. Here we find set out the conditions that will be met with in true insanity, and this, contrasted with pretended insanity. The authors have rendered a real service to the medical profession in the publication of such a book. The publisher is also to be congfiratulated on the attractive form of the volume.

ELECTRO-THERAPEUTICS FOR PRACTITIONERS.

Being Essays on some useful forms of electrical apparatus and on some diseases which are amenable to electrical treatment. By Francis Howard Humphries, M.D., F.R.C.P., Edin., M.R.C.S., Eng., L.R.C.P., Lond., President of the American Electro-Therapeutic Association, Vice-President of the Brussels Medical Graduates' Association, Fellow of the Royal Society of Medicine, Fellow of the Hunterian Society, Member of the Roentgen Society, Illustrated. London: Edward Arnold. 1913. Price, 8 and 6.

Of late years there have appeared a number of books on the application of electricity in medicine and surgery. This one covers a very useful field, and does so in a condensed and clear manner. A perusal of the volume makes it quite plain that the author has had an extensive experience in this work, and has aimed throughout to make his book as practical as possible. Discussion is eliminated and the reader is taken at once to the practical aspect of the subject under consideration. The illustrations are clear and helpful, they are well executed, and lend much assistance to the text. The various diseases and the form of electricity best suited for them is the real aim of the author. He is to be congratulated upon the successful performance of his task. The publisher has produced a very neat book.

THE VICIOUS CIRCLE IN DISEASE.

By Jamieson B. Hurry, M.A., M.D., Cantab., ex-President Reading Pathological Society. With illustrations. Second and enlarged edition. London: J. & A. Churchill, 7 Great Marlborough Street. 1913. Price, 7 and 6.

We have had the pleasure of reviewing a former edition of this book. The vicious cirlcles of the several systems of the body are taken up seriatim and discussed in detail. The classification of these vicious

circles are given as consisting of organic circles, mechanical cirlces, infective circles, neucotic circles, chemical circles, circles due to imperfect repair, and artificial circles. There is much very useful information on each topic. In dealing with the vicious circles of any organ much information incidentally is mentioned on the normal action. In the case of Aortic rejurgitation the chain of events is stated thus: Aortic regurgitation, shortened repletion of cornorary artery, impaired cardiac nutrition, and weaker heart beat. This is set out in the form of a circle and is made interesting because of the graphic method adopted. Take Myopia—There is excessive convergence of visual axes, anteroposterior expansion of eyeball, and further increase of the myopia. An example from the ear as otalgia: Otalgia, insomnia, neurasthenia, reduced health, increase of otalgia. The author has quoted not only freely, but wisely from writers. The paper is sepcially good and the binding very attractive. The book has gilt edges. Indeed it is a gilt-edged book in all respects.

DISEASES OF THE EAR.

By Richard Lake, F.R.C.S., Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. 287 pages, four colored plates and 77 original illustrations. Fourth edition, revised and enlarged. Toronto: D. T. McAinsh & Co. 1913. Price, $2.50.

When Mr. Lake writes upon the ear the profession may expect something good. He is now regarded as one of the highest authorities upon this organ and its diseases. The first edition appeared in 1903, and now we have the fourth edition called for. This shows that Mr. Lake has written a book which the medical profession purchase and read. Mr. Lake has laid down for his motto in this book the Latin saying, *Tempora mulantur at nos mutamur in illis.* He has lived up to this in the fullest sense; for he has changed and improved his book with the progress of aural surgery. The book is not a large one, and yet the subject of diseases of the ear are covered in a lucid and instructice manner. Mr. Lake has the faculty of being able to be brief and at the same be thoroughly clear and say all that need be said. In other words he can make a book that is a *multum in parvo.* One of the most refreshing features about this book is that it is so definite. It does not give several theories and then leave the reader in doubt what course to follow. No, Mr. Lake states in precise terms what should be done. Mr. D. T. McAnish is to be highly congratulated on this handsome volume. Better paper, binding and press work could not be desired.

