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TWO CASES OF STEEL IN THE INTERIOR OF THE EYE AND THEIR SUCCESSFUL TREATMENT.*

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MANY, perhaps all of us, can recollect how hopeless we used to be in the presence of a piece of steel in the interior of the eye. Such an accident was generally looked upon as synonymous with the enucleation of the eye, or if not, a long season of suspense and the constant fear of sympathetic ophthalmia.† However, I can say regarding this latter disease, sympathetic inflammation, that of this justly dreaded affection I have not the same fear as oculists in general seem to have, for I have succeeded in saving eyes which have suffered from the milder, and also from the worst, forms of sympathetic disease.

Judging from the literature of this affection, I am alone, apparently, in expressing such full confidence in an ability successfully to treat sympathetic inflammation.

Returning, however, to the subject of this paper, I can safely say that this feeling of inability to do anything regarding eyes injured by pieces of steel is now done away with, owng to the *x*-rays and Haab's magnet, for through them we can be sure of their presence and locality, and of the means of their removal. My remarks will be founded upon two of my cases.

In one which occurred several years ago, most opportunely the Haab's magnet had just been received. The late Dr. McMaster and myself tested it a few days after its arrival. The next day, almost, a man with a piece of steel in the interior of his eye presented himself.

The late Dr. McMaster by the *x*-rays accurately located it in the vitreous. It had in its passage wounded the inner third of the cornea, iris and lens. The magnet, mounted on a movable stand, was applied to the cornea a little to the inner side of the centre. It acted, and the piece of steel presented itself through the outer iris. There it lodged, and the magnet, though placed between the lips of the wound in the cornea, could not budge it. I now elongated the wound to the opposite corneal margin, just in front of the piece of steel. Now the magnet quickly removed it. This last elongation of the corneal wound allowed me to draw upon it in

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†'The Combined Treatment in Diseases of the Eye,' by G. Herbert Burnham, M.D., Tor., F.R.C.S., Edin., Professor of Ophthalmology and Otology at the University of Toronto, etc., Toronto, Can., by H. K. Lewis, 136, Gower St., W.C., London.

a straight line and thus successfully to take it out, whereas before doing so I failed on account of pulling at an angle.

This exemplifies the necessity of being patient and trying different lines of traction. Like a flash does the steel, when it comes out, appear on the tip of the magnet. In this case there was necessarily much disturbance of the various structures, and though granting an aseptic foreign body, still there was a natural fear of losing the eye. Owing to an unavoidable delay several days elapsed before the magnet was used. It is sometimes advocated to make, in this form of case, an incision in the sclerotic back of the ciliary processes and through this opening remove the piece of steel by the magnet.

I did have difficulty in saving the eye, but finally, after two months, it recovered, being perfectly quiet. Tn., bright perception of light with a good field. I gave iodide of potassium and mercury, internally, and kept upon the eye without cessation a large piece of ice. This was always put in a sling of cheesecloth and laid upon the closed eyelids with a thin pad intervening.

The use of ice in a rubber bag is wrong, rather, a much inferior method. The cheesecloth enables the eye always to have the effect of the full chill of the ice, whereas using the bag, the latter is often only filled with cold water, the ice having melted. The water, as the ice in the cheesecloth melts, runs away, and hence the ice is always in contact with the eye, and also it can be noticed when the bulk of ice is much lessened and thus put on a fresh piece without any delay. In this way the eye was kept thoroughly chilled for at least six weeks. This condition was a great check to the subsequent inflammatory changes and so limited them as to enable the eye to recover therefrom. My last information was, that the eye was quite quiet and the vision impaired by the corneal scar and opaque capsule.

The second case was about one year ago, and was that of a man whose eye was wounded by a piece of steel, which penetrated the outer cornea and iris, and lodged midway between the lens and ciliary body without apparently affecting either of them. A delay in getting the magnet caused an exudate to surround the steel and pain began. However, warned by previous experiences, I made an opening in the corena opposite to it and finally landed the piece of steel. In this case, though I knew its position and the condition of the surrounding tissues, still one hour and a quarter elapsed before the steel sprang out and attached itself to the tip of the magnet. My first case took in all two hours. The magnet was fully acting upon the steel, as evidenced by the jolting movements of the eyeball and head. Hence the necessity of perseverance if you wish to succeed. This case when last heard from had good vision with the eye quite quiet. I am informed that I was the first in the city to use Haab's

magnet. As I used it such a short time after its arrival, it seems to be a correctly-made statement.

The shorter the time after the lodgment of a piece of steel in the interior of the eye the magnet is used, the better the hope of recovery, is allowed by all of us.

Alloys of iron may be wholly or nearly non-magnetic. The alloy of iron with manganese and the effect it produces in the destruction and alteration of its susceptibility to magnetism is interesting and surprising. Without going any further into the magnetism of alloys of iron, it is stated as a fact that special steels differ widely in their behaviour when placed in the magnetic field. This ought to be borne in mind, although it is again stated that all of them affect only slightly the question of removal from the eye.

INHERITED SYPHILIS.*

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THIS subject is of sufficient importance to justify the attention that can be given to it in a short article. It is now admitted that the Spirochæta pallida, discovered by Schaudinn and Hoffman in 1905, is the cause of the disease. Mr. Jonathan Hutchinson pointed out many years ago, and long before the organism had been discovered, but assumed to exist, that unless a child brought the germ with it into the world, or got it very soon after birth, it did not inherit nor acquire syphilis. If either of the parents had previously suffered from syphilis, the child might inherit a weakly constitution, though not the disease.

I. The Terms Employed.

Of late there has been a good deal of discussion on the terms congenital syphilis, hereditary syphilis, and inherited syphilis. The third is the more accurate expression. The term "congenital" is not always true when applied to this disease, as the child may be syphilitic and yet not congenitally so. The term "hereditary" should be employed for such conditions or states as may descend through a number of generations, which is certainly not the case with syphilis. The term "inherited" means that a child is born with the disease, or acquires it at birth, manifesting the disease while still very young. This is, therefore, the most accurate term.

The cause of syphilis is a special kind of protozoon of spiral form, with a flagellum at each end. It is very motile, with three forms of

* Abstract of a Post-Graduate Lecture delivered at The Toronto Orthopedic Hospital.

motion, a lashing, spiral and to-and-fro. With Giemsa's fluid it stains a pink color, while the Spirochæta refringens stains a dark purple with the same fluid.

II. Mode of Transmission.

It is now established that a syphilitic father cannot impart his disease directly to his offspring. It is not possible for the spirochæta to be present in the spermatozoon, grow and multiply in it and not destroy it. Further, Colles's law has borne the test of time that a syphilitic child cannot infect its mother whom it nurses. It would appear as quite clear that inheritance is invariably through the syphilized mother.

If the disease is active in the mother the infection may penetrate into the placenta and infect the fœtus, often causing death. In other instances where the disease is not very active either through time or treatment, the spirochæta may not thus reach the placenta and fœtus. At the time of labor, however, as the placenta begins to separate, its surface may become infected, and the infection find its way to the fœtus through the umbilical vein. In such cases the exanthematous stage may occur a few weeks to two or three months after the birth of the child. The separation of the placenta corresponds with the chancre in ordinary cases.

It was once held that in Colles's law the mother had acquired the disease from her child *in utero*, but it has been shown that this is not possible. The only remaining conclusion is that the mother is first affected and then gives the disease to her child through the placenta during gestation, or at the time of birth, by the separation of the placenta.

Whether the disease can be transmitted to the third generation or not is still a disputed question. Mr. Hutchinson collected eight instances of persons who had inherited syphilis, but whose children did not show any evidence of the disease. The late Dr. R. W. Taylor recorded three instances of what he regarded as descent to the third generation, and Edmond Fournier has collected 59 instances of what he regards as transmission to the third generation.

It is well known that a person as old as 25 years may show active secondary symptoms from inherited syphilis. This fact would render the transmission to the third generation a possibility on purely scientific grounds. But more evidence is required before a definite conclusion can be arrived at.

III. General Results.

The mortality among syphilitic children is very high, and the morbidity still higher. It must be remembered that the sores about the child's mouth and anus are highly infecting, as the discharges from these contain

the spirochætes. Among the symptoms may be mentioned brown macular spots, pompholyx, stomatitis, snuffles, wasting, enlarged spleen and liver, epiphysitis, bone nodes, bent bones. In the earlier years the tibia may become thickened and painful. At and after the sixth year there is marked liability to flattened nose, square forehead, lines from the mouth, short figure, and pallor. During the second dentition the three signs pointed out by Mr. Hutchinson, namely, notched incisor teeth, interstitial corneitis, and syphilitic deafness, are to be expected. There may be destruction of the hard or soft palate, ulceration of the skin, caries of bones, and a characteristic form of dactylitis.

IV. Lesions of the Bones.

In the bones some very characteristic lesions are found in cases of inherited syphilis. One of these is epiphysitis. This is often an early symptom of the disease, and gives rise to what has been called pseudo-paralysis. It is present in from 10 to 15 per cent. of all cases. It is contended by some that there may be a syphilitic pseudo-paralysis without the presence of epiphysitis, as no tenderness nor swelling can be detected at the ends of the bones in some instances. Such examples of paralysis, whether with or without the epiphyseal bone lesion, usually do well under proper treatment.

The long bones, especially the tibia, may present marked deformity, as irregular enlargements, or a certain degree of curvature, caused by chronic osteo-periostitis. This condition is known as syphilitic osteitis deformans. There may be other stigmata of the disease, but in some instances this almost painless deformity of the bones may be the only manifestation present. The enlargement may be quite massive, or confer upon the anterior border of the tibiæ a sabre-like appearance. These changes in the long bones are frequently associated with mental defects in the children. This form of syphilitic osteitis deformans should be distinguished from Paget's osteitis deformans. This may be done by noting that in the syphilitic disease it comes on while the patient is quite young, that it is not painful, that it improves under anti-syphilitic treatment, that the tibiæ most frequently suffer most, there are often bosses on the bones, there are usually other indications of syphilis, there is no tendency to malignancy. In Paget's osteitis deformans there usually is severe pains, the femora are often affected, the patients are older, there is a tendency to malignancy, and antisyphilitic treatment is not effective.

In the bones of the skull there are some important changes found. On the frontal and parietal bones there may be deposits of vascular spongy bone. These bosses may also occur in rickets, and are indis-

tinguishable from each other, though anatomically they differ. Craniotabes, or thinning of patches of the cranial bones, occurs mainly in syphilis, but may also be met with in rickets. This is also frequently associated with laryngismus stridulus, but this again is common in rickets. The absorption of the cranial bones may be very extensive.

V. Changes in the Teeth.

In the teeth there are certain deformities in the permanent set that merit consideration. The lower central incisors are notched and the upper incisors are diminished in size and usually screwdriver shaped. These changes are due to an arrest in their development which was pointed out long ago by Mr. Hutchinson. There is also a lack of development in the sides of the crowns, rounding off the cutting edges. The notching is caused by the arrest of development of the central columella, while the rounding is due to defect in the lateral columellæ, there being three of these for each incisor. Many years ago Mr. Henry Moon described a deformity in the first molars. These are reduced in size and dome-shaped, caused by a dwarfing of the central tubercle of each cusp. These changes may appear in the molars, though the incisors are normal. The teeth of children with inherited syphilis are apt to be rather far apart owing to the lack of development in their lateral columellæ. The characteristic notching has been noted a few times in the temporary incisors. So that the rule that it is found only in the permanent teeth does not always hold good. The notching has also been noticed a few times where there was no taint of syphilis.

VI. Diseases of the Joints.

Inherited syphilis may cause very serious disease of one or more joints. Synovitis may occur. It sometimes attacks the joints irregularly and sometimes symmetrically. This affection of the joints has been observed by many, but notably by Dr. George F. Still and Professor Lorenz.

A rather obscure but very interesting form of joint affection in syphilis of children is a form of osteo-arthritis, or the osteochondritis syphilitica of Wegner. In this complication the joints usually become affected successively, but the disease does not appear to be progressive in character, leading to the destruction of the joints. It generally becomes stationary, even though treatment has not been resorted to. There is some thickening of both the bones and the soft parts. As the result of these changes there is limitation of movement which may be permanent, with a certain degree of enlargement. Under the best of hygienic conditions and the most careful treatment these changes are very chronic and obstinate. When

fibrous adhesions are formed the joint is most likely permanently impaired. There is proliferation of the cartilage cells, ossification at the epiphyses, and thickening of the perichondrium and periosteum.

VII. Visceral Manifestations.

Enlargement of the spleen is one of the most constant of the many visceral lesions. It is met in at least 50 per cent. of all the cases. Some put its occurrence as high as 75 per cent. When this is met with in children too young to be the victims of rickets it is a valuable aid in forming a diagnosis. The poison of syphilis produces some irritation of the spleen, as distinct inflammatory changes have been found in the organ and its capsule. In later stages there may be the formation of a good deal of fibrous tissue both in the capsule and throughout the spleen. Gummata are very rare in this organ.

Nephritis has been noticed in connection with inherited syphilis by Drs. Guthrie, Sutherland, Holt, Walker, Massalongo, Stroebe, Carpenter, Sawyer, and others. There seems to be very little doubt now remaining but that syphilis may be a cause of nephritis, both in the child and in the adult. The form which the disease assumes is that of the interstitial type with a certain amount of parenchymatous changes. In recent cases the stroma of the kidney is infiltrated with small cells in areas. There is also the formation of new connective tissue. The small arteries around the glomeruli tend to thicken. Catarrhal changes may exist in the tubes, which may also contain hyaline casts. There may be also minute hæmorrhages into the substance of the kidney. In the advanced cases the organ presents all the appearances of the granular contracted kidney of the adult, with its distorted shape, adherent capsule, dilated pelvis, thin cortex, thickened blood vessels and glomerular capsules, obliterated tubules, atrophied glomeruli, and tubular cysts.

Dr. Bradley, of Manchester, in 1871 recognized the condition and successfully treated it. This is the first case on record. The frequency of this complication is not known, but Speiss gives it as 10 in 34 children with inherited syphilis.

The suprarenal glands suffer about once in every eight cases. The changes have been studied by Virchow, Hecker, and many others. There may be an increase in size due to cell infiltration, and the formation of connective tissue. This new growth is very liable to undergo fatty degeneration. The organ in time may be changed to a quantity of oily looking matter and granular debris.

In the liver similar changes have been found. At first there is a cellular infiltration and the formation of some new connective tissue. This causes more or less enlargement of the organ, as is the case in the early

stage of syphilitic disease of the spleen and adrenals. Later on these changes give place to atrophies and there may ensue a genuine fibrosis or cirrhosis of the liver. This cirrhosis of the liver may be coincident with the enlargement of the spleen.

The heart may suffer in various ways from inherited syphilis. Myocarditis has been observed a number of times. The endocardium may also be affected. New formation of muscle has been met with somewhat in the same way as new formation of bone, as the result of irritation produced by a syphilitic lesion. The small arteries of the heart may be thickened and there is sometimes found a well-marked cell infiltration into the myocardium.

The peritoneum may become involved in disease. There are a few cases on record of infants suffering from peritonitis which appeared to be due to syphilis. The tenderness and ascitis disappeared under appropriate treatment. Cirrhosis of the liver with abdominal ascitis has been met with in the fœtus *in utero,* as in the case reported by Dr. Naish, of Sheffield, where the intestines were matted together, the liver showed intercellular cirrhosis, there was ascitis, and the peritoneum presented the appearance of chronic inflammation. West, in his "Diseases of Children," mentions the case of a syphilitic infant whose abdomen became very tender and distended with fluid, both of which disappeared under treatment.

In the mouth, pharynx, naso-pharynx, and larynx there may be deep-seated ulceration and necrosis of tissues. The cartilages of the larynx have been known to be destroyed more or less completely. The lungs have been found in a state of splenization. The capillaries were dilated and the alveolar walls thickened. The alveoli were stuffed with cells. The well-known snuffles require no special explanation. It is caused by a syphilitic catarrh of the mucous membrane, a specific rhinitis, with infiltration and thickening of the tissues. This condition is found in about 70 per cent. of all cases. It may occur in other conditions, such as ordinary coryza, among idiots and mongols, when adenoids are present among the very young, etc. The snuffles may pass away in a few weeks or months unaided by treatment.

Including the testes and ovaries with the viscera, it may be mentioned here that these organs are occasionally involved. They undergo the usual changes of cell infiltration and new connective tissue