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Original Communications.

ORTHODONTIA.*

By J. A. C. Hoggan, D.D.S.

Orthodontia received little attention until within the last half century, the most interest having been awakened in the last twenty, and the greatest advance made in the last six years. The progress made has been in the broader and more detailed study of the science. Previously it was the custom to rest the welfare of each case upon the inventive genius of the dentist in charge. To-day cases are classified in groups. We may get appliances to correspond to each class, and we rely upon these appliances only as an assistance to Nature. We study the mouth, jaws, teeth, lips, nose, etc., to find out Nature's plan, and only with a thorough knowledge of embryology, histology and comparative anatomy can we arrive at a conclusion.

Orthodontia is based on the normal occlusion of the teeth. Occlusion is the locking of the teeth together and their relation when the jaws are closed. The Ideal of Orthodontia is Art, the perfection of Art is Harmony, and the result of Harmony is beauty.

When the forces which govern occlusion are perverted we call it malocclusion; perversion of the normal. Malocclusion is found in all races and even occasionally in the lower animals. It is very common and is becoming more common. The thoughtful man is asking: Why are there so many mutilated, irregular, twisted, deformed and positively ugly mouths among the people we

*Read before the Hamilton Medical Society, April 1st, 1908.

meet? In proportion as malocclusion exists the function of the teeth, speech, and facial lines are impaired. The opportunities and possibilities of improvement of the facial lines and features are so great, and the appreciation of the parents and friends so genuine, we wonder that a closer study and a keener interest was not awakened in the medical practitioner long ago. It is to be greatly regretted that so few have a proper conception of Orthodontia and its work, and the possibilities of improvement upon the speech, health and beauty of the individual.

The work and treatment of Orthodontia is not based upon irregular teeth but normal occlusion of the teeth. We must have an intimate knowledge of facial type, a quick perception of the normal in that type. Type in the individual is made up of the predominating characteristics of that race to which he belongs. We must consider the numerous changes which occur subsequent to tooth movement.

Let us now get a definite knowledge of the forces which govern normal occlusion.

These forces are:—

1. The incline planes of the teeth.
2. Muscular pressure of lips, cheeks, tongue, etc.
3. Harmony of the dental arches, or the normal relations of the teeth of one arch to the other.

The *importance of the incline planes of the teeth arises from* the fact that these planes act as guides to the erupting teeth, as they emerge from the gum. The first permanent molar is one of the first of the permanent dentition to erupt, it arrives behind the last deciduous or baby molar about the sixth year. The last deciduous molar acts as a guide to the permanent one. The lower molar erupts first. When the other upper molar comes into position, it is guided by its own and the incline planes of the opposing lower molar. Now it depends upon the position of the cusps of this lower molar at this time as to whether these corner stones of the denture are going to lock normally or not. Therefore, we have the same force perverted into an abnormal one and governing now. Malocclusion, if the cusps of the erupting teeth are diverted from their right course, and if the teeth first to erupt are misplaced, is surely followed by a general malocclusion throughout the mouth.

Muscular pressure acts upon the teeth to mould them into position. The tongue exerts an outward pressure while the lips and cheek muscles exert an inward pressure.

Harmony of the arches is essential. The teeth of the lower jaw erupt first; this creates a mould over which the upper arch is

fitted. Any abnormality or inharmony in the position, size or relation of the teeth of the lower arch will be reproduced or exaggerated in the upper. Further, we will have a reaction from the upper arch, and the lower trying to accommodate itself to the irregularities of the upper, so the forces which govern normal occlusion perverted become the forces of malocclusion. And if we do not place each and every tooth in its normal and destined position, we cannot expect it to remain there or be maintained permanently.

The causes of malocclusion are many, and those things which interfere with nature's plan of the denture we divide into three great classes:

1. Congenital causes—Hare lip, abnormal frenum labii, supernumerary teeth, missing teeth, large tongue.

2. Constitutional causes—Adenoids, lack of development, eruptive fevers, rickets.

3. Local causes—Premature loss or decay of deciduous teeth, prolonged retention of deciduous teeth, premature loss or decay of permanent teeth, tardy eruption of permanent teeth, habits of the lip, tongue, thumb, etc., alveolar abscess, accidents, and fractures. Constitutional causes are of the most importance to the physician, and of all the factors in producing malocclusion the most potent is nasal obstruction, of any kind, but especially that produced by adenoids.

The symptoms of mouth breathing in the child are very plainly marked. It causes atrophy of the nose and jaws. It creates a derangement in function of the muscles of the lips, cheeks and tongue.

In normal breathing the air is warmed, moistened and strained of its impurities. It aids in the maintenance of health in the tissues over which the air passes during inspiration and expiration. It in no way interferes with the delicate balance of pressure between the tongue on the inside and the lips on the outside. It allows the mouth to close and the teeth to lock normally. This balance of pressure is a very important factor. If, however, mouth-breathing becomes established, this beautiful balance of pressure is destroyed. The patient becomes pale, anaemic, the nose short with small wings, the upper lip short and curled upward, the mouth open, the teeth and gums exposed, dry and inflamed, with protruding and elongated upper incisors, narrowed or contracted upper arch, high vault. The lower anterior teeth are lengthened and frequently come in contact with the roof of the mouth when the jaws are closed. The tongue rests now on the floor of the mouth, it no longer maintains the form

of the upper arch. Now, various nasal obstructions produce different forms of malocclusions. The mucous membrane lining the nasal cavities covers a large area. Any irritant causing the membrane to become inflamed and thickened, as in chronic hypertrophic rhinitis, or atrophic rhinitis with polypi will obstruct the air passages. This class of nasal obstruction creates a mouth-breathing that may be only temporary or intermittent, but if persisted in long enough to interfere with the development of the bones of the floor of the nose, the septum or turbinates it will also retard the development of the intermaxillary region, causing a crowding of the upper incisors.

Contrast this form with that of obstruction with adenoids. You do not have the crowding of the anterior teeth, but a protrusion and a receding lower jaw, a short upper lip, thickened lower lip, which is wedged in between the lower and upper anterior teeth. This lower lip simply acts as would a rubber wedge and forces outward the upper teeth and holds backward the lower arch and jaw. This in time spreads the upper anterior teeth like a fan. In this class of cases the malocclusion is general, in the other it is confined to the anterior region.

How important then is it that nasal breathing be maintained during the early period of development. The most critical years are those during the eruption of the first permanent molar teeth. Those of the lower jaw precede those of the upper. The cusps of the upper molar are fitted into the fossae of the lower molar. If for any reason the cusps are not occluded properly, then we have the pernicious commencement of malocclusion, and all of the teeth following will be out of harmony or normal occlusion.

In mouth breathing, the mouth is open, the lower jaw drawn downward and backward, the lower molars are almost certain to lock distal to normal. Frequently it occurs on one side of the arch only. If it has been but temporary, you will have the malocclusion of these molars with the lower jaw distal to normal, but with normal nasal and lip function. These cases show a distinct marking in the position of the incisor teeth. These teeth overlap each other in one or another of several forms. The overlap is caused by an effort of the muscles of the lips to overcome the malocclusion started in the back molars years previously during a temporary mouth-breathing. Still another form of malocclusion is the protruded and over-developed lower jaw and arch, with the upper anterior teeth occluding inside the lower, and the lower molars now mesial to normal instead of distal as in mouth-breathing. This class of cases is due to enlarged tonsils. A very important local cause is loss or decay of

the deciduous teeth. Those teeth should be preserved until the permanent teeth are about to erupt. Great care should be given that the child is placed at once in the hands of a competent dentist.

In the treatment of malocclusion, we first remove the cause, whatever that cause may be. If it is nose or throat trouble, place the patient in the hands of a competent physician or rhinologist. Restore the normal occlusion of all of the teeth. Every tooth should be placed in its proper position and held there for a time to allow the alveolar process to develop about it, and the incline planes of the teeth to accommodate themselves to their new opposing surfaces, and the muscles of the face to functionate properly.

In treating such cases as protrusions, we pit the force necessary to move the teeth of one jaw forward against the force necessary to move the teeth of the other jaw backward.

In moving teeth the greatest force to overcome is that of the peridental membrane fibers. The fibrous membrane surrounding the root of each tooth consists of inelastic connective tissue, and is richly supplied with nutrient vessels and nerves.

The fibers of the membrane pass from the cementum of the root to be inserted into the alveolar process. The arrangement of the fibers is such that they pass in every direction that will resist the movement of the tooth under its normal stress when extra or mechanical force is applied. The osteoclasts absorb the bone in front of the tooth and osteoblasts build up the bone behind. The peridental membrane fibers are cut off or pulled away from their insertion, not all at once, but one here and there, probably the shorter ones or weaker ones, or those in the vicinity of greatest pressure. These are quickly reinserted by having new deposits of bone laid about them. This process is repeated over and over until the teeth reach their final position.

Let me say that in those cases where we have great protrusion of one jaw with recession of the opposite one, leaving a large gaping space between the two arches, it is impossible to establish normal nasal breathing without the aid of the Orthodontist. It is just as essential that the teeth, jaws, and muscles be made to functionate properly as it is that the nose be cleared.

Finally, let me say that we believe the best balance and harmony of the mouth and rest of the face is only possible with normal occlusion. Our best efforts are to assist Nature and interpret her wishes, and if we do so intelligently she will complete the growth and development of those tissues in accordance with the type of the individual. To do this we should start the

treatment in early childhood that we may get the tissue at a time when Nature will give the greatest response.

The following points were brought out in the discussion of the paper:

The ideal at which to carry out the treatment of Orthodontia is during its initial stage—the moment it appears.

The importance of the preservation of the deciduous teeth cannot be too greatly urged. If decay occurs have the teeth treated by a competent dentist, and if the teeth are lost the space they occupied should be maintained so that the permanent teeth may meet the natural conditions when erupting.

Room 19, Federal Building, Hamilton.

PRIMARY CARCINOMA OF THE NECK.*

By F. Arnold Clarkson, M.B.,

Demonstrator of Pathology, University of Toronto.

Primary cancer of the deep tissues of the neck, or as it was named by Volkman, branchiogenic carcinoma, is so rare that every case of it is interesting enough to report. A comparatively large number of primary malignant tumors in the upper part of the neck have been observed, it is true, and have been called carcinoma, but recent investigation has shown that many of them were peritheliomata originating in the carotid gland. Secondary carcinoma of the neck is, of course, seen very often, and there is always the chance that what is considered a primary growth is in reality only a secondary development from a very small carcinoma in some obscure location where it escapes the observation of the clinician and even of the pathologist.

The following history is a fair type of the few cases which have been reported:—Mrs. F., a nulliparous woman, aged 60, sought medical advice on December 29th, 1905, for a rapidly growing tumor on the right side of her neck, which she had first observed about six weeks previously. The swelling had reached such a size that she had great difficulty in swallowing, and this was the unpleasant symptom which brought her reluctantly to a physician.

She was an undersized, badly nourished Englishwoman, with a most pronounced scoliosis, the rotation being to the right. Previously in very comfortable circumstances, she had been by bad investments reduced to adject poverty. The family history had little of interest, except that her mother was insane. The general appearance of the patient indicated a recent loss of flesh.

The tumor, situated in the anterior triangle of the neck, was, on the first examination, of stony hardness, 2 1-2 inches vertically, and two inches from side to side. It was freely moveable and unattached to the skin. At the lower pole was a small nodule, evidently connected with the larger growth. Any handling of the tissues caused a good deal of pain, but otherwise the patient suffered little discomfort.

The pharynx, larynx, esophagus and nose were carefully examined for a carcinomatous lesion, but none was found.

The tumor increased rapidly in size, the concatenate glands enlarged, the cachexia and weakness became more pronounced,

*Read at a meeting of the Pathological Section of the Toronto Academy of Medicine.

till death ensued on the 6th May, 1906, about 5 months after the initial symptoms. About the middle of March the largest mass became soft and fluctuating, ruptured and discharged a small quantity of debris.

The autopsy, kindly performed in my absence from the city by the house surgeon, revealed a number of enlarged lymphatic glands on the right side of the neck extending downwards from the original growth, which was capsulated and only slightly attached to the surrounding tissues. The interior of the tumor was filled with necrotic material. Although the esophagus and air passages were carefully examined, no other neoplasm was discovered.

Microscopical Examination.—Sections from the primary growth showed a large number of squamous epithelial cells in alveoli, with a good deal of necrosis and fatty change. The lymphatic glands contained also squamous epithelial cells closely packed together.

Etiology.—Early in the development of the embryo, the visceral clefts become closed, and so far as can be seen from the surface, completely disappear. The 1st, 2nd and 3rd clefts are, apparently, completely obliterated in the adult, but it is supposed that, during the process, in some cases at least, part of the surface epithelium is folded in, and from this, at a later period of life, the neoplasm begins, occupying the situation generally conceded to be that of the 2nd branchiogenic cleft.

Occurrence.—All the cases I can find reported were in men of middle age. This patient was a woman. The right side seems to be more frequently involved.

Course.—The tumor develops slowly and insidiously at first, the patient's attention being attracted to it only when it is large enough to cause pain. After this the growth of the tumor is rapid and the patient dies in a few months. I can find only one record of cure by surgical intervention.

Diagnosis.—The condition must be distinguished from a secondary cancer where the primary focus is concealed. Barnard (Polyclinic, 1904) reported a case of malignant glands due to an epithelioma of the pharynx so small as to escape detection during life. There is always the possibility of a primary neoplasm in the nose, larynx or esophagus. Tuberculosis also must be taken into consideration. Even when the tumor is removed, the cheesy debris of the interior is hard to distinguish from a caseating gland.

The prognosis is hopeless, probably because the condition is recognized too late.

TWO CASES OF SURGICAL INSANITY FOLLOWING SIMPLE FRACTURE.*

By Dr. A. H. Garratt, Toronto.

There are numerous cases reported of mania following injuries to the head, also following surgical operations; but there are very few reported cases of insanity following simple fracture.

Dr. Shepherd, Montreal, reported two cases of intracapsular fracture of the femur, followed by insanity, twenty years ago; both recovered.

Dr. Howard Kelly reports 20 cases of mania following minor plastic operations with one death. A few of these cases were slightly toxic, but most of them were free of any septic condition, the insanity being due to disturbance of the mental equilibrium brought about by the strain of the operation, superadded to mental excitement antedating the operation.

Dr. Keene says these cases are traumatic neurasthenia and traumatic hysteria only, not insanity.

Dr. Howard, Baltimore, thinks there is little ground for the use of the term insanity in these cases, were it not for the existence of infective processes accompanied by delirium or prolonged depression.

Case 1.—Mrs. F., aged 50, a healthy woman of a nervous disposition, in October, 1896, fell from her bicycle, fracturing her Tibia. The bone was set without anesthesia, and her recovery was without incident.

Four years later, Sept. 2, 1899, Mrs. F. again fell from her bicycle and fractured the Femur at the junction of the upper and middle third. She was treated at home on a fracture bed with Liston's long splint and extension in the usual way.

A general anæsthetic was given to diagnose the fracture and apply the splint. For a few days there was no more anxiety on the part of the patient than when her leg was broken four years before. At the end of the first week, however, marked hysterical symptoms were noticed, and from day to day grew worse.

When questioned she did not complain of pain, but said she would never get well, that her second accident would certainly kill her. By Sept. 12th, the hysterical symptoms were so violent, a second nurse was engaged, and in a few days more she developed a confusional insanity. On Sept. 24th she refused to swallow food or drink, and was moved to St. Michael's Hospital where she received rectal feeding till her death on Oct. 7th, 1899.

*Read at meeting of Academy of Medicine, Toronto.

Case II.—Miss H., aged 22, is a well developed healthy girl whom I have personally known for many years, although she never required my services before.

Her mother is a healthy woman with a family of three children, all healthy and particularly free from any nervous disorders. Miss H. had never been hysterical before this winter, but her mother told me that she complained unusually about pain caused by the dentist, when it was necessary to have any work done in her teeth.

On Dec. 26th, 1907, Miss H., while tobogganing in High Park, had a simple fracture of the Tibia and Fibula. A temporary splint was applied and she was removed to her home in the ambulance.

Three hours later when I first saw her she was very nervous and apprehensive about what was to be done for her. She was told that it was not a bad fracture, that she would soon be out again, and reassured as far as possible to relieve her anxiety.

She begged the anesthetist to be sure and give her plenty of chloroform, and to keep her asleep a long time. When she awoke and found her leg in a splint, she was much calmer, but complained of pain. One-eighth grain of morphia was given in repeated doses, but she got very little sleep. The day following the accident she was restless, and complained of pain about the region of the fracture.

On the 3rd day as she complained so unusually, I changed the splint to a double inclined plane, and as the morphia did not relieve her I tried sodae bromide and tr. valerian amon.; for 24 hours she did not complain so much and slept a few hours.

On the 5th day the sedative had no apparent effect, and the patient had a sleepless night, moaning and crying incessantly. When asked what she cried about, she would say, "I don't know," or "I wonder what Jennie and Kate are doing." These I learned were girl friends.

Her mother said she constantly worried about things outside of the house, and only spoke of her leg when her attention was drawn to it.

Trional and sulphanol were tried for the sleeplessness with poor results, also hot sponge baths and massage.

On Jan. 9th, 1908, the 15th day, Dr. Goldwin Howland saw her, and looked upon the case as one of hysteria, but as she was completely confused on time he thought it might result in insanity.

There were no anesthetic areas found in Dr. Howland's examination, but a few days later when I renewed the bandages

she complained with a shriek of a terrible pain in the foot. On careful examination I found the foot of the affected side hypersensitive on the inner side, and just above the cleft between the first and second toes, an anesthetic area of about 1 inch in diameter. This was the only area of anesthesia found.

The nurse told me that it was only on the occasion of my visits that she complained of her foot or leg, and I noticed that no complaint of pain was made during my visit until the splint or bandages were touched.

On Jan. 12th she refused solid food, and had incontinence of urine and feces. Her constant cries were those of a lunatic or idiot. The temperature and pulse were normal for the first three weeks, then at times she would have a slight rise of temperature, when the tongue would be dry and furred.

On Jan. 16th I asked Dr. C. K. Clarke of the Asylum to see her. That day her pulse was 120 and weak, temperature 101, tongue dry; this was the worst day of her illness. Dr. Clarke looked upon the case as hysterical insanity.

During the month she was in bed she never moved the broken leg. The right leg was frequently thrown about, but so far as the affected leg was concerned, she could not have kept it quieter had her mind been clear.

I asked the nurse to put her in a sitting position, but for several days this was impossible unless some one held her there.

In the fourth week a plaster of paris splint was applied, and she was lifted out of bed, and held in a chair for a short time each day. From the end of the fourth week her mental condition improved daily until Feb. 6th, nearly six weeks after the accident. On that day I found her quite sane and the nurse said she had not lapsed for 24 hours.

Since then she has moved about on crutches daily and enjoys seeing her friends. Her mind remains quite clear.

To my great satisfaction the leg has made as good a recovery as if no mental complications had existed.

Selected Articles.

MYOCARDIAL DISEASE FROM THE CLINICAL STANDPOINT.*

By H. B. Anderson, M.D.; L.R.C.P. (Lon.); M.R.C.S. (Eng.)
Toronto, Ont.

Associate Professor of Clinical Medicine of Toronto University, and Attending Physician Toronto General Hospital.

Rokitansky studied both acute and chronic inflammations of the myocardium, recognized their relationship to cardiac dilatation and rupture, and did much to advance our knowledge of the gross pathology of the condition. Virchow's work is especially important, because it included a careful study, both microscopic and chemic, of the changes in parenchymatous myocarditis. Thus, from the pathological side, diseases of the myocardium have been very carefully worked out, with a completeness of classification, a definiteness of description, and an appreciation of importance, which stands in marked contrast to the dearth of information that has been obtained from the clinical side. The pathologists have shown the etiological relationship of many other conditions to myocardial disease, but the clinician has too seldom borne this relationship in mind. In fact in probably no other important class of diseases is there such a disparity between the well established facts of the pathologist and the practical application of this knowledge by the clinician, whether it be in the management of these diseases or in teaching students their frequency, importance and means of recognition.

Considering therefore the relative importance of the tissues involved, it seems remarkable that in Allbutt's excellent System of Medicine four times as much space is devoted to pericardial lesions and nearly eight times as much to endocardial as to myocardial, and this is only a fair example of what may generally be found in text books of Medicine and special treatises on Heart Diseases.

Myocardial lesions are not only more important from the nature of the tissue involved, but also on account of their greater frequency. In this connection, it must not be forgotten that the coincident condition of the cardiac muscle is a factor of equal, if not greater, importance than the valvular

*Read before the Fifth Branch of the Michigan State Association, Grand Rapids.

lesion itself in determining the outcome of any case of valvular disease.

It is therefore unfortunate that the student of medicine should go into practice with an exaggerated idea of the importance of valvular disease, and a very hazy notion of myocardial.

Auscultation as an aid to cardial diagnosis has not proved an unmixed blessing. Properly used, with a clear understanding of its limitations, auscultation is undoubtedly of great value. But, after all, it deals with sounds or murmurs, the interpretation of which often requires the widest knowledge, the greatest care and the soundest judgment, without the exercise of which auscultation may be worse than useless—it may actually be misleading.

Huchard's contention, endorsed by Lindsay, "That since Laennec's time we have all been too much the slaves of auscultation—too much under the tyranny of murmur," must express the opinion of those who have studied the subject, not only at the bedside but in the laboratory and the morgue.

For clinical purposes, myocarditis may be divided into two broad classes, acute and chronic. From whatever causes the condition arises, or whatever the pathological cardiac changes which may be present, the important clinical manifestation is *heart weakness* or *muscular insufficiency*, and the symptoms and physical signs are practically all referable to this factor.

As ordinarily seen in practice, acute myocarditis follows one of the acute infective diseases—diphtheria, influenza, scarlet fever, typhoid fever, pneumonia, septicemia, rheumatism or even measles. The soft, pale, flabby, friable heart found at autopsy in fatal cases of these diseases has been commonly recognized by morbid anatomists since the time of Morgagni.

That symptoms do not always arise in cases of even marked myocardial involvement is not remarkable when we consider the extraordinary reserve force the organ possesses.

There are, however, good reasons to believe that the heart muscle is injured to a greater or lesser extent in every case of acute infective disease, *as an essential part of the disease*, the degree of involvement varying with the nature and intensity of the attack, its duration, the previous condition of the heart and many other circumstances connected with the individual case. In the milder grades of involvement, the case recovers without any clinical evidence of its presence, but it is of the utmost importance for the clinician in the management of these diseases to keep the cardiac phenomena in mind, not as unusual occurrences or as complications, but as an essential part of the disease. This appears the only safe rule in order to avoid consequences, in many cases, fraught with the greatest danger.

In typhoid fever every clinician has in mind the probability of intestinal ulceration and the consequent liability to perforation, and in his management of the case, takes all possible prophylactic measures to avoid its occurrence. He does this, not from the fact that perforation is of such common occurrence or that symptoms of it are present in a given case, but because from his knowledge of the pathology of the disease, he recognizes the presence of the morbid opportunity—a liability to this accident. This, I believe, is the only safe and proper clinical attitude to assume with regard to the cardiac manifestations of these diseases. Being on guard and interpreting symptoms in the light of pathological knowledge, it is unnecessary to urge the necessity for redoubled care in case where any symptoms of myocardial weakness frankly manifest themselves.

Time will not permit of my entering into a discussion of the cardiac manifestations in the individual diseases, but I shall refer to some of them again in connection with the notes of cases which have recently come under my observation.

1. About a year ago I was called to see a girl, A. M., aged 8 years, who had been ill for some days with extensive nasal and pharyngeal diphtheria. She was very ill, temperature 102 2-5, pulse rapid. Under full administration of anti-toxin the symptoms rapidly improved and the membrane disappeared. Her general condition was satisfactory and in ten days she appeared well on the way to recovery. She had been kept in quiet so far as possible and not even allowed to be propped up in bed. One morning Dr. Tweedy, of the Toronto Isolation Hospital, where she was a patient, telephoned me that the patient felt cold and looked pale. An immediate visit was paid. On examining her, I found the skin cold; she presented an extreme pallor, the pulse was very rapid, small and extremely weak, and the cardiac impulse was scarcely perceptible. The first sound at the apex was short, weak and valvular in character. In spite of measures for her relief, she died in a few hours after the onset of symptoms. This was an extreme though not unusual case, developing without any premonitory symptoms, and I know of no means by which the fatal issue could have been averted, unless by earlier treatment at the beginning of her attack of diphtheria.

In my experience, influenza is particularly liable to be followed by myocardial weakness, especially when it occurs in those elderly persons whose occupation subjects them to severe exertion. The disease is often the determining factor of muscular insufficiency in persons with previously well compensated cardiac lesions. From a number of instances which have come under my notice during the past few years, the following case, at present under my care in St. Michael's Hospital, is especially instructive.

III. A. W., paperhanger, aged 41, was referred to me by Dr. W. J. Fletcher of Toronto. Fourteen years ago he was confined to bed for eight weeks with rheumatism. No valvular lesion developed and he had no shortness of breath or other symptoms following his attack. He was in good health, following his occupation until February, 1905, when he had an attack of influenza, which laid him up for ten days. On attempting to return to work he found himself short of breath, weak and quite incapable of exertion. He continued to go about, but his condition grew steadily worse. I saw him first in November, 1905. He felt very ill, weak, had continual shortness of breath, was very nervous and had been suffering from fainting spells. The features were turgid, he had slight cyanosis of the surface of the body generally, cervical veins were prominent, breathing was of the Cheyne-Stokes type. Physical examination showed enlargement of the precardial area, apex beat in the sixth interspace, 1 inch outside the nipple, impulse very weak and diffuse. There was increase of cardiac dullness upwards, and to the right and left of the sternum. The first sound at the apex was very weak, short and valvular in character, the second sound being much more distinct than the first. No murmurs were present. The liver was greatly enlarged.

This case to me has been one of extreme interest. I believe that some chronic myocarditis with hypertrophy resulted from his rheumatism fourteen years before, thus rendering the organ more vulnerable to the influenzal poisoning, which was directly responsible for the cardiac breakdown.

IV. Myocarditis, following chorea.

E. W., aged 11 years, suffered from an ordinary attack of chorea, during which she was confined to bed for three weeks. No valvular disease developed, and apparently she made a satisfactory recovery.

September 1st, Dr. Stark was sent for. Patient had been complaining of shortness of breath on exertion and the legs began to swell. A mitral systolic murmur was now found to be present. In spite of treatment she gradually grew worse, tremendous edema of the lower extremities, ascites and edema of the lungs, with hypostatic pneumonia, developed.

I saw her in consultation on November 19th. The heart's impulse was weak, diffuse and irregular, the apex beat being out to the axilla. The whole precordium was faintly throbbing. A distinct mitral systolic murmur was present. The patient died on November 21st and an autopsy was performed the following morning. The heart showed some hypertrophy with dilatation of both sides, weight 8 ounces. The muscle was pale, very soft

and flabby. Subsequent microscopic examination showed infiltration of leucocytes and slight hemorrhage into the interstitial tissue, and vacuolation and albuminous and fatty degeneration of the muscle cells. The normal striation of the muscle had almost disappeared.

No more serious error could be made than being misled by the presence of the murmur to look upon this as a case of valvular disease. As explained by Knehl, the valvular incompetency was due to lack of constriction of the mitral orifice by the muscular band surrounding it, and possibly to changes in the papillary muscles interfering with their normal action in controlling the valves. Such examples of relative incompetency apart from valvular disease are common and, no doubt, explain many of the cases of murmurs disappearing under rest and treatment.

I wish, therefore, to emphasize the fact that the coincident condition of the myocardium is a factor of greater importance than the valvular lesion itself in determining the prognosis in a given case. In this way only can we explain the marked variability in course and the uncertainty of the outcome shown by patients with similar valvular lesions.

In the management of the acute infective diseases, therefore, the clinician should always keep the following possibilities in view:

(a) That *myocarditis* may give rise to serious symptoms either at the height of the disease, during convalescence or in after life.

(b) The *greater* danger, often determining cardiac breakdown, in persons *previously subjects of valvular or muscular lesions*, and the necessity for using all available measures to protect the heart in such cases.

(c) The great length of time which must elapse to allow of regenerative changes and consequent cure.

Chronic Myocarditis.—This condition is common and may make its appearance in various ways.

(a) Occasionally as a sequel to acute myocarditis.

(b) Most commonly as one of the manifestations of the senile heart—from sclerosis of the coronary arteries and consequent interference with the nutrition of the organ.

(c) From excessive heart strain due to occupation, general arterial sclerosis and high blood pressure; in cases of obesity.

(d) Toxic conditions, as in syphilis, gout, phosphorus poisoning, in the various anemias and cachexias, tend to chronic myocardial degeneration. Excess of tea, coffee, tobacco and alcohol, especially beer, is productive of myocardial disease.

(e) Unusual mental stress and worry is a frequent concomitant factor.

(f) Very frequently there is a combination of these conditions, as in persons who have suffered from rheumatism or other acute infective diseases, who are poorly nourished and partake of alcohol and tobacco to excess, whose occupation subjects them to intermittent severe exertion or to more prolonged laborious efforts, or in those who have undergone prolonged worry.

(g) Hereditary influences are important, some families being prone to early cardiac breakdown.

As to treatment, much of this has already been indicated, prophylaxis is of greatest importance.

After the acute infective diseases in the subjects of valvular disease or arteriosclerosis, and in advancing age, the necessity for the avoidance of severe exertion or any excess of effort; the early recognition of hypertrophy, weakening of the first sound or marked accentuation of the second aortic sound, irregularity or intermitting of pulse; undue breathlessness on exertion, etc.

The avoidance of excess in tobacco, in eating or drinking is very important; also of mental overstrain and worry.

A holiday with a change and complete rest from business, with baths, etc., often has a most beneficial effect.

Strychnine is one of the best remedies, given frequently and for long periods. Nitroglycerine and the nitrites are often of value to lower arterial tension; in some cases with cardiac asthma, morphia renders splendid service. Musser recommends pulv. opii, and I have found it very useful. Aromatic spirits of ammonia, caffeine and camphor are without danger and often useful in cases of dilatation with urgent symptoms; also oxygen inhalation. Digitalis and strophanthus may be of service, but one has to be guarded in their use. The Schott treatment where it can be properly carried out often gives excellent results.—*West. Can. Med. Jour.*

SUDDEN DEATH.

By Prof. Robert Saunby, M.D., M.Sc., LL.D., F.R.C.P.

The Church Litany contains a prayer for deliverance from the perils of battle, murder, and *sudden death.*

By sudden death is generally meant death which comes unexpectedly, or, if we may elaborate a little, we may say that has not been preceded by warning symptoms of its approach.

This prayer expresses a feeling which is widespread, yet, on reflection, as death is inevitable and must come to all of us, it is most merciful when it comes unawares and all is quickly over. As one gets to a time of life when necessarily the portion of existence left can only be short in comparison with that which has passed, the least reflective person may sometimes wonder in what way he shall make his exit from the stage on which he has played his little part, and would probably like to think that when the time comes he will not be long about it. I admire and envy my old friend and master, the late Professor Annandale, who only a few weeks ago, after a full day's work, having operated at the Royal Infirmary in the afternoon, was found next morning dead in his bed. In such a death, sudden though it be, there is nothing terrifying; he had done his duty up to the last, and lay down to rest from his labor. Why should we murmur if his sleep was that from which there is no awakening? He was æt. 68, so had lived nearly the allotted span of human life, and he went to his long home without knowing the weakness and infirmity of old age.

But sudden death raises certain civil and professional questions with which we, as medical practitioners, have to deal.

In our capacity of private medical advisers we are expected to foresee and forewarn against this danger, and, armed with the authority conferred on us by the law, it is our duty to give a satisfactory explanation when we can, and to aid the officers of justice in discriminating between deaths due to natural causes and those which are the consequences of crime. Hence we are called upon to familiarise ourselves by observation so far as opportunity is afforded us, and by reading and study which are open to all of us with those natural causes by which life may be unexpectedly ended.

Sudden death may occur—

1. In the course of acute disease.
2. In the course of chronic disease.
3. In apparent health.

We may leave out of account for the present all those

cases where death is caused by injury or shock, for, interesting as they are, they would carry us too far and exceed the limits of time at my disposal.

1.—In Acute Disease.

Death in acute disease may be tragically unexpected, and there are few circumstances under which it comes with a greater shock to relatives and to the medical attendant. Perhaps the best and commonest illustration is seen in diphtheria. I remember such a case when I was a student, and the impression then made is indelible. One of our house physicians, a strong, healthy young man, caught diphtheria in the Infirmary; he was getting better, when he sat up in bed and died suddenly. I had a similar case at the old Hospital where the patient did not sit up and every precaution was taken. There had been no evidence of heart weakness, and I had remarked on the absence throughout of serious constitutional symptoms, although the throat condition was well marked.

Such sudden deaths occur in other acute diseases, especially in typhoid fever and pneumonia, but, happily, they are rare.

2.—In Chronic Disease.

This is a chapter which might be extended to very great length if I were to enumerate all the conditions under which it occurs. I do not here include cases in which there has been no previous illness, where the evolution of the disease has been latent, those will come in the next series; but I refer to patients who are known to be suffering from some chronic disease but death is not expected, as, for example, in chronic phthisis, where a sudden rupture of an aneurysmal dilatation of a vessel in an old pulmonary cavity may cause sudden death. I remember seeing a lady a good many years ago who was suffering from fibroid phthisis, a very chronic form of the disease, which often lasts twenty or thirty years, and I had laid stress upon this favorable aspect of the case to her husband. The next day a sudden violent hemorrhage carried her off, and since then I have guarded myself in my prognosis against this accident.

In phthisis, too, sudden death may occur from embolism or from syncope, and either may cause death in cancer.

The liability of the subjects of heart disease to die suddenly is generally admitted, but it is chiefly where the aortic valves are incompetent that this occurs. The late Dr. Tilbury Fox, the well-known skin specialist, died in this way at a compara-

tively early age. He and his wife had run over to Paris for a short holiday, and while there one night he woke her from her sleep, asked her to kiss him, and died. Some pang there may have been that roused him and gave the opportunity for that brief parting, or he, too, would have been one who died in his sleep. But sudden death may occur in other forms of heart disease. I have seen a case of mitral stenosis lying quietly in bed in the ward suddenly attacked by acute œdema of the lungs, and die in a few minutes. Of the suddenness of death in angina pectoris we are all sufficiently aware.

I do not need to lay stress on the risk of rupture of an aneurysm, although it is comparatively rare; or to the possibility of death resulting from a ruptured varicose vein. But the danger of sudden death in phlebitis is not fully appreciated, or we should not have had to regret the untimely death of Sir Richard Thorne, who could not be persuaded to rest while suffering from an attack of gouty phlebitis of the femoral vein.

Death may occur suddenly from the rupture of varicose, submucous œsophageal veins in cirrhosis of the liver, and, indeed, it came in this shape, without warning at Bath railway station to the great Dr. Todd, the apostle of alcohol in the treatment of acute disease, perhaps the victim of applying his own prescriptions inopportunely to himself.

Intestinal obstruction may cause sudden death in old incarcerated hernias, from the presence of adhesions set up by pelvic inflammation, from chronic appendicitis, from ulcer of the stomach, from impaction of a gall-stone; in all these cases, however, there are symptoms of severe abdominal pain and vomiting, so as to suggest poisoning. The late Surgeon-General Harvey, Director-General of the Medical Department of the Army in India, had suffered for years from chronic dysentery with resulting matting together of the intestines and chronic obstruction. He came home to seek advice, but was dissuaded from an operation. He reached Bombay on his return to India safely, but in the train journey to Simla was attacked by symptoms of acute obstruction, and although the abdomen was opened it was too late to save the life of one who was an ornament to the Service and the friend of everyone who knew him.

Rupture of the spleen is another frequent cause of sudden death in malarious countries, where this organ becomes enlarged, hard, and brittle, so that a blow or a fall or even a sudden effort may be sufficient to burst the capsule.

Chronic Bright's disease is accountable for many sudden

deaths by apoplexy, by epileptiform attacks, followed by coma and death, by severe and fatal dyspnœa; less common are acute œdema of the larynx and acute œdema of the lungs.

It is also well known that the lives of diabetics hang by a thread. Such a patient runs to catch a train, sinks exhausted into a seat, and dies from heart failure, or after the fatigue of a moderate walk or the shock of a small operation such as the extraction of a tooth, or some emotional excitement, is seized with abdominal pain, rapid pulse, and breathlessness, followed by coma and death. With all these your text-books have made you familiar.

We all know, too, that persons suffering from Graves' disease, from disease of the middle ear, from acromegaly, from bulbar paralysis, and from various forms of insanity are liable to sudden death, and that life insurance companies rightly refuse to take these risks.

3.—In Apparent Health.

But now let us pass before all my time is exhausted to the most startling and most tragic cases where death comes suddenly and unexpectedly to persons in apparent health, and let us consider some of the conditions in which that may occur.

When I was pathologist to this institution, a man who was walking rapidly along Summer Lane about 1 o'clock in the day, was seen to stagger and fall; he was picked up and brought into the hospital, which was only a few yards away, but when seen he was quite dead. I made an examination of the body and found nothing in the abdominal or thoracic organs to account for death, so I cut out the larynx with the tongue and the neighboring soft parts and drew them down. When I had done this I saw lying over the opening of the larynx and firmly plugging it a large piece of unmasticated beef steak, which I suppose the man was eating as he hurried back to his work, and which, being tough, he had probably bolted. Such cases are rare, but it is well to know that death may be caused quite suddenly in this way, apparently from inhibition of the heart, for mere asphyxia would be far less speedy.

Some years ago a well-known English actress went to Paris for a short holiday, and took a drive in the Bois de Boulogne; while taking tea at the restaurant by the Cascade she was seized with sudden pain in the abdomen, turned pale, and died. A post-mortem examination showed rupture of a tubal pregnancy, a fact which was suppressed, as the lady was not living with her husband, and death was attributed to "internal hemorrhage."

Brouardel relates the case of a tripe-seller, æt. 20, who fell down dead while serving a customer; both lungs were found to be riddled with tubercles, but there had been no symptoms of the disease during life.

An engineer, employed at a colliery near Rowley Regis died suddenly, and I was asked to make a post-mortem examination. He was supposed to have been in perfectly good health, and had not been absent from his work for a single day during the previous two years. I found his stomach distended with blood from a ruptured varicose œsophageal vein, and his liver in a state of advanced atrophic cirrhosis, but there was no ascites.

A man came to me in the out-patient room complaining of pain in the back; I sent him to undress, but soon after, hearing the sound of a fall, I went to him and found him dying; in a few minutes all was over. At the examination of the body we found a small aneurysm of the thoracic aorta not larger than a walnut: its posterior wall was formed by the muscles lying over the spinal column, while there was a round atheromatous ulcer in the posterior wall of the aorta about as large as a florin; the aneurysm had given way laterally, and the blood had poured into the cavity of the thorax.

A few days ago a man was walking past the General Post Office when he was seen to fall, and the policeman who ran to assist him found him dead. He was brought to the hospital. On examining the body, a rent was found in the wall of the left ventricle half an inch in length; there was atheromatous blocking of a branch of the coronary artery and fatty degeneration of the muscle supplied by this branch.

The Comte de Chambord, whom some Frenchman called Henry the Fifth, died suddenly, and at the post-mortem examination the œsophagus was found deeply ulcerated, for which no explanation was forthcoming. A less august personage, Chas. B., æt. 36, was locked up at 11.30 p.m. by the police for being drunk; his cell was warm, and he had two blankets; at 2 a.m., he had some hot coffee; at 6 a.m., he complained of feeling ill, and at 7, as he was worse, he was brought to the hospital. When admitted, he was unconscious, cyanosed, and breathed stertorously; he died an hour later. The post-mortem examination showed acute sloughing of the œsophagus, which was attributed to some corrosive poison, but there was no evidence to show that he had obtained any. Was our pathologist right, or is there, as Brouardel appears to believe, some unknown cause of acute œsophageal inflammation?—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

The Physiological Age for Smoking.

At what age can smoking be countenanced by the physiologist and the physician? Like most apparently simple medical questions, that modest-looking query takes a good deal of answering. One thing may be said off-hand without a moment's hesitation, namely, that juvenile smoking is a bad thing from every point of view. Then, again, excessive smoking is injurious at any age, but that is implied in the condition of excess. A great deal depends on the individual himself with regard to the effects of tobacco upon his constitution. If he be vigorous, well-fed, and under good conditions of general environment, he can withstand quantities of tobacco poison that would wreck a weaker vessel. As regards the latter end of life, it is interesting to note how many veterans gradually curtail or altogether discontinue the habit of smoking. That is most likely an unconscious surrender to hidden physiological promptings, which show that the pipe or cigar is no longer smoothly tolerated by the nervous system as in days of yore. Not long ago a speaker at a Northern university conference moved that physiology be included amongst the list of subjects for a degree in Arts. One of his arguments was that divinity students thus educated would become sounder advocates of such social problems as that of temperance. Probably, he added, they would acquire much light on the heinous practice of smoking. The heart of that assembly of learned men was solely vexed by this frontal attack, and so great was the subsequent confusion that the speaker hurriedly qualified his statement by the assurance that he meant smoking by boys under fourteen. Possibly a further conference of the Scottish universities might settle the exact age at which a man might be permitted to begin smoking, and the hardly less important points as to when he should leave off that altogether unnecessary indulgence.—*Medical Press and Circular.*

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Bier's Method and Ulcer of the Leg.

There is probably no common and non-fatal affection that is more troublesome to treat successfully than non-specific ulceration of the leg. The skin and subcutaneous tissues in the inner aspect of the lower third of the leg, where these ulcers are commonest, are comparatively poor in their blood supply; the part is particularly liable to small injuries; and when once an ulcer has formed, its surroundings very quickly become indurated and hide-bound from capillary lymphatic obstruction. There may or may not be varicose veins in the leg at the same time; whether such varicosity exists or not, the ulcers are commonly termed "varicose" when it is desired to distinguish them from syphilitic ulcers; probably a better adjective than varicose would be " malnutritional."

It is the malnutrition of the part which makes it so difficult to cure the ulcers. Anything which assists in promoting the better nutrition of the leg also helps the ulcer to heal. One of the simplest measures is to keep the leg raised so that the foot is on a level with the heart; the blood is then able to return by the veins with greater rapidity than it can when the leg is down: and if the patient can afford to lie up in bed for a good many weeks, or even months, there are few of these ulcers that cannot be got well, at least for the time being.

The difficulty is that the very class of persons that is most liable to malnutritional ulceration of the legs is also the class that is obliged to be up and about, seeing to household and other work. Even when a certain length of time can be spared for continuous rest in bed the patient is eager all the while to be up and about again at the earliest opportunity. The result of this is that, no sooner is the ulcer nicely skinned over again with fresh epidermis than the patient, having been in bed for six weeks or two months, perhaps, deems herself well, and the leg is used again too soon. The new-formed epidermis has not had time to become mature; and the slightest injury or excoriation causes it to ulcerate afresh; nay, even without injury, the dependent position of the leg by itself may cause recurrence of the ulceration owing to return of the original state of malnutrition in the part from stagnation in the dependent veins.

The crux of the whole question is the length of time that can be devoted to the resting of the ulcerated leg up in bed, and

anything which can bring the cure to a more advanced stage of maturity in a given space of time is bound to be a boon in the treatment of the condition.

We do not propose to deal with the ointments or fomentations or caustics that may be applied to the surface of the ulcers themselves; nor with the remedies such as calcium chloride or calcium lactate, potassium iodide, colchicum, and so forth that may be given internally. These we have already discussed elsewhere. It is our purpose to discuss to-day a simple procedure by which the rate of repair in the ulcer may be considerably accelerated during the period of rest, so that the length of time during which the patient must lie with the leg up can be considerably curtailed. This simple procedure is known as Bier's passive hyperæmia method.

The process is very easy, and it requires no special apparatus beyond an elastic bandage which is used in a way very similar to a tourniquet. A Martin's bandage is very convenient for the purpose, and it should be about three inches wide. This is applied round the leg, proximal to the ulcer and as remote from it as may be convenient. The affected region of skin should on no account be subjected to pressure; a good place for the bandage is just above the knee.

The most important point about the bandaging is the tightness with which it is done; and no absolute rule can be laid down, for one patient can bear it much tighter than another can. Broadly speaking, the bandaging has to be such that the return flow of blood has only to be impeded, not stopped, whilst the temperature of the distal end of the limb must not be lowered. The tightness of the bandage must be considerable, but yet something less than is required when, for example, venesection is to be performed. The parts beyond the bandage will swell, and become reddened; if the application is too tight the color may become bluish or even white, in which case the bandage should at once be loosened. There is a subjective feeling of tension in the parts in and around the ulcer, and the patient's sensations afford a very good clinical guide as to how tight the bandage should be. That which is most comfortable to the patient is approximately the best for the treatment, which should stop short of any painfulness at the site of the bandaging or of acute discomfort in the parts beyond.

The length of time the bandage should be left on will vary in different cases; some prefer continuous application for many hours, others periodic bandaging for short periods at a time. Probably the latter is the more convenient and comfortable in

most cases, the bandaging being applied for an hour at a time night and morning. There is no absolute need for the patients to remain in bed, at least in so far as the Bier's treatment itself is concerned, and the procedure has been successfully used in out-patients who, after having the bandage on for an hour under inspection, to see that all is well, have been allowed to go home with it *in situ*, to be left on till next day. This, however, applies to the treatment of inflammatory conditions such as whitlows and the like rather than to ulcers of the leg; for the latter, rest in bed is the ideal condition, with Bier's treatment to accelerate the process of repair.

Precisely how the treatment acts is not known. Theoretically, if it is a bad thing for the ulcerated leg to be dependent it should also be the reverse of good to produce an artificial venous stasis in the part. Practical experience shows this not to be the case, however; and the intermittent passive hyperæmia induced by the bandaging undoubtedly does a great deal of good in these cases. The procedure is very simple, and it costs very little. There can be no doubt of its value as an additional means of treating what is otherwise a very refractory disease.—*The Hospital.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Meeting of Ex-House Surgeons.

The ex-house surgeons' meeting was held in the medical theatre of the Toronto General Hospital on Monday, March 2nd, Dr. Caven presiding. Dr. Frederick Fenton reported a case of Cesarean Section and also a case of Hydrocephalus (presenting the specimen); Dr. Boyd presented several patients whom he had operated on for mastoid disease.

The following is a short history of Dr. Fenton's case:

Mrs. Shapiro. Aet. 30. Jew; born in Russia.

Second labor, having been delivered of a dead child some years ago, after being in labor four days.

Admitted to hospital at 11 p.m. on Jan. 16, having been three days in labor, the last twenty-four hours being what she described as hard labor.

She was a pale, anaemic woman, having a starved appearance, and suffering from severe labor pains.

Her fingers were clubbed and much reddened about the matrix of the nails, and on the day following operation were found to present an infected paronychia.

The membranes had ruptured some hours before admission to the hospital, and she was greatly exhausted.

On examination the head was found at the brim of the pelvis, but not engaged; the os was fairly well dilated, and there was oozing from the cervix a material which looked and smelt like the contents of the ilium.

The presence of old scars in the perineum and of old tears of the cervix led me to suspect a recto-vaginal or cervical fistula, but this was not justified by further examination.

On examination one was at once struck with the narrowness of the antero-posterior diameter of the pelvis, not only at the brim, but throughout the greater part of its length.

The diagonal conjugate measured 8 c.m., and the sacrum was straight in its upper half, so that the normal curve of the pelvis was lost.

The child being found to be alive, the indication for section appeared to be imperative.

The chance of delivery by forceps or turning were nil, while perforation would destroy the child and not very greatly decrease the danger to the mother from the already existing sepsis.

Unfortunately, reasons other than the points in the case had to be considered in deciding between the various forms of operation, and I was forced to choose the conservative procedure.

The woman died from sepsis on the ninth day after the operation, and this result would have been made less probable by a radical procedure, had I been free to follow what was deemed best without being influenced by circumstances.

There are one or two features of the case which I would like to draw attention to, viz.:

On opening the abdomen there escaped a large amount of clear acitic fluid, which fluid proved troublesome after the operation, in that it burst its way through the wound in a few hours and continued to be discharged in large quantities for several days.

Another point is the fact that throughout the woman had a *normal* temperature, with the exception of one or two occasions, when it rose to about 100, and the day before she died, when it was subnormal, viz., 96.

After the first day or two she took nourishment and retained it, frequently complaining that she was being starved.

At first the bowels were constipated, but they finally responded to purgatives, and for several days moved well. Toward the end she developed diarrhoea.

From the first the distension was very great, and at times was most distressing. Her mind was clear throughout.

For a few days the lochia was foul-smelling, but that finally cleared up, and for three or four days before death it was without odor, red, and in all respects normal.

The child is living and well six weeks after operation.

A synopsis of three of Dr. Boyd's cases:—

1.—Roumanian, admitted to the T. G. H. on Feb. 2, 1908, complaining of severe pain behind the left ear and an aural discharge of some weeks' duration. There was a profuse purulent discharge from the external meatus, marked sagging of the post-sup. wall of the meatus near the tympanic membrane, and swelling with œdema over the mastoid process and in the adjoining part of the neck, suggesting a Bezold's mastoiditis. Temperature was normal. Operation on Feb. 3. After reflecting skin, etc., a large sinus, fully 1-2 inch square, was found over the middle and lower part of the bone, at the bottom of which was the exposed lateral sinus, covered with large granulations. No sequestrum was found. The mastoid was large, of a pneumatic type, and extensively diseased. It was thoroughly cleared, the tip removed—as a large cell at the apex was diseased. Attention was then paid to the condition of the lateral sinus. This felt soft and semi-fluctuating beneath the granulations, but in order to be reasonably sure of this the bony wall in the upper part of the mastoid cavity was removed. The whole of the descending portion of the sinus was thereby exposed—the lower by disease, the upper by design. This latter appeared perfectly healthy. The granulations over the lower part were left untouched (nature's barrier to the extension of disease). A separate piece of gauze was placed over the exposed sinus. The wound was practically left open, two stitches only being put in at the upper angle. No complications nor further extension occurred. No discharge was seen from the external meatus after the first dressing, six days later, and the wound was healed in five weeks. Bacteriological examination of the pus showed the streptococcus.

2.—Infant, 2 years old, with a history of measles 2 months ago and discharge from the right ear of 4 weeks. Advice was sought on account of a large, boggy, fluctuating swelling behind the affected ear—a sub-periosteal abscess. Operation at the T. G. H., Feb. 2, 1908. After reflecting the skin flaps, a sinus was found in the bone over the usual site of the antrum in a child of this age, viz.: above and behind the roof of the bony meatus. A probe, introduced in the sinus, went forward and

slightly downward, apparently into the aditus. It was found, however, that the dura mater was at the bottom of this sinus, and, on further examination, the antrum was found at a lower level, and in its roof a fistulous tract leading directly to the cerebral cavity. Curiously enough, the dura was not thickened, but appeared normal. The mastoid process was small and not diseased. The track of disease was evidently from the antrum, probably through the petro-squamous suture, to the cerebral cavity, and then outwards. The abscess cavity in the soft parts was thoroughly curetted and rubbed with iodoform gauze, and two-thirds of the wound closed. This part healed by first intention, the whole wound healing in 5 weeks, without complications.

3.—S. W.—First became ill Dec. 19.

Jan. 7—Entered T. G. H. Temp 103.4. Typhoid.

Jan. 13—Cough.

Jan. 18—Peculiar sensation in ears when she swallows. Hearing is much dulled. Still coughs.

Jan. 20—Complains of earache in each ear and soreness in front of each and behind the right.

Jan. 22—Slight discharge from both ears. They are being washed with normal saline. Hearing is a little better this morning. No cough.

Jan. 23—Right ear is discharging thin, watery fluid. Still tender around the ears.

Jan. 28—Temperature normal. Left ear still aches somewhat, and there is a slight discharge from the right.

Jan. 29—Left ear has no discharge and no pain. Right ear has a foul-smelling, purulent discharge, rather small in amount: Hearing is still quite defective.

Feb. 4—Ear discharges very little. Hearing is better. Ear syringed with bichloride 1-5000 and Lysol 1-200.

Feb. 5—Slight discharge from right ear.

Feb. 8—Some pain in left ear.

Feb. 9—Sore throat and stiff neck. Ear still painful and slight discharge. Still a little deaf. Temperature, 100.

Feb. 12—Ear drum punctured under gas anæsthesia. Temperature, 101.6.

Feb. 15—No pain in left ear, but it feels tender. Ear syringed with carbolic 1-80 every 4 hours. Temperature, 99.4.

Feb. 18—Mastoid operation.

Feb. 21—Wants to get up. Somewhat sore about the wound. Hurts to open mouth.

Feb. 23—Dressing. Stitches removed.

Feb. 24—Wound slightly painful.

Feb. 25—Wound painful when head is moved, but patient

feels perfectly well otherwise. Temperature has been normal since operation.

Feb. 26—Dressing.

Feb. 27—Dressing. Not much discharge.

Feb. 29—Dressing. Very slight discharge. Wound granulating from bottom and looks clean.

March 3—No discharge. Wound has almost closed.

Treatment of Contracted Pelvis.

Olshausen believes (*Berl. klin. Woch.*) it is wrong to suppose that the measurement of the conjugata vera is the vital point in contracted pelvis. First he speaks of the shape of the pelvis. In rickets the pelvis has several well-marked characteristics. The transverse diameter of the true pelvis is narrowed, the outlet is increased in size, and the sacrum is only slightly curved. It is by no means easy to determine whether the transverse diameter at the inlet is contracted or not. Complicated instruments have been devised, but as a rule one must rely on the estimate which one makes from a digital examination. Generally contracted pelves are even more difficult to diagnose exactly than rachitic or flattened pelves. He discusses several points in connection with this last-named form, and points out that the conjugata vera is rarely less than 8 cm. (about 3 in.). Next he turns to the mechanisms of labor with contracted pelvis. In flattened pelves the head usually lies transversely at the inlet, the forehead being lower than the rest, and the anterior portion of the parietal bone presenting. In generally contracted pelves the occiput generally lies in the cavity of the inlet, and the sagittal suture tends to correspond with the antero-posterior diameter. When the posterior portion of the parietal bone presents in high degrees of flattened pelvis, one has every reason to anticipate great difficulties. At times one may improve matters by placing the patient in a more favorable position. The operative treatment consists in one of the following: Forceps, prophylactic version, perforation, Cesarean section, and division of the pelvis. He considers that the forceps should only be used in contracted pelvis cases with care and premeditation. The forceps will not correct a faulty position of the fetal head; they will deliver only by brute force. If one decides to put the forceps on when the head has not yet engaged at the inlet, one must exercise great care, and the trial must be a short one. If after from six to eight tractions no progress has been made, the forceps should be taken off and perforation should be performed. Next he comes to version. There is no doubt that the after-coming head will enter the pelvis in a more favorable position than the presenting head. But one must not forget that the after-coming head has far less

time to mould itself, and that the gain of obtaining a favorable diameter is largely counterbalanced by the want of adaption of the head to the shape of the pelvis through which it has to pass. For this reason far fewer living children are born after version than after the presenting head. Prophylactic version may be carried out when the degree of contraction is moderate. Good chances of success are only present when the os is fully dilated and the membranes are still unruptured. While the author does not consider version as a good method for the fetus, he realizes that it saves the maternal parts from excessive pressure. Perforation and cranioclasia are indicated when the fetus is already dead, but he considers that it should only very rarely be performed on a living child. He dismisses Cesarean section in a few words, since he has so frequently in other places written on this operation. The mortality has, thanks to the work of Saenger and others, been reduced to from 4 to 5 per cent. Porro's operation need not be considered any longer. He briefly describes the method he follows in performing this operation. With regard to pubiotomy (hebotomy) or symphysiotomy and their modifications, he points out that the technique of these pelvis-dividing operations has not yet been perfected. The chief dangers are hemorrhage, fistulæ, and tears into the lateral or anterior vaginal wall, with suppuration and general infection following. The indications for these operations have not yet been definitely settled, and while he thinks that we are not likely to be able to avoid the dangers accompanying these operations, he feels inclined to believe that pubiotomy will continue to be recognized as a standard obstetrical operation. The technique and indications must be fixed by those in charge of lying-in institutes.—*Brit. Med. Jour.*

Hydramnion: Is Abdominal Puncture Justifiable?

Nijhoff (*Zentralbl. f. Gynak.*), in relating an instance in his own experience before a medical society, turned attention to several questions which were afterwards discussed. In his case of hydramnion it was situated in the upper ovum in a twin pregnancy. He tapped the upper sac by simple puncture, without making an incision through the parieties. Scarpa and Petrus Camper had recommended puncture of an hydramnion in the eighteenth century, and in the nineteenth Schatz had spoken approvingly of the practice. Nijhoff limits puncture to twin pregnancies where the dropsical amnion cannot be reached from the vagina. With aseptic precautions puncture is not dangerous, and there is little if any fear of hemorrhage, as the minute track made by the needle closes rapidly.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Partial Occlusion of both Anterior Nares by a Congenital Cutaneous Web. By George K. Grimmer. *Jour. Lar., Rhin. & Otol.*, April, 1908.

The patient, aged 32 years, had suffered all his life from severe nasal stenosis. During the night-time this usually became complete; and during active exercise and running, he had always been a mouth breather. There was no history of purulent rhinitis.

Examination revealed a cutaneous membrane situated in the lower half of the inner end of each vestibule. The membrane was thin at its upper extremity, gradually thickening to about one-quarter of an inch at its base.

On the right side, an incision was made on the outer side of the web down to the base of the membrane, completely severing its attachment to the external wall; on the inner side, also, a similar cut, separating it from the septum. Then the flap was bent back and sutured to the floor of the nose by a horse hair stitch.

On the left side, the membrane was removed by electro-cautery operation.

On both sides the result was all that could be desired.

Septal Perforations: Their Closure by Plastic Operation. Chevalier Jackson, *Medical Record.*

The writer believes that the enlarging of a septal perforation in order to stop "whistling" is unjustifiable, as small perforations are curable by operation. His method of operating is the following: Cocaine and adrenalin are first freely applied. Then a long tongue-shaped flap, with its base anteriorly, is made of the entire thickness of the inferior turbinal tissue, the incisions from before backwards being parallel to each other. The flap must be wider and longer than the perforation. Then, the edges of the perforation are freshened with a knife, the flap drawn forwards, and with its raw face toward the cavity, the flap is sutured in position with silkworm sutures. A small perforation may be closed with the one operation, but a large one may require a similar operation upon the opposite side, after the first one has consolidated. In due time the basal attachment is severed and treated as a synechia.

Spirographs of Nasal "Breath Pictures." Wyatt Waigrave, *Lancet*, January, 1907.

The method of testing the comparative freedom of the two nostrils by breathing upon a smooth, polished surface has not received the attention it deserves, on account of the difficulty in obtaining a satisfactory material. Slate, glass and polished metals have all been found wanting; but the writer has used vulcanite with a medium polish very advantageously. It gives a reliable and faithful image.

The plate is placed horizontally on the upper lip, half an inch below the nostrils. Then one short and steady expiration makes a well-defined steam impression. The subsequent evaporation gives reliable and striking evidence of the comparative potency of the two nostrils.

The picture may be temporarily fixed by lightly powdering it with calcined magnesia or pulverized starch.

Retention of an Iron Bolt in the Maxillary Antrum for Four Years. J. O. McReynolds, *Laryngoscope*, March, 1908.

The patient was an electrician, 36 years old. Four years previously, while romping with a boy, he was thrown forcibly against the lock of a screen door, inflicting a wound along the infraorbital ridge, but without producing any disturbance of the eye. The wound in the soft tissues was closed with four stitches. The healing was uneventful and there was no purulent discharge. Two years later the patient suffered from facial neuralgia on that side, but it soon passed away.

After the accident it was discovered that the screen door lock had unaccountably disappeared.

After a while the two posterior molar teeth on the injured side became loose, and the patient extracted them with his fingers, when he discovered a hard foreign substance occupying the cavity thus made. By and by, through the same opening, he fished out the missing lock, after its lodgment in the antrum for four years. It was an iron bolt, one and five-eighths inches long and three-eighths of an inch in thickness. The case illustrates the high degree of tolerance which the maxillary antrum will sometimes endure.

A Tonsil Composed of a Mass of Papillomata. A. N. Tweedie, *Jour. Lar., Rhin. & Otol.*, April, 1908.

This pathological specimen was exhibited owing to its extreme rarity. When *in situ*, this tonsil and its fellow looked like a

pair of big sea anemones with pink fringes interlacing across the middle.

A similar tonsil was shown many years ago to the Toronto Medical Society by H. T. Machel, being exhibited on that occasion also as a *rara avis*.

A Case of Fenestration of the Anterior Pillars of the Lances. Watson Williams, *Lancet*, Jany., 1908.

This case was supposed to be congenital. The bilateral fenestrae were symmetrical; there were no cicatrices; the margins were smooth and even. The posterior pillars were free from fenestration; yet the palate-pharyngeus muscles were collected into distinct bundles on each side, with only a thin layer of mucous membrane separating them from the lateral walls of the pharynx.

A second possible explanation was, that the four thin mucous membranes were excellent at birth, but that the two weaker ones were destroyed by an attack of scarlatinal angina, which occurred in early life.

Treatment of Innocent Laryngeal Growths by Galvano-Cautery. A. Wylie, *Lancet*, November, 1907.

The writer enumerates nine advantages in this method of treatment as follows: 1. That very minute growths can be permanently obliterated. 2. That small vascular growths can be removed without the risk of hemorrhage. 3. That it is far superior to chemical caustics. 4. That the technique is reliable and precise. 5. That the whole operation is in view of the surgeon, which is not the case with the forceps. 6. That small sessile growths on the mesial surface of the cords are more thoroughly treated than by the forceps. 7. That stumps left by the use of other instruments can be obliterated by the cautery. 8. The galvano-cautery cuts off the blood supply and thus kills the growth. 9. That it diminishes the liability of local infectivity of papillomata.

Two Cases of Papillomata in the Larynx in Children Treated by Killian's Direct Method. Van del Wildenberg, *La Presse Oto, Laryngologigue Belge*, August, 1907.

1. A child, aged seventeen months, was suffering from laryngeal stenosis and aphonia. On inserting Killian's tube spatula, under general anesthesia, two papaillomatous growths were found. Both of them were successfully removed by the direct method.

2. A child, aged eighteen months, had been aphonic for a year. There was much dyspnœa and some bronchitis. Similar procedure was followed to that of the former case, but during the manipulations tracheotomy required to be done. The larynx was full of papillomata. These were ablated at different sittings. Ultimately the child did well.

The difficulties encountered in young children are due to the small size of the larynx, and the shortness and softness of the epiplottis. Cocaine and adrenalin are not very safe for infants, and the author prefers to operate without their aid under light, general anesthesia.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

A very valuable Review of the Oculists Records for Ten Years at the Ohio State School for the Blind, by J. E. Brown, is published in the *Ohio State Med. Journal.* It covers a great deal of ground, but is of special importance in regard to ophthalmia neonatorum.

In 10 years 521 pupils were admitted to the school. Of these, blindness was due to the disease just mentioned in 93 cases. Now, as ophthalmia neonatorum is preventable, it is a public scandal that so many boys and girls should be allowed to become blind from this cause.

The author says:—It is not in the scope of this paper to take up the treatment of ophthalmia neonatorum, but it would be a failure to do our duty if we neglected to emphasize to the fullest the importance of anticipatory and early treatment of these cases of ophthalmia which appear at times where the physician least expects them.

How best to disseminate information that will diminish the percentage of preventable blindness is a question that has long been under consideration. The work of the committee on ophthalmia neonatorum of the American Medical Association is no doubt to bear good fruit. For the last report of the state institution, at the suggestion of the superintendent, I prepared a page for insertion, slightly modified from a form gotten up by Priestley Smith, to read as follows:

"PREVENTION OF BLINDNESS

From Inflammation of the Eyes of the New-Born—Advice to Mothers and Nurses.

"It cannot be too widely made known that many persons are

blinded every year by diseases that are preventable and curable. The most destructive of these diseases is the ophthalmia of newborn infants. Nearly one-fourth of the present pupils of this Institution owe their blindness to this cause, and the same high proportion has been found to obtain in other schools for the blind. It is fair to say that in nearly all of these cases the eyesight might have been saved by proper treatment at the commencement of the disease; the disease usually arises through ignorance of the danger and consequent delay in obtaining medical treatment. Delay is dangerous, and in the case of a newborn babe the parents or nurse must not wait until the symptoms of inflammation have become severe, but must give the case most careful attention whenever any signs of inflammation present themselves.

"This form of ophthalmia is due to the infection of the baby's eyes with irritating material during or very shortly after birth. About the third day after birth—in some cases a little earlier, in others a few days later—the baby's eyelids become swollen, and a yellowish secretion is found forming and discharging from the eyes. This is the sign of danger. Skilled medical advice should be obtained without delay. In the meantime the baby's eyes should be cleansed in the following way:

"Place the baby on its back with a cloth under its head; separate the eyelids gently with the thumb and finger, and with a bit of fresh absorbent cotton or a soft, clean bit of cloth, drip warm water freely into the eyes, moving the lids gently over the eyes, so as to wash away as thoroughly as possible every bit of the secretion that has formed. This should be repeated hourly, or in cases of much secretion, half hourly, until the services of a competent physician have been secured.

"The laws of the State of Ohio recognize the importance of this, and require the nurse, midwife or person in attendance upon the infant, to report to a licensed physician within twenty-four hours after it has been noticed, the fact that this inflammation exists, and failure to do so is punishable by fine or imprisonment, or both. Neglect of early treatment may result in blindness within a fortnight."

Ophthalmia neonatorum is the most prolific cause of blindness in the class of preventable. It seems to me the subject is of enough importance that in every case of obstetrics, when not under the daily notice of the physician, a printed slip should be left in the home or at the bedside of the parturient, calling attention to the destructive nature of inflammation of the eyes of the newborn occurring any time within ten days or two weeks

after birth, and the necessity for at once calling the attention of the physician to the same. Not only this, but we must emphasize the fact that this inflammation is nearly always due to a gonococcus infection, and the attending physician should not place reliance on use of a boracic acid solution alone, but remember that a more active agent, preferably a silver salt, is called for to combat the disease and to reduce the danger of disastrous results."

(We are informed that no such law exists in Ontario. We trust that the Medical Council will see that such a law is passed—and enforced.)

Examination of Students' Eyes.

W. C. Posey and R. T. McKenzie, Philadelphia (*Journal, A. M. A.*, March 23), describe the methods and results of the examination of the eyes of 883 students of the University of Pennsylvania during the college year of 1905-06. So far as known, the University of Pennsylvania is the only degree-conferring institution in which such examinations are systematically made.

The principal point of interest brought out is the effect of study in increasing myopia, for the statistics showed an increase of about 2.5 per cent. of myopia for each of the four years of college life.

L. Williamson (*Med. Herald*) has some good ideas on Squint in its Relation to the General Practitioner. Three-fourths of the cases begin before the fourth year of a child's age. If allowed to go on without treatment the deterioration of sight is rapid in the squinting eye. Claud Worth has proved that a poorly developed "desire for binocular vision" or fusion faculty, is the cause of squint, but this so often depends upon a difference in the refraction of the two eyes, corneal opacitus, etc., that they may play an important part in the causation of squint. The first thing to be done then, is to correct existing refraction errors, and in many cases the wearing of properly adjusted glasses is all that is necessary to bring about parallelism of the visual axis. The author insists that no child who squints is too young to wear glasses, and says he has used them on children younger than two years of age. He estimates the refraction under atropine.

If the squint is an old one and amblyopia is present, steps should be taken to exercise the deviating eye. This is done by occluding the sound eye, either with a blinder placed over the glass, an eye pad, or by instilling atropine into the better eye. By occluding the sound eye the little patient is forced to use his amblyopic eye all the time, and by instilling atropine the ac-

commodation is paralyzed and he is forced to use his deviating eye for all near vision. Under this treatment the vision in the amblyopic eye usually improves rapidly, provided the squint is not of too long standing, and a normal vision in an eye formerly barely able to count fingers is not an uncommon result if the treatment is carried out conscientiously. In cases which have existed for some years, however, results are not so satisfactory and, though some improvement in vision may be obtained, binocular vision is rarely accomplished and it is these neglected cases which were "too young yet for treatment," or "waited to grow out of it," that have useless, practically blind eyes even though the deformity be corrected by operation—another plea for the early treatment of squint.

Hand in hand with exercise of the amblyopic eye should be given exercises for the development of the fusion faculty. By means of a stereoscope, or, better still, an amblyoscope which can be adjusted to any angle of squint, an effort is made to increase the desire for binocular vision and ability to fuse images. These exercises require great patience on the part of the physician and some assistance on the part of the child. They are not applicable to babies therefore, but with perseverance they can be practiced on quite young children and the results obtained are usually sufficiently good to recompense one for the trouble taken.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

The Tuberculin Eye Test. *Archives of Pediatrics*, February, 1908.

During the past year a great advance has been made in the early diagnosis of tuberculosis in children through the adaptation to the conjunctiva of the tuberculin skin inoculation. Calmette conceived the idea of simply dropping a solution of tuberculin into the conjunctival sac, and demonstrated his method before the Academy of Sciences, Paris, in June, 1907. He uses a watery suspension of dried tuberculin, which has been precipitated by 95 per cent. alcohol. One drop of a 1 per cent. solution freshly prepared is dropped into the conjunctival sac of one eye, being sure that there is no conjunctivitis or any other affection. After three or five hours congestion appears and the conjunctiva becomes bright red and swollen. By-and-bye a slight fibrinous exudation appears. Congestion and injection increase, the fibrinous exudate becomes more abundant and gathers in

threads in the lower conjunctival sac in about six hours. The reaction is at its height in from six to ten hours. The patients have no pain and only slight discomfort. There is no chemosis and no elevated temperature. The opposite eye is used for comparison. After eighteen hours in children and from twenty-four to thirty-six in adults the congestion lessens and soon disappears.

There is no reaction (or, at most, a slight redness) in patients who do not harbor the tubercle bacillus. The reaction also fails in those in the last stage of tuberculosis, in anaemic, enfeebled or moribund patients and in children under nine months of age. The reason of this is that the reaction is not simply the result of an irritation of the locality by the tuberculin, but is an evidence of the power of the body cells to produce an antagonizing substance, which, in turn, shows itself at the site of the inoculation.

Careful testing the world over has given uniform and satisfactory results. When the reaction occurs it means that the patient *has* or *has had* recently in his body active tubercle bacilli. In infants and young children a positive reaction usually means tuberculosis.

This diagnostic method will prove of the greatest value to the profession, and especially to pediatrics, by assisting an early diagnosis in obscure cases. Cases of latent tuberculosis, of lymphoid tuberculosis (bronchial, cervical, or mesenteric) and of tuberculous meningitis can now be diagnosticated early.

Some Points in Infantile Tuberculosis. *Archives of Pediatrics*, September, 1907. Holt.

1st. Frequency and mode of infection in infantile tuberculosis.

Its frequency has not been fully appreciated because we do not look for it thoroughly. More careful application of the means at our disposal has made possible the frequent recognition of the disease and has emphasized the fact that pulmonary tuberculosis is a very common disease in infants.

The means referred to are (*a*) a systematic search for the bacilli, and (*b*) the tuberculin test.

During 19 months ending May 1, 1907, 67 cases of pulmonary tubercle were treated in the Babies' Hospital, 62 of these being infants under 2 years of age and 15 under 6 months. The diagnosis rested on finding the bacilli in the sputum in 54 cases, upon post-mortem findings in 10; one had tubercular meningitis, the bacilli being found in the fluid drawn by lumbar puncture; one reacted to tuberculin, and one had typical clinical symptoms of pulmonary tubercle.

In only one case was there any consolidation of the lungs present, and in nine case there were no pulmonary signs whatever, the infants having been admited for other conditions.

How to obtain the sputum in infants? The method at present folowed is to excite a reflex cough and then catch any sputum that appears on muslin or gauze. Swabs prepared as suggested are ready at hand, and when the nurse notices a paroxysm of coughing the child is picked up and an attempt made to get the sputum. Inversion during a paroxysm is another method.

The effect of hereditary influence. For the past year it has been usual to inquire into the family history of all children admitted, and if there was evidence or suspicion of tubercle a careful search was made for the bacillus.

The result of this routine was surprising. If one parent was affected, the bacillus was usually found, and in a few cases where they were not found a positive reaction was given by tuberculin.

The relatively insignificant and infrequent intestinal lesions seen in tubercular children is rather surprising when we consider how often tubercular sputum is coughed up and swallowed.

This tends to confirm the suspicion that direct contagion rather than the taking of food is the chief cause of infection.

2nd. A study of the cerebro-spinal fluid in tuberculous meningitis.

In the past 14 months, 42 cases of tuberculous meningitis have been treated in the Babies' Hospital, in every one of which the tubercle bacillus was found in the spinal fluid.

Technique.—The fluid withdrawn is received into several tubes, as the bacilli are more apt to be present in that which is drawn last. The bacilli are not numerous, and some time may be needed to find them.

The bacilli are more numerous late in the disease than early, therefore late punctures are best.

The fluid is allowed to stand in the tube for 12 hours. If a film forms on the top the bacilli will usually be found entangled in its meshes. The film is stained as usual for the T. B. If no film forms the side of the tube is scraped with a platinum loop. If not found in that way, the fluid is centrifuged. The chances of finding them are increased if a drop or two of blood is added to the fluid, which is best done at the time of the puncture.

Another procedure sometimes successful is to superimpose drops on a slide. One drop is put on a slide and allowed to dry, then another is added and allowed to dry, etc., etc. Occasionally bacilli are found in this way when they are very scarce.

Study of Osteo-Myelitis in Children by the X-ray. *Archives of Pediatrics,* July, 1907. By Thos. Morgan Rotch, of Boston.

The accompanying radiographs illustrate what has been said—(radiographs are given).

Case 1—Plate I.—Nine years old. Shows one of the earliest manifestations of osteo-myelitis. The child was kicked on the tibia two days before being seen. Radiograph taken on the third day and showed an increased radiability of bone below the epiphyseal line of the tibia, and below this a slight boggy periosteum recurring down the whole length of the tibia, and evidently showing an exudation of fluid below the periosteum.

Case 1—Plate II.—Same case. Plate shows proliferation of the periosteum, with formation of sequestra.

Case 2—Plate III.—Ten-year-old child, entered the hospital for rheumatism; symptoms referred to the knee-joint, where there was swelling and tenderness, but nothing localized in the lower end of the femur. Radiograph showed increased radiability of the diaphysics of the femur, with proliferation of the periosteum. Osteo-myelitis of the lower end of the femur was present.

Case 3—Plate IV.—Five-year-old child, with swelling, pain and limitation of motion about the hip joint. Sent to the hospital with a diagnosis of tuberculosis of the hip. Radiograph showed an infiltration, with abscess formation resulting from infection of the neck of the femur, with proliferation of the periosteum midway between the greater and lesser trochanter and the epiphyseal line. Also an area of increased radiability.

Case 4—Plate V.—Twelve years old. The plate shows the permanent results of acute osteo-myelitis of the femur. Case was treated for tuberculosis of the hip.

Comment.—Where the diagnosis is not clear, the rays should be used. They permit a perfect understanding of the case, and tell us whether an operation is needed or not.

Editorials.

HONOR TO DR. WALTER B. GEIKIE.

At a large gathering of the members of the Toronto Academy of Medicine in the Medical Building of the University of Toronto, a life-sized portrait in oil of Dr. Walter B. Geikie, formerly Dean of Trinity Medical College, was presented to that gentleman.

Dr. Geo. A. Bingham made the presentation on behalf of the graduates of Trinity Medical College. In his address he referred to the 51 years of service of Dr. Geikie in the teaching of Medicine. He started his career as a teacher of Medicine in 1856, when he became one of the lecturers in the Medical Faculty of Victoria University. In 1860 on account of poor health he removed to Aurora. He soon acquired a large practice in the Aurora District, but at the same time continued his lectures in Toronto. He was appointed Professor of Anatomy of Victoria University in 1869. He resigned this position in 1870, and was one of the principal organizers of Trinity Medical College, which was established in 1871. He was Professor of Medicine in that Institution, and became its Dean in 1877. He occupied this position until the amalgamation of this College with the Faculty of Medicine of the University of Toronto in 1903.

Dr. Geikie in reply spoke as follows:

MR. PRESIDENT AND GENTLEMEN,

I accept with much pleasure the portrait just presented to me by Dr. Bingham on behalf of the Graduates of Trinity Medical College in such kind and pleasing terms, representing the more than warm feelings entertained towards me personally, by the Graduates of my old College. Fifty-one of the best years of my life were spent, as an earnest Medical educationist. Thirty-two of these, from April, 1871 till June, 1903, were specially devoted to the founding—establishing on as firm a foundation as possible—and building up, of Trinity Medical College, with all the energy I possesesd, ever keeping in view, and promoting, as far

as was in my power, the best interests of every student who entered the College during that long period.

I therefore appreciate this presentation, coming from her graduates, very highly. It vividly recalls many past and most pleasant years—years to me of continuous delight in daily meeting my classes. With all my heart I thank every graduate, who has had a share in this presentation, who was as loyal to his College as I was, and who now cherishes as sincerely as I do, her glorious memory.

I regard this presentation as a fresh and marked evidence that the hearts of our graduates continue to beat, as my own does, with mingled pleasure and pride as we think of the magnificent work Trinity Medical College did for Practical Medical Education during the long and useful years of her existence. No wonder that my whole heart was given to promoting and stimulating so great and so grand a work. It is, however, and I think our graduates will all agree with me, very largely, perhaps chiefly, to commemorate the glorious and long continued usefulness of our College, that this presentation is now made. The numerous high positions our graduates occupy where they are practising their profession and the eminence attained by so many of them, in Canada and elsewhere, bear testimony stronger than any words of mine can do, to the excellence of the professional training they received within her walls.

I may here mention, as illustrative of the fact just stated, the well known names of Professor Alexander H. Ferguson, of Chicago, and L. Teskey and G. A. Bingham, of Toronto, who with many others are eminent as Surgeons, and did time permit, the names of many might be given who are distinguishing themselves in all the various branches of the Profession in Canada or in other countries.

It is not surprising, therefore, that with hardly an exception, they are as loyal to the memory of their College, and that her name is, and always will be, as dear to them as it is to me. Great and long continued as my work in connection with the College was, the general success of her graduates has always been to me an inspiration and a joy.

In this connection I have only one regret, and one wish—the regret is, at my not having done more than I did for my College and for her students. The wish is, that, what I did do had been done very much better.

A College like ours was worth the labor of many a life, as her teaching was a blessing to the men she taught—a credit to our City and Country, and a boon to the public who require and deserve to have the very best and most practically taught medical men we can produce sent out to practise their profession—men who are capable of successfully coping with the frequent and great responsibilities so often met with at the bed-side.

While to-night my remarks have necessarily referred to my own College and her graduates only, it goes without saying, that I entertain no feelings other than those of kindness and sympathy towards all well conducted medical Colleges which now exist, or which may hereafter be established amongst us, and nothing pleases me better than to hear of their full success.

Gentlemen, I again thank you for the portrait, and have pleasure in presenting it to the Toronto Academy of Medicine.

WALTER B. GEIKIE.

Toronto, April 7th, 1908.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE.

It is probably not known to the majority of the physicians in Canada that there is on this continent the Society of Tropical Medicine. The fifth annual meeting of the American Society of Tropical Medicine was held in the Johns Hopkins Hospital, Baltimore, March 28th.

We are told by the *New York Medical Journal* that in the five years of its existence this Society has proved the centre for the distribution of information about tropical diseases, and has acted as the rallying point for the increasing number of medical men returning from the tropical climates of the world.

At the recent meeting in Baltimore, Mr. D. E. Lantz, of the United States Department of Agriculture; Dr. F. F. Russell, of the Army Medical Museum, and Dr. Terry, of the Rockefeller

Institute, read papers and gave interesting demonstrations. There were present about 100 members and guests.

The *New York Medical Journal*, in its comments, expresses the opinion that the work of this Society is interesting not only to physicians and sanitarians returning from the tropics, but also to all medical practitioners in the lower austral zone of the United States, which comprises North and South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Texas, Arizona, New Mexico, and Southern California. Malaria exists to a greater or less extent in all these districts.

THE CANADIAN MEDICAL ASSOCIATION.

To those who are taking part in the Ontario Medical Association, the announcement that the Canadian Medical Association would be held from June 9 to 11, came as a surprise and somewhat of a shock. Many who desired to work for both meetings find now that they can practically do nothing for the Ottawa meeting.

We understand that the local Committee of Arrangements at Ottawa understood the situation, and chose the dates named with considerable regret, but they found it impossible for certain local reasons, as for instance, meeting of conventions, the Ottawa Exhibition, etc., to select a later date.

We are glad to learn, however, that a fair number from Toronto and Western Ontario will attend the meeting, and assist in making the different sessions interesting.

The meetings in Ottawa have always been good. That city is the capital of Canada, and, therefore, a fit place for such meetings. The profession of Ottawa, with the support of physicians in neighboring towns, have always furnished good programmes, and have always entertained the visiting members in a most hospitable way. The charming personality of the President, and his extensive acquaintance with physicians in all parts of Canada, ought to help to increase materially the members in attendance.

We learn from the Secretary that there will be two chief

sections, General Medicine and General Surgery, and in addition to these there will be one session each for the following sections, all of which will meet at one time: Mental Diseases—Chairman, Dr. W. H. Hattie, Halifax; Secretary, Dr. J. C. Mitchell, Brockville. Eye, Ear, Nose and Throat—Chairman, Dr. Birkett; Secretary, Dr. McKee, both of Montreal. Public Health—Chairman, Dr. C. A. Hodgetts, Toronto; Secretary, Dr. Law, Ottawa. Obstetrics and Gynecology—Chairman, Dr. F. A. Lockhart, Montreal. Pathology—Chairman, Dr. W. J. Connell, Kingston. General Medicine—Chairman, Dr. J. T. Fotheringham; Secretary, J. A. MacKenzie, both of Toronto. Military Surgery—Chairman, Dr. G. Sterling Ryerson, Toronto; Secretary, Dr. Legatt, Ottawa.

The Address in Medicine will be delivered by Dr. Risien Russell, of London, England. The place of meeting will be in the Parish Hall, of St. George's Church, on Metcalfe Street, the Racquet Court and the Carnegie Library.

Further particulars as to railway arrangements, etc., will be given by the Secretary in a circular letter early in May.

TORONTO WATER.

"Truth crushed to earth will rise again," or, as another famous author says, "Truth is like a football. You may kick it about all day, and it will be just as round and full as ever in the evening." Toronto water has done considerable damage of a physical kind, and may do more. But we did not expect that the CANADIAN PRACTITIONER would live to see the professional career of two distinguished bacteriologists disappear, even for a brief moment, beneath its none-too-pure stream! Extreme confusion of thought on the part of the Mayor and aldermen led to their confounding Casandra with Shuttleworth, and another name that shall be nameless with somebody else. They think that you can avert typhoid by ignorance, and that what people do not know or cannot see cannot harm them! This criticism of public servants who do their work faithfully and well, just because they are doing it faithfully and well, is a blow at public

health, and, what is worse, at public morals. Where is Dr. Sheard? Could he not advise the Mayor and aldermen better? The name of this country is Canada, not Russia or Patagonia. We are glad to see the independent stand of the Academy of Medicine. They do well to bestir themselves about this matter, and they must fight on until Toronto has a first-class slow sand filtration plant to give the citizens pure water, and then fight on still until Toronto's sewage is disposed of in a manner worthy of a civilized community.

THE FEEBLE MINDED IN ONTARIO.

At the request of the Ontario Government, Dr. Helen MacMurchy, of Toronto, has made a careful inquiry into the history and present condition of the feeble minded in Ontario, with the view of determining the best methods of caring for them. Dr. MacMurchy has forwarded to the Hon. W. J. Hanna, the Provincial Secretary, two very interesting and important reports.

From these we extract some of her conclusions, as follows:

"The only satisfactory method of dealing with the problem of the feeble minded is to recognize mental defect in children, training them, and giving them all through life the care and supervision that will enable them to earn at least a part of their living, and protect them from the crimes and evils that threaten them in the outside world. Special classes in the Public schools and special institutions for those needing permanent care are required for these.

"Where special classes have been tried in Great Britain, on the continent of Europe, and in the United States, it is found that more than two-thirds of the children who are in them are seriously defective mentally, and will always be dependents. From the special schools then, as a rule, they are taken to a special institution as their permanent home. These children should be taken charge of about the age of six or seven. Some of them can be taught to read, write and do arithmetic. A part of their time should be spent in learning useful trades and occupations. As they grow older they should be treated somewhat

differently, and any of them who can act as helpers, attendants and members of the staff of the institution should be placed in these positions, but the really feeble minded should never be allowed to go out into the world. No training or supervision will ever change the defective mind into a normal mind.

"It is always to be remembered that in providing for the care of the feeble minded the Government and the people are not taking up a new burden. We pay the cost of their maintenance now, while they should pay the cost of their own way partly or wholly by working under supervision. The jails, the Mercer Reformatory, the hospitals, the refuges, and the county poor house have a number of feeble-minded persons as inmates."

THE CANADIAN MEDICAL ASSOCIATION AND A FEDERAL DEPARTMENT OF PUBLIC HEALTH.

At each of the last six annual meetings the Canadian Medical Association has discussed the advisability of having a separate Department of Public Health created by the Dominion Government. Our readers will remember many of the resolutions and reports of committees which have previously been published. Among those who have taken the most active interests in the subject are Drs. E. P. LaChappelle, R. W. Powell, T. G. Roddick, I. H. Cameron, O. M. Jones, Hon. Senator Sullivan, and others.

At the last meeting of the Association, held in Montreal, the special committee on Public Health Department was requested to interview the Government at Ottawa. In accordance with such instructions the committee presented a memorandum to the Prime Minister and the Honourable the Minister of Agriculture, March 3rd, 1908. In this memorandum it was pointed out that during the last decade there has been an increasing demand for governmental recognition of the importance of public health. In England they are moving for a Minister of Public Health. In the United States the Marine Hospital Service has been enlarged into a Public Health Service. The intention of such a department would be the consolidation within it of those matters concerning public health. Among the sanitary

and public health subjects now scattered over several departments, that should be grouped together in a Department of Public Health, may be mentioned the following:

From the Department of Agriculture:—1. Sanitary advice of the Dominion Government. 2. Quarantine. 3. Leprosy. 4. Public Health Works Act. 5. Health of animals. 6. The sanitary part of consensus. 7. Vital statistics.

From the Department of the Interior:—8. Medical side of immigration affairs. 9. Medical side of Indian affairs.

From the Department of Marine:—10. Marine hospital.

From the Department of Inland Revenue:—11. Adulteration of foods and drugs.

Additional:—12. Supervision of sanitary matters in the territories which have no organization corresponding to a provisional Board of Health. 13. Sanitary direction of the service of protecting international waterways. 14. Sanitary supervision as to tuberculosis. 15. National bacteriological laboratory.

We learn from the interesting pamphlet issued by Dr. George Elliott, the general secretary, under the direction of the committee, that the Prime Minister and the Minister of Agriculture were very much interested in the reports and addresses of different members of the committee in support of the same.

Hon. Mr. Fisher, in response to the query of Sir Wilfrid as to whether it were feasible, stated that in his opinion it was, but he thought he could foresee some difficulties in the way of an immediate reorganization and consolidation of the different medical services of the Government.

New York Women's State Medical Association.

The Women's Medical Societies of Rochester, Buffalo and New York City have organized a State Medical Association, which held its first meeting in Rochester last month. One of the most interesting papers was that on "The History of Women in Medicine," which was given by Dr. Martha Wollstein, of the Rockefeller Institute of Research in New York, and Pathologist of the New York Babies' Hospital. This organization will, no doubt, do an excellent work, as do simlar societies in Great Britain, notably the Association of Registered Medical Women.

But women in the profession in Canada who are members of

the British Medical Association, the Canadian Medical Association, the Ontario Medical Association, the Academy of Medicine (Toronto), and other bodies, have frequently been heard to say that membership in these associations, which ought to include all the members of the profession in good standing, is far better than forming separate associations.

Graduates of Queen's.

Queen's Medical Faculty announce the following as graduates this term who have secured the degree of M.D.: C. J. Baker, Newington; W. Beggs, Hallville; H. E. Bend, Kingston, Jamaica; R. M. Bradley, B.A., Boston, Mass.; J. C. Byers, Eganville; S. V. Carmichael, Spencerville, Ont.; F. A. Cays, Kingston; J. A. Charlebois, Hull; J. P. A. Clancy, Lumsden, Sask.; W. H. Cole, Ottawa; T. J. Collinson, Piercefield, N.Y.; H. A. Connelly, B.A., Vancouver, B.C.; N. A. L. Connelly, Vancouver, B.C.; W. F. Cornell, B.A., Kingston; M. C. Costello, Calgary; I. D. Cotnam, Pembroke; T. V. Daley, Kingston; H. Dunlop, B.A., Kingston; R. A. Hughes, Kingston; G. H. V. Hunter, Kingston; J. R. Hurtubiz, St Ann de Prescott, Ont.; J. M. Kelly, Addison; W. D. Kennedy, Ottawa; A. V. Laing, Dundas; A. L. Magill, Kingston, Jamaica; H. H. Millburn, Peterboro'; W. Morrison, B.A., Ashgrove; E. T. Myers, Portland; A. Macdonald, Regina, Sask.; F. B. McIntosh, Edmonton, Alta.; J. F. McDermott, Kingston; N. J. McKinley, Seeley's Bay; C. T. Nurse, Georgetown, British Guiana; C. A. Patterson, Athens; G. H. Patterson, Stella; P. J. Quinn, Oswego, N. Y.; J. E. R. Ramdholm, New Amsterdam, B.C.; T. R. Ross, Abernethy, Sask.; F. R. Sargeant, B.A., Kingston; B. Harty Thompson, Kingston; F. S. Young, Forfar; W. L. Yule, Gananoque Junction.

The medalists are: G. T. C. Nurse, Georgetown, British Guiana, in medicine, and I. D. Cotnam, Pembroke, in surgery.

The Children's Bill.

The medical profession in Great Britain, which has always sought to promote legislation to reform existing laws relating to the physical and moral welfare of the coming generation, is deeply interested in "The Children's Bill," now before the British House of Commons. It is not a party measure, and its mover is Mr. Herbert Samuel. The bill consolidates no less than twenty-two statutes, and parts of many others, besides a number of new provisions.

The five parts of the bill are: (1) Infant Life Protection—embodying and amending the Act of 1897, which was passed to

diminish the evils of baby-farming and the perils of infants put out to nurse; (2) Prevention of Cruelty to Children—strengthening the present laws and facilitating the work of the societies, and constituting overlying an offence; (3) Juvenile Smoking—prohibiting the sale of cigarettes to those under the age of sixteen, suppressing smoking by them in public places, and authorizing the confiscation of their tobacco; (4) Reformatories and Industrial Schools—consolidating the existing laws; and (5) the establishment of special children's courts for the trial of juvenile offenders, the enforcement of the attendance in court of parents, and the revision of the present methods of child-punishment, with especial reference to the unsuitability of common jails.

Mississippi Valley Medical Association.

The thirty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 13, 14, 15, 1908, under the presidency of Dr. Arthur R. Elliott, of Chicago.

Announcement has just been made of the selection of the orators for the coming meeting by the President. The Address in Medicine will be delivered by Dr. George Dock, Professor of Medicine in the University of Michigan, Ann Arbor; and the Address in Surgery by Dr. Arthur Dean Bevan, Professor of Surgery in Rush Medical College, Chicago. The mere mention of these names is enough of a warrant that this feature of the programme will be in every way first class.

The local Committee of Arrangements in Louisville has selected The Seelbach Hotel as headquarters; the general sessions and the section meetings being held in the hotel's large auditoriums.

One of the features of the entertainment projected is a smoker in the famous Rathskeller of the hotel—the finest of its kind.

The McDowell button, so much admired at the 1897 meeting in Louisville, will be reproduced in bronze for this meeting.

American Medical Editors' Association.

The annual meeting of this Society will be held at the Auditorium Hotel, Chicago, on May 30th and June 1st. An extensive and interesting programme has been prepared and every member of the Association is urged to be present and editors of medical magazines, not now affiliated with this Society, are also invited to meet with them.

PROGRAMME OF THE ONTARIO MEDICAL ASSOCIATION.

TUESDAY MORNING, MAY 26TH, 10 A.M.

Medical Section—

1. "Vaccine Therapy in Medicine and Surgery."—W. L. Silcox, Hamilton.
2. "One Year's Experience with the Therapeutic Inoculation of Bacterial Vaccines at the Toronto General Hospital."—George W. Ross, Toronto.
3. "The Opsonic Treatment of the Diseases of the Skin."—D. King Smith, Toronto. Discussion on Bacterial Vaccines, to be led by W. Gibson, Kingston.
4. "Neurasthenia from the Etiological Standpoint."—H. B. Anderson, Toronto. Discussion to be led by J. A. Bauer, Hamilton.
5. "Rare Complications of Pregnancy, with Report of a Case." A. Dalton Smith, Mitchell. Discussion to be led by G. S. Glassco, Hamilton.

TUESDAY MORNING, MAY 26TH, 10 A.M.

Surgical Section—

1. "Conservative Surgery of the Tubes, with Report of Five Cases."—L. W. Cockburn, Hamilton. Discussion to be led by T. Shaw Webster and S. M. Hay, Toronto.
2. "Method of Treatment of Sprained Ankle."—J. Sheahan, St. Catharines. Discussion to be led by F. N. G. Starr, Toronto, and T. H. Balfe, Hamilton.
3. "Obstruction Due to Cancer of the Large Bowel."—H. A. Bruce, Toronto. Discussion to be led by W. Gunn, Clinton, and Henry Howitt, Guelph.
4. "The Surgical Treatment of Compression Paraplegias." A. Primrose, Toronto. Discussion to be led by A. B. Welford, Woodstock, and L. W. Cockburn, Hamilton.

TUESDAY MORNING, 10 A.M.

Section of Preventive Medicine.

1. "Diphtheria Antitoxins as Prophylactic and Curative Agents."—W. Goldie, Toronto.
2. "Medical Inspection of Schools."—Helen MacMurchy, Toronto.

3. "Control of Minor Contagious Diseases."—H. Sinclair, Walkerton.
4. "Precautionary Measures Necessary to Prevent Infection in Typhoid Fever Patients."—J. A. Amyot, Toronto.
5. "Sewage System for Towns and Smaller Cities."—T. Aird Murray, C.E., late of Leeds, England.
6. "Anti-Variolous Vaccines."—Charles A. Hodgetts, Toronto.

TUESDAY NOON.

Clinic and Luncheon at the City Hospital.

TUESDAY AFTERNOON.—GENERAL SESSION, 2.30 P.M.

1. President's Address.
2. Ballot for the Committee on Nominations and Appointment of Scrutineers.
3. Symposium—Arteriosclerosis.
   Pathology—J. J. Mackenzie, Toronto.
   Cerebral Manifestations—Colin K. Russell, Montreal.
   Ocular Manifestations—Hermon Sanderson, Detroit.
   Aortic Arch Manifestations—Thomas McCrae, Baltimore.
   Muscle Manifestations—Harry C. Boswell, Buffalo.
   Visceral Manifestations—J. A. Bauer, Hamilton.
   Treatment—A. McPhedran, Toronto.
4. Report of Scrutineers.

4.30 P.M.—Meetings of Committees—Standing, Temporary and Special.

TUESDAY EVENING.

Smoking Concert at the Yacht Club, Hamilton Beach.

The Committee on Arrangements are providing an entertaining programme.

WEDNESDAY MORNING, MAY 27TH, 9.30 A.M.

Medical Section.

1. "Remarks on the Duties of the Medical Examiners in Life Insurance."—G. S. Glassco, Hamilton.
   "Remarks on the Fees for Life Insurance."—Norman Walker, Niagara Falls.
   Discussion on Life Insurance to be led by W. H. Merritt, St. Catharines; J. H. Howell, Welland; E. M. Hooper, St. Catharines, and T. F. McMahon, Toronto.

2. "Non-Alcoholic Cirrhosis of the Liver."—R. J. Dwyer, Toronto.
3. "Some Points in the Treatment of Puerperal Septicemia."—A. H. Wright, Toronto.

Discussion to be led by H. S. Griffin, Hamilton.

4. "Addison's Disease and Adrenal Insufficiency."—Benson Cohoe, Baltimore.
5. "The Estimation of the Pressure of the Cerebro-Spinal Fluid."—R. D. Rudolf, Toronto.
6. "The Medical Superintendent."—Charles O'Reilly, Toronto.

WEDNESDAY MORNING, 9.30 A.M.

Surgical Section—

1. "Exstrophy of the Bladder, Report of a Case."—F. N. G. Starr, Toronto.
2. "Report of an Extraordinary Case of Foreign Body in the Bladder."—Edwin Seaborn, London.

Discussion to be led by E. B. O'Reilly, Hamilton; George E. Armstrong and A. E. Garrow, Montreal.

3. "The Hyperemic Treatment."—H. P. Lyle, New York City.

Discussion to be led by V. P. Gibney, New York; S. H. Westman, Toronto, and E. B. O'Reilly, Hamilton.

4. "Ulcer of the Stomach."—W. E. Olmsted, Niagara Falls.
5. "Duodenal Ulcer."—A. E. Garrow, Montreal.

Discussion to be led by J. W. Edgar, Hamilton; G. A. Bingham, Toronto, and Robert Lucy, Guelph.

6. "Mechanical Ileus; Operation, Recovery; Remarks on the Diagnosis and Treatment."—George T. McKeough, Chatham.

Discussion to be led by P. Stuart, Guelph; H. P. Lyle, New York, and A. E. Garrow, Montreal.

7. "The Surgical Aspect of Hemophilia, with Special Reference to Hemarthrosis."—Beverley Milner, Toronto.

Discussion to be led by V. P. Gibney, New York; Clarence Starr, Toronto, and George E. Armstrong, Montreal.

WEDNESDAY MORNING, 9.30 A.M.

Section for the Eye, Ear, Nose, and Throat.

1. "Lateral Sinus Suppuration and Cerebellar Abscess."—J. P. Morton, Hamilton.
2. "Tubercular Uveitis."—J. W. Stirling, Montreal.
3. "Glioma."—R. A. Reeve, Toronto.

4. "Clinical Measurement of Relative Accommodation."—Lucien Howe, Buffalo.
5. "Accessory Sinus Disease."—Perry Goldsmith, Toronto.

WEDNESDAY AFTERNOON.—GENERAL SESSION, 2.30 P.M.

1. Address in Surgery—Charles L. Scudder, Boston.
2. Gangrene and Abscess of the Lung—George and E. Armstrong, Montreal.
3. Results of the Bier-Klapp Treatment of Tuberculous Sinuses and Joints at the Hospital for the Ruptured and Crippled, New York City—Virgil P. Gibney, New York, and C. E. Preston, Ottawa.

4.30 P.M.—Business Session, Reports of Committees, Election of Officers, etc.

WEDNESDAY EVENING.

The Annual Dinner to be given in the Royal Hotel, at which the members will be the guests of the medical men of Hamilton.

THURSDAY MORNING, MAY 28TH, 9.30 A.M.

Medical Section—

1. Mouth Breathing—John Hunter, Toronto.
2. Report of a Case of Cerebro-spinal Meningitis, Recovery—A. R. Gordon and Allan W. Canfield, Toronto.
   Discussion to be led by G. S. Glassco, Hamilton.
3. A Plea for Rational Therapeutics—George Acheson, Galt.
   Discussion to be led by V. E. Henderson, Toronto.
4. The Treatment of Appendicitis—G. R. Cruickshank, Windsor.
   Discussion to be led by G. D. Farmer, Ancaster; D. H. Arnott, London; and H. A. Bruce, Toronto.
5. Some Points in the Diagnosis and Treatment of Diabetes Mellitus—Campbell Howard, Montreal.
   Discussion to be led by Graham Chambers, Toronto.
6. Rheumatism—J. C. Meakins, New York.
   Discussion to be led by J. T. Fotheringham, Toronto; and R. V. Parry, Hamilton.

THURSDAY MORNING, 9.30 A.M.

Surgical Section—

1. Pyelonephrosis and Pregnancy—J. F. W. Ross, Toronto.
   Discussion to be led by Henry Howitt, Guelph.

2. Transplantation of the Omentum in Hepatic Cirrhosis—Edmund E. King, Toronto.
   Discussion to be led by T. H. Balfe, Hamilton.
3. Pancreatic Cyst—D. E. Mundell, Kingston.
   Discussion to be led by George E. Armstrong, Montreal; and Clarence Starr, Toronto.
4. Hypodermic Anesthesia—D. Dunton, Paris.
5. Spinal Analgesia—History, Technique, Phenomena, Results—Duncan Anderson, Toronto.
   Discussion to be led by G. A. Bingham, F. W. Marlow, Samuel Johnston, Toronto; and A. H. Perfect, West Toronto.
6. The Third Dimension in the Visualization of Surgical Procedures—N. A. Powell, Toronto.
7. The Treatment of Acute Diffuse Suppurative Peritonitis Without Drainage—C. F. Moore, Toronto.
   Discussion to be led by G. A. Bingham, Toronto; W. E. Anglin, Kingston; and Angus McKinnon, Guelph.

THURSDAY MORNING, 9.30 A.M.

Section of Obstetrics and Diseases of Children—

1. A Fatal Form of Eclampsia—K. C. McIlwraith, Toronto.
   Discussion to be led by J. D. Balfour, London.
2. Obstetrical Technique—Frederick Fenton, Toronto.
3. Some Complications of the Puerperium, report of a case—J. R. Stanley, St. Mary's.
4. Missed Abortion—H. Ferguson, London.
5. Mole Pregnancy with Specimen—C. R Chartiers, Chatham.
6. A Case of Spasmodic Stenosis of the Pylorus in an Infant, with Recovery—H. T. Machell, Toronto.
7. Pyo-pneumo-thorax due to a Fusiform Bacillus — Allen Baines, Toronto.

THURSDAY AFTERNOON, GENERAL SESSION, 2.30 P.M.

1. Address in Medicine—Charles L. Stockton, Buffalo.
2. X-Ray Diagnosis in Medicine and Surgery, with lantern slide demonstration—Lewis G. Cole, New York.
3. Psychiatry in Relation to General Medicine—C. K. Clarke, Toronto.

BUSINESS SESSION.

Unfinished Business, Installation of Officers, etc.

Personals.

Dr. Frederick Guest, of St. Thomas, has been appointed an associate coroner for Elgin County.

Dr. Sam Johnston of Toronto, after a trip to England, France, Switzerland and Italy, returned April 6th.

Dr. James A. Robertson and his son and partner, Dr. Lorne F. Robertson, of Stratford, sailed from Boston for Egypt April 4th.

Dr. A. C. Bennett, who has been doing post-graduate work for about two years in Dublin and London, will return to Toronto in June.

Dr. E. Stanley Ryerson, of Toronto, announces to the Profession that after May 1st, 1908, he will devote himself to the practice of surgery.

Dr. John Stewart, of Halifax, visited his brother in Toronto March 21st, and remained until April 10th, when he left for Montreal, where he expected to remain a couple of days before returning home.

Dr. J. Orlando Orr, of Toronto, after an automobile trip through Italy, Switzerland and France, reached London April 1st. In a letter written from the latter city he stated that he expected to return about May 1st.

Dr. W. H. B. Aikins sailed for Hamburg on April 25th for a two months' vacation in Germany. It is his intention to visit some of the leading medical clinics there, as well as some of the noted health resorts—Carlsbad, Marienbad, Weisbaden and Nauheim.

Dr. G. W. Crosby (Tor., '04), after practicing in the Parry Sound District, went to Europe for post-graduate work. He recently returned to Canada, and is now practicing at 78 College Street, Toronto. He will confine his work entirely to diseases of the eye.

Dr. R. H. Robinson, of Wilton Avenue, Toronto, met with a painful accident March 13th. While walking on a slippery sidewalk he was thrown down by a large dog, and received injuries to his back and left leg. He was confined to bed for about four weeks, and at the time of writing (April 20th) is still somewhat seriously crippled.

Obituary.

HIS EXCELLENCY JOHANNA FREDERICK AUGUST VON ESMARCH.

Professor von Esmarch, the distinguished surgeon and Professor of Surgery in the University of Kiel, died February 23rd, of pneumonia following influenza, aged 85.

WILLIAM McQUEENE TEETZEL, M.D.

Dr. Teetzel, of Cleveland, died at his residence in that city, March 31st, aged 35. The cause of death is said to have been some obscure form of spinal disease. Dr. Teetzel graduated from Trinity University in 1896, and shortly afterwards commenced practice in Cleveland, and up to the time of his illness was very successful.

W. S. ENGLAND, M.D.

Dr. England, of Winnipeg, died April 24th, aged 40. He was born at Dunham, Quebec, and soon after graduating commenced practice in Winnipeg. He was recognized as one of the leading surgeons of Western Canada. He was professor of anatomy in Manitoba Medical College, surgeon in the General Hospital, and consulting surgeon in St. Boniface Hospital. He was attending to his duties as usual up to the evening of April 23, but had an attack of apoplexy about midnight, and died in a few hours.

EDWIN GOODMAN, M.B.

Dr. Goodman, one of the oldest citizens of St. Catharines, and one of the oldest physicians in Ontario, died April 9th, aged 75. Dr. Goodman graduated M.B. from Trinity University in 1855. Soon after graduating he settled in St. Catharines, and became one of the most successful physicians of the Niagara Peninsula. He was surgeon to the 19th Regiment during the Fenian Raid in 1866. He took a great interest in sports, especially lawn tennis and bowling. He also took great interest in public matters, serving as alderman of St. Catharines several years, as Mayor for two years, and as chairman of the Board of Health for eleven years. He was a member of the Public Library and Collegiate Institute for many years, and a coroner for thirty years.

JOHN WILCOX PEAKER, M.B.

Dr. Peaker, of 347 Bathurst Street, Toronto, died at his late residence, April 5th. Dr. Peaker received his preliminary education at the Brampton High School, his medical education in the Toronto School of Medicine, and graduated M.B. from the University of Toronto in 1886. After graduating he engaged in post-graduate work, studying for about two years in Great Britain, and received the double surgeon's and physician's qualification of London. Soon after returning to Canada he commenced practice in Toronto, and was highly successful for many years.

He, unfortunately, suffered much from rheumatism, and had a double aortic murmur for some time. About two weeks before his death he had an attack of apoplexy, followed by paralysis. Dr. Peaker possessed good ability, sound judgment, and was highly respected and much beloved by his patients and friends in and out of the profession.

HON. DR. WILLOUGHBY, M.P.P.

Dr. W. A. Willoughby, of Colborne, died April 28th, aged 64. He graduated M.D. from Victoria University in 1867, and at once commenced practice in Grafton, in West Northumberland County. He removed to Colborne, a village seven miles east of Grafton, in East Northumberland County, in 1873. He was always exceedingly popular, both as a physician and a "man of affairs." He took a great interest in military matters, and was Surgeon-Lieut.-Col. of the 40th Battalion of Infantry. He was a member of the Colborne Municipal Council for eight years, Reeve for seven years, member of the School Board for twelve years, and Warden of the united Counties of Northumberland and Durham in 1884. He was first elected to the Ontario Legislature as member for East Northumberland in 1886, was defeated in February, 1888, was re-elected after the death of the sitting member, Mr. Clarke, in October, 1888, was defeated in 1898, but was re-elected in 1902, and held the seat until the time of his death. He was very popular in the Legislature on both sides of the House, and was for many years Whip for the Conservative party. On the formation of the new Government under Mr. Whitney he was made a Minister without portfolio. He was certainly one of the most popular men in a social way, in a professional way, and in a political way in the Province of Ontario.

HUGH McCALL, M.D.

Dr. Hugh McCall died at his late residence, London, Ontario, April 20th, 1908, aged 64. He was born in the Township of Westminster, Western Ontario, but received his medical education in New York, where he graduated, M.D., in 1870. After graduating he took courses in England and Germany. He then returned to the United States and settled in Lapeer, Michigan, where he was a prominent physician and surgeon for 35 years. Owing to a severe illness he was forced to give up practice and he returned to Canada in 1906, and resided in London with his sister and aged mother (now in her 92nd year).

In January of the present year he presented his splendid collection of medical works to the library of the Western Medical College, of London, accompanied by this message to the students: "Let knowledge grow from more to more, but more of reverence in us dwell." We are told by one who knew him well that while he was esteemed for his rare medical skill by both the profession and the public, "he was still more beloved for his whole-souled kindliness and genuine manliness—truly a man of the Dr. McClure type among his fellows."

Book Reviews.

MINOR MEDICINE: A TREATISE ON THE NATURE AND TREATMENT OF COMMON AILMENTS. By Walter Esser Wynter, M.B., B.S. (Lond.), F.R.C.S., F.R.C.P.; Physician to Middlesex Hospital and Lecturer on Medicine in the Medical School; Examiner in Medicine to the Royal College of Physicians; late Lecturer in Pharmacology and Therapeutics and Examiner in Pharmacy to the Royal College of Physicians. D. T. McAinsh & Co., Toronto. Sidney Appleton, London. 1908.

Dr. Wynter's book will undoubtedly be of great service to many general practitioners, especially during their earlier years in practice; the ailments discussed are those one is frequently unable to find in the medical manuals, and in the management of which students are, as a rule, uninstructed. The treatment recommended for such minor diseases as chilblains, bunions, ingrowing toenails, is eminently practical; and a careful perusal of this little book will not only be pleasant reading, but the practical knowledge to be gleaned from its pages will be worth a small fortune to many a physician.

"INTERNATIONAL CLINICS." A quarterly of illustrated clinical lectures, and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, J. H. Musser, A. McPhedran, F. Billings, Chas. H. Mayo, Thos. H. Rotch, John G. Clark, Jas. J. Walsh, J. W. Ballantyne, John Harold and Richard Kretz, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. I. Eighteenth Series. 1908. J. B. Lippincott Co., Philadelphia and London. 1908.

The above is a volume of about 300 pages, well printed, neatly bound and illustrated by a considerable number of plates and diagrams, several of which are in colors. Under the section of Treatment come articles on Sanitaria, by Lawrason Brown, of Saranac; Notes on Syphilis, by Jean Dardel, of Paris, with ref-

erence to the injection of soluble salts of mercury; and several others of interest. In the Medical division Wilson, of Philadelphia, discusses Paratyphoid Fevers; Rudolf, of Toronto, the normal temperature of the body, and Sir Dyce Duckworth "textural proclivities and immunity the personal factor in medicine." The subjects treated under Surgery are: "Gastric and Duodenal Ulcers," "Diseases of the Gall Bladder," and several others. Under neurology we note George L. Walton on Fracture of the Spine; certain articles on gynecological subjects and pathology are also worthy of attention. Finally, the last 100 pages are devoted to the progress made during 1907, edited by A. A. Stevens, Edsall, Nisbit, and Gus Bloodgood. The plates illustrating these are particularly good and do much to elucidate the text.

TREATMENT OF INTERNAL DISEASES. By Dr. Norbert Ortner, of the University of Vienna. Edited by Nath'l Bowditch Potter, M.D., Visiting Physician to the New York City Hospital, and to the French Hospital; Instructor in Medicine, Columbia University. Translated by Frederick H. Bartlett, M.D., from the Fourth German Edition. Octavo, 658 pages. Cloth, $5.00 net. J. B. Lippincott Company, Philadelphia, London, Montreal.

The scope of this book is treatment, not prophylaxis, only so much of the pathological physiology of the diseases being discussed as bears upon their rational treatment. The reader is shown the importance of mechanical, dietetic, climatic, and all extra medicinal methods, then the applicability of certain drugs, their respective advantage, disadvantage, and limitations, with useful prescriptions from the author's own experience and that of others, leaving the reader better armed to meet casual indications and the various contingencies which arise and require symptomatic treatment.

One of the most attractive features of the book is the citation and description of numerous climatic resorts, the discussion of hydrotherapeutics and all extra medicinal measures, and the judicious reasons for the application of those selected.

Dr. Bartlett has translated the German text into idiomatic English, and without losing the spirit or the details of the original. Climatology, hygiene, and dieteties have been adapted to the needs of the American practitioner, and the prescriptions to conform to the American Pharmacopœia. Where the editor's views differ from the author's, he has selected suggestions from

the American or English clinicians. Such additions have been enclosed in brackets.

It contains a carefully selected list of American resorts and a brief mention of their most important features, with a tabulated list of drugs, many of the tables including those of the various iron compounds, of the iron-containing waters, and of arsenical water, which will prove very useful for ready reference.

ATLAS OF APPLIED (TOPOGRAPHICAL) HUMAN ANATOMY. For Students and Practitioners. By Dr. Karl Von Bardeleben and Prof. Dr. Heinr Haeckel, in collaboration with Dr. Fritz Frohse and Prof. Dr. Theodore Ziehen. Only Authorized English Adaptation from the Third German Edition, containing 204 wood cuts in several colors and descriptive text by J. Howell Evans, M.A., M.B., late senior Demonstrator of Human Anatomy at St. George's Hospital, London, Demonstrator of Operative Surgery at St. George's Hospital, and Assistant Surgeon to the Cancer Hospital, London. Rebman, Limited, 128 Shaftesbury Avenue, London; Rebman Company, 1123 Broadway, New York, and C. E. Wingate, Toronto.

This Atlas of Anatomy supplies a very great want. We have looked through the illustrations and know of none that are equal to them. They are not highly colored and distorted, but are excellent in design and accurate in their description. This is a book to which a surgeon may refer for quick reference and get the information sought. There are the transverse sections showing the organs as viewed in that manner, as well as dissected specimens. The dissected specimens are not spoiled by being all marked up, but indicating lines run from each part to the name placed at the border of the cut, not in any way interfering with the cut itself. It is impossible to individualize these specimens. The nomenclature is the one most usually employed amongst the English-speaking nation, and in that respect differs from the original German work, which is the B. N. A. This will undoubtedly be changed to the B. N. A. nomenclature in subsequent editions.

All practitioners who do surgery feel the need of ready reference to anatomical specimens or plates, and this Atlas certainly supplies that need. The Rebman firm have always excelled in their illustrations, and in this particular volume they have still further increased their reputation. The press-work and typography are all that can be desired in such a volume.

PRACTICAL FEVER NURSING. By Edward C. Register, M.D., Professor of the Practice of Medicine in the North Carolina Medical College. Octavo volume of 352 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $2.50 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

In the preparation of this volume the object has been to present to nurses a working text-book that will completely cover the field of practical fever nursing. A nurse, before she can intelligently care for a fever patient, must have some knowledge of the disease and its medical treatment. She cannot know the cause and significance of many of the symptoms unless she knows something of the pathologic processes that are going on within the body, nor can she anticipate all that is expected of her by the physician unless she is at least partly familiar with the history and treatment of the fever which she is nursing. For this reason it was necessary in the preparation of a work of this kind to incorporate and describe in as non-technical a manner as possible the pathology of the different fevers, their prognosis, and the various methods of treatment.

Selections.

Passive Hyperemia.

B. M. Bernheim, Baltimore (*Journal A. M. A.*, March 14), describes the Bier method of using hyperemia by cupping for therapeutic purposes. Cups of all sizes to fit every part where the method may be desired to be applied have been devised, and the suction is produced by means of a rubber bulb. The applications, for example, in a case of carbuncle, previously opened, last five minutes, the pressure being carefully regulated; then the cup is removed and the exudate gently sponged away with a piece of gauze, after which the process is repeated after two minutes' rest, and this alternate cupping and resting is kept up for from thirty to sixty minutes, when the part is cleansed and a simple wet dressing applied. The patient is again treated the following day; if a crust has formed, as over a sinus, it is carefully removed with a blunt instrument and the cupping repeated as before. The pus will usually be found to decrease each day and the granulations to become healthier, firmer and less likely to bleed. The improvement continues each day, the exudate decreases and the case progresses toward recovery. In regulating the pressure, a bluish-red tint should always signify the limit; too much pressure, even though exerted without pain, may induce hyperemia amounting to stagnation, obviously not the end desired. Experience shows that the first few days of the treatment are most important; therefore, during that time the cupping should be done as above directed; later, as the condition improves, the length and frequency of the treatments may be reduced. Squeezing and massaging of the parts to get out the remaining pus is not allowable, neither is curetting. It is best also to avoid the use of the probe or of splints, and the patient should be advised to use the affected member. Frequently patients present themselves early in the infection (as in beginning carbuncle, ischiorectal abscess, and bubo) before suppuration has appeared, only the usual redness, swelling, tenderness and infiltration being present. Such cases should be treated as described, but without incision, as resolution sometimes occurs without the use of the knife. When, however, incision is demanded, a cut from 1 to 1.5 cm. long should be made and the cup applied at once. In cases of bone tuberculosis, sequestra are sometimes drawn out; at other times they do not come away and are best left undisturbed, as Bier has observed that they sometimes unite with the healthy bone. The formation

of cold abscesses is not to be dreaded, but looked on as a normal process in the course of the disease. They should be promptly recognized and followed by the usual incision and cupping. Curetting, probing or iodoform injections increase the chances of infection, and immobilization is not advised. In acute mastitis, to avoid pain, the diameter of the cup should be at least 1 cm. greater than that of the breast, and when the breast is engorged with milk and much pus is also present, and very little comes away, a small cup should be applied over the nipple, and incision made after the treatment, simply to draw off the pus and milk. This is only necessary in the presence of pus, and will hardly be needed more than two or three times. While recognizing that there are cases unsuited to this treatment, Bernheim claims for it certain advantages, viz.: 1. Relief of pain, which is one of its most striking features. 2. Rapidity of cure, the disease being materially shortened. 3. Preservation of function. The tuberculous joints are not immobilized, healing taking place with motion very frequently. The wide radial incisions are avoided in mastitis; hence a minimum of the scar tissue that often interferes with the function of the gland. 4. Discarding of the drain, itself a distinct advance. 5. Simplicity. The physician, as well as the surgeon, can use the method successfully.

Chloroform Anesthesia.

This drug is constantly losing ground, except in obstetrical practice, as a method of general anesthesia. In recent literature, the chief references are to early and late deaths after chloroform, the effect of chloroform on the viscera, the importance of giving this drug in exact doses, its mixture with oxygen and ether to diminish its dangers. All of these subjects have been previously discussed in *Progressive Medicine*. I find nothing new to add.

In my own experience I find that there are occasions when chloroform is indicated, either as the only anesthetic, or, now and then, in combination with ether. In the Rochester Clinic, in 1905, Alice Magaw found it necessary to give chloroform 133 times, as compared with ether 2,847—a proportion of about 1 to 20. This is a larger proportion than that in which I found it necessary to use chloroform.

Alcoholics with thick necks take ether at first badly, and the addition, now and then, of a few drops of chloroform during the beginning of the anesthetic lessens the stage of excitement and the muscular rigidity which produces cyanosis. In cases of peri-