HYPERTROPHY OF THE PROSTATE.

By W. J. Macdonald, M.D., St. Catharines, Ont. 142 pages, 5 full-page case plates, with descriptive letterpress. Toronto: D. T. McAinsh & Co. 1913. Price, $2.00.

It is a pleasure to review such a book by a Canadian author. We congratulate Dr. Macdonald on this book on the subject of Hypertrophy of the Prostate Gland. There are now many books on this subject, but there is ample room for this one also. The book is mainly built upon the author's own experience, but one does not require to read far until it becomes plain that the author has been a close student of what has been said by others. The matter in the book is contained under the following captions: History, surgical anatomy of the prostate, pathology and etiology, symptoms and diagnosis, non-surgical treatment, after treatment complications. Dr. Macdonald tells what he has to say in 134 pages, but in these few pages he tells a great deal—indeed all that need be said. The book is a most valuable manual, and would be one that would be highly prized by anyone who might possess a copy. On every page there is something worth remembering. Messrs. McAinsh and Campany have done well to secure the publication of this representative Canadian book.

GLYCOSURIA.

Glycosuria and Allied Conditions. By P. J. Cammidge, M.D., London. London: Edward Arnold. 1913. Price, 16 shillings.

Dr. Cammidge is a well-known writer upon this subject and the functions of the internal secretory organs. His book can take a place with those by Opie, Cushing, Biedl, etc., and this is the highest praise that one could accord this volume. The author goes into the subject of glycosuria in a most exhaustive manner. Every phase of the condition is carefully considered. The reader is taken along through classification, detection of sugars, experimental glycosuria, the alimentary form, the persistent forms, the treatment, the prognosis, allies of sugar in the urine, and the insipid type of diabetes. The author has really given the reader a library in this volume as there is no opinion of any note, or experiment of merit that does not receive the fullest consideration. We have no hesitation in recommending this book, as it is so ably written and so exhaustive that no disappointment can come to any one who takes the trouble to study it; and to study it is a real pleasure. It is a veritable mine of information.

CHLORIDE OF LIME IN SANITATION.

By Albert H. Hooker, Technical Director, Hooker Electrical Company. New York: John Wiley & Sons. London: Chapman & Hall. 1913.

This book gives very full information on the subject of the use of chloride of lime in disinfection work. The book will be read with pleasure by those who are hearing so much just now about chloride of lime in wataer. This book contains much useful information on the subject of chloride of lime, and should be read by those who are interested in sanitary work.

ORGANIC AND FUNCTIONAL NERVOUS DISEASES.

A Text-Book of Neurology. By M. Allen Starr, M.D., Ph.D., LL.D., Sc.D., Pro-Professor of Neurology, College of Physicians and Surgeons, New York. Fourth edition, enlarged and thoroughly revised. Octavo, 970 pages, with 323 engravings and 30 plates in colors and monochrome. Philadelphia and New York: Lea and Febiger. 1913. Cloth, $6.00 net.

In its early editions Professor Starr's work won a leading place both as a text-bood for students and as a guide for practitioners, and the author has spared no effort to keep it in the forefront by a thorough revision as each new edition was demanded. Its position is so well known that little need be said beyond mentioning the changes and improvements in this new issue. It has been rearranged so as to present its subjects in a still more convenient order and to accommodate the doubled space allotted to the functional diseases. Everything new and approved in neurology has been introduced, several chapters have been wholly rewritten, subjects of recently recognized importance, such as pellagra, have been discussed, and particularly valuable new chapters on Headaches and Disorders of Sleep have been added. These are only a few of the new features. This single volume is a complete presentation of neurology, suitable for readers of all classes, whether undergraduate or practising. It opens with anatomy and general diagnosis, and then covers the whole field of organic and functional diseases, and those of the sympathetic system, the most logical and convenient classification. The eminent position of Professor Starr vouches for the authority of the subject matter, which he has presented in an excellently clear and attractive syle, with abundant illustrations and plates.

We have had the pleasure of reviewing former editions of this work. It has been of much interest to note the improvements in each edition to keep it thoroughly up-to-date. Dr. Starr is an acknowledged authority on neurology, and, further, has an excellent style of imparting his knowledge. This volume is sound in every detail, and yet couch-

ed in such language as to be specially suited to the needs of the general practitioner and student.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and L. F. Appleman, M.D. Philadelphia and New York: Lea and Febiger. March 1, 1913. Price, $6.00 per annum.

This quarterly volume is a good one. It treats of the surgery of the head, neck and thorax, by C. F. Frazier, M.D.; Infectious Diseases, by John Ruhräh, M.D.; Diseases of Children, by F. M. Crandall, M.D.; Rhmology and Laryrgology, by Geo. B. Wood, M.D., and Otology, by A. B. Duel, M.D. The articles are all excellent. The volume is well illustrated. The paper and type are all that one could wish. The series is one of the very best.

MUSCLE TRAINING IN THE TREATMENT OF INFANTILE PARALYSIS.

By Wilhelmine G. Wright, Boston Normal School of Gymnastics, 1905. Reprinted from the Boston Medical and Surgical Journal, Vol. clxvii., No. 17, pp. 567-574. Oct. 24, 1912. Boston, Mass.: W. M. Leonard, publisher, 101 Tremont Street. Price, twenty-five cents.

The demand for light upon this subject exhausted the file of the journal in which it was printed and has led Dr. R. W. Lovett and the *Medical Journal* to re-issue the article in form of a thirty-two page reprint at the nominal price of twenty-five cents. The directions given are explicit and make the reprint not only of great value, but practically the only set of definite directions in the treatment by exercise of conditions following paralysis.

MISCELLANEOUS MEDICAL NEWS

KING GEORGE PLEASED.

A reply to the cablegram sent to King George by H.R.H. the Duke of Connaught, telling of the completion of the Million Dollar Fund to be used for the suppression of tuberculosis as a memorial to King Edward, has been received by the Duke, and is as follows:

"Duke of Connaught:

"I rejoice to hear that the splendid sum of a million dollars has been collected for the fund for the suppression of tuberculosis as a memorial to my dear father. No better object could have been chosen.

(Signed) "GEORGE."

The message sent the King by his Royal Highness read:

"Toronto, Feb. 15.

"To the King of England:

"At a public meeting in Toronto to-day I received a certified statement showing that the trustees of the National Sanitarium Association had completed the Million Dollar Fund for the suppression of tuberculosis as a memorial to King Edward.

(Signed) "ARTHUR."

HOW TO ATTAIN EIGHTY: RULES OF HEALTH.

Five golden rules of health were given recently by Mr. Frederic Harrison, author, critic, bibliophile, ex-professor, barrister, historian, traveller, and amateur gardener, on his eighty-first birthday yesterday, celebrated at his home at Hawkhurst, Kent:

(1) Abstain from tobacco, spirits, made dishes, and all such dreadful things. I am satisfied with a little bit of mutton and rice pudding.

(2) Rise from a meal with an appetite. I believe people eat too much.

(3) Walk every day for two hours. This I am going to do as soon as I get through a pile of letters and telegrams from Florence and Rome. I am too old to play at tennis, and golf is too slow.

(4) Sleep eight hours. People cannot sleep who smoke themselves black in the face, eat too much, and have not walked enough.

(5) More important than all—be content with what you have got. Take things quietly.

TORONTO'S VITAL STATISTICS.

A slight improvement in the civic health as compared with January, 1913, and with February, 1912, is shown by the returns for February published in the monthly bulletin of the Health Department issued recently. The most encouraging feature about the report is the decrease in the number of typhoid fever cases. There is, however, a considerable increase in the number of deaths from tuberculosis and from other acute

diseases, while the infant mortality rate remains abnormally high.

A total number of 522 deaaths was recorded last month, as compared with 561 in January, and 478 in February, 1911. When allowance is made for the increase in population, the figures are found to indicate slight decrease in mortality. The number of deaths from tuberculosis was 37, as compared with 25 during the corresponding month last year. The report says, "the tuberculosis figures show a considerable increase over that of last year, a condition that of late has come to be regarded as quite unusual."

The mortality from pneumonia is less than that of February, 1912, and January, 1913, but it is still alarmingly high when it is known that the disease is to a great extent preventable. In all 91 persons died from pneumonia or broncho-pneumonia. A marked increase is again shown in the number of deaths from cancer, but the bulletin states that the mortality increases are due rather to the abnormally low number of deaths last year than to an increased prevalance of the disease.

HOSPITAL IMPROVEMENTS.

A press item under the date of Feb. 10 summarizes as follows the work now in progress in New York for the improvement of hospital buildings in that city:

"Hospital improvements to the value of more than $21,000,000 are either being carried forward in this city or are planned for the immediate future. They consist of new buildings, reconstruction and betterment of equipment of both public and private hospitals. The most costly and elaborate work is the rebuilding of Bellevue and the increase of the capacity of its allied hospital in Harlem. The present capacity is 1,290 beds. The new hospital will accommodate 2,500.

"At Harlem a new wing is being added, which will double the present capacity of 180 beds. The cost is to be about $250,000. The entire cost of all the Bellevue plans is estimated at $10,000,000.

"The directors of the New York Hospital are planning an entirely new building. It is intended to erect a building with the most modern equipment, with an ultimate capacity of 600 beds. The capacity of the present hospital is 260 beds. It is estimated that the new hospital and site will cost between $4,000,000 and $5,000,000.

"Other improvements are under way for the Greenpoint Hospital. which is expected to do voluable work, is under construction by the Volunteers of America at Beekman and Water Streets,"—*Boston Med. and Surg. Journal.*

FEW PEOPLE DIE OF OLD AGE.

Few people die of old age, Dr. Jacques Bertillon, head of the Paris Municipal Statistical Department, points out this regrettable fact in an interesting sheet of statistics compiled from the study of a man's diseases in relation to his occupation.

Consumption, as Dr. Bertillon shows, is most frequent in the liquor trade and among those whose occupations expose them to lead poisoning. Next on the list under the same head come the occupations which entail the breathing of a dusty atmosphere. On the other hand, consumption is very rare among shopkeepers and all the liberal professions.

Very few farm laborers die of consumption. Cancer is rarest among farmers, railroad men and miners. Cab and wagon drivers are frequently attacked by cancer. This disease is extraordinarily frequent among chimney sweeps, brewers and sailors in the merchant marine, but only the average number of fishermen die of it. Diabetes especially abounds among the liberal professions. Lawyers, doctors, druggists and after them come in order butchers, printers, dyers and commercial travellers.

The liquor trade is at the top of the list in the affections of the nervous system. If any moral can be drawn from the above statistics it is that diabetes in Paris is the only disease which has any pretence to respectability and that the safest profession of all is that of a clergyman, for, according to Dr. Bertillon, clergymen have fewer diseases and live longer than anyone else.

DISEASE IN TORONTO'S SCHOOLS.

Measles 33, chickenpox 51, mumps 9, diphtheria 1, scarlet fever, 7, whooping cough 11, pulmonary tuberculosis 2.

The number of inspections during the month was 5,194. 2,657 children were examined and of these 520 were found normal. Those with whom defective teeth was the only fault totalled 1,207. Some of the other cases were: Defective vision 232, eye disease 104, defective hearing 32, ear diseases 19, defective breathing 314, enlarged tonsils 425, underfed 25, skin disease 251. 29 pupils were found with tonsolitis.

In the skin diseases 60 children had ringworm.

During the month 330 children were excluded from school, of whom 180 had contagious diseases. The rest were suspected or came from houses where there was illness.

1,542 visits were made by the nurses and doctors and 2,703 visits were made to homes.

The children fitted with glasses were 66, while 6 children were refitted. Adenoids were removed from 10 childreen and tonsils from 57, and tonsils and adenoids were removed from 105. 324 children had teeth filled, 34 had some taken out and 41 had fillings and extractions.

DR. W. E. HAMILL'S MEDICAL EXCHANGE.

In addition to the medical practices offered for sale by the Canadian Medical Exchange office to be found among our advertiseing pages each month, Dr. W. E. Hamill, who conducts the above exchange office, wishes us to state that inasmuch as these offers can only necessarily appear once a month in our publication, that in future he will present interim offers each week, on Saturday, under "Business Chances," in the Toronto Globe, thus enabling those interested to keep a better tally on his offers and to secure quick results and a short-cut to the goal desired. His sixteen years' experience as an exclusive medical broker has enabled the doctor to perfect a system whereby vendors and vendees are brought together which the profession will quickly perceive and take advantage of yhen desiring either to sell or to buy. Office 75 Yonge Street. Hours, 11.00 a.m. to 5.00 p.m.

HISTORICAL MEDICAL EXHIBITION, LONDON, 1913.

Among other historical medical objects of exceptional interest that have been secured for the Historical Medical Exhibition, organized by Mr. Henry S. Wellcome, and which will be opened in London during the meeting of the International Medical Congress, in the coming summer, are many personal relics of Dr. Edward Jenner, the discoverer of vaccination. These include the original lancets and scarifiers he employed during his first experiments, his case and account books, his snuff box, medicine chest and many other interesting articles. A large collection of autograph letters of Jenner's, some of unique interest, have also been loaned, together with the arm chair from his study and in which he died. Other objects connected with the life of Jenner are also to be exhibited, including many valuable portraits of himself and family, painted at different periods, the illuminated addresses presented to him, together with the freedoms of the Cities of London and Dublin, also medals and other documents of special interest.

Concerning the history of anæsthesia, many interesting relics are to be exhibited, beginning with the original autograph journals and manuscripts of Henry Hill Hickman, F.R.C.S., the discoverer of the

application of the principle of anæsthesia by inhalation for surgical operations, which he proved by actual experiments on animals in 1823. Personal relics of Sir James Simpson, and some of the earliest forms of apparatus for administering chloroform and ether will constitute an exhibit of more than usual interest.

Those who may possess any objects of a similar character connected with the history of medicine and the allied sciences, and who would be willing to loan the same, should communicate with the secretary, 54A Wigmore Street, London W., who will be pleased to forward a complete illustrated catalogue to anyone interested.

ONTARIO HEALTH OFFICERS' ASSOCIATION.

The annual meeting of the Ontario Health Officers' Association will be held in the Parliament Buildings, Toronto, May 29th and 30th, at which all the medical officers of the Province are required to attend as provided in section 42 of the Public Health Act.

Arrangements are being made for reduced rates on the principal lines of railway, and a large attendance is expected.

The programme will be issued at an early date.

NEW YORK SKIN AND CANCER HOSPITAL.

The governors of the New York Skin and Cancer Hospital announce a course of clinical lectures and demonstrations in the out-patient hall of the hospital at 4.15 o'clock each Wednesday afternoon during the month of April and first two Wednesdays in May. The April clinics and that of May 7th will be under the charge of Dr. Bulkley, and the subject, *Surgical Diseases of the Skin.* On May 14th, Dr. Bainbridge will give the clinic on *Surgical Treatment of Malignant Diseases.*

Each lecture will be illustrated by cases, models, colored plates, photographs, etc.

The lectures will be free to the medical profession on presentation of their professional cards.

CHAS. C. MARSHALL,
Chairman of Executive Committee.

Members of the medical profession, who intend going to Britain this year, should communicate with the editor before deciding on the route. Special inducements can be offered.

MEDICAL PREPARATIONS, ETC

THERAPEUTIC REMARKS ON DIABETES MELLITUS.

By Dr. P. J. Latz.

In the treatment of diabetes mellitus we distinguish between remedies for the disease itself and for complications which may arise. Within the last few years numerous preparations, promising a complete cure, have made their appearance, but none of them have been able to reduce and even eliminate sugar secretions as effectively as Sanol's Anti-Diabetes, a remedy which only within the last year has been put on the market in this country. This preparation is successfully applied in cases where sugar remains in spite of a diet free of carbo-hydrates. Experience has proven that this remedy has caused no bad effects whatever. Of course, an improvement without a strict observance of the diet regulations cannot be expected, but as this remedy is perfectly harmless and has been used with excellent results, it should be tried in every case of diabetes. After a course of from 5 to 8 weeks, during which time the strict diet has gradually been changed to a mixed diet, the toleration of carbo-hydrates will be noticed, and this favorable condition will remain even after the remedy is taken at longer intervals, to be finally dispensed with altogether.

Diabetics of advanced age show symptoms of arterio-sclerosis and arthritis, have derived great benefit from the continued use of Natr. iodat, with Natr. Salicyl, taken in connection with Sanol's Anti-Diabetes.

There is doubtless a close relation between liabetes, arterio-sclerosis and arthritis. Many a case of diabetes effecting the aged may be explained by arthosclerotic changes of the vertebral and basilar arteries which are near the medulla, and their small branches supply the floor of the fourth vertricles in which C. Bernhard found the diabetic centre. The above medication was useful in arthritic patients, as well as in the sclerotic. Swelling of the joints disappeared, notably thereby, the somewhat sclerotic antecedents in the arteries of the medulla were likewise influenced and thereby the cure of diabetes was brought about.

For indigestion, dry and bitter taste in the mouth, loss of appetite, oppression in the abdominal region, flatulence, constipation, nothing equals Carlsbader salt, taken as hot as possible.

The use of Stront. bromat. will control nervousness and its favorable influence upon the general condition of the patient, especially upon insomnia, irregular pulse, etc., will be noticeable after a few days.

It is a well-known fact that during the first days of strict diet, when all foods containing carbo-hydrates, are prohibited, the patients

complain of nervousness, irritation, palpitation of the heart, etc., symptoms which the physicians often take as preceding the state of coma, and, unfortunately, cause the diet to be interrupted. In such cases a prescription of Dionin will be found very beneficial.

For pruritis nothing is better than Natr. salicyl, 45 grains daily, or the same amount of aspirin.

THE NEW TREATMENT FOR PNEUMONIA.

After long and laborious clinical study—extending, in fact over a period of more than twenty months—Messrs. Parke, Davis & Co., announce the addition of Pneumonia Phylacogen to their list of therapeutic agents. This product is designed for the treatment of penumonia or any infection caused by the pneumoncoccus. Administered in the early stage of the disease it is said to cut short the pneumonic process in a manner that is truly remarkable.

Pneumonia Phylacogen has been administered to patients of all ages and of many nationalities, with highly gratifying results in a large majority of cases. "From experience gained in the study of typical cases treated under favorable circumstances," one writer remarks, "we are led to believe that almost every case of pneumonia seen within the first twenty-four hours after the initial chill will recover if properly treated with Phylacogen." Another observer, a professor in one of the large American medical schools, pays the product a high compliment in these words: "Pneumonia Phylacogen is the only therapeutic agent in my experience that has ever shown a definite thereapeutic action on the penumonic process."

In view of the fact that penumonia is one of the commonest and most fatal of infections (it is said upon good authority that it causes more deaths than tuberculosis, scarlet fever and smallpox combined), the new Phylacogen gives promise of a veritable therapeutic blessing.

GLYCO-THYMOLINE.

The many cases of nasal and naso-pharyngeal inflammation which are so prevalent at this season, call to mind the fact that Glyco-Thymoline is almost a specific in their treatment.

The cooling, soothing and slightly anodyne effect of this preparation on the dry and hot mucous surfaces is well known to the profession. In addition Glyco-Thymoline will by its exosmotic properties relieve the congested area of the inflammatory exudate and by stimulating the capillaries to renewed activity bring about a normal condition of the parts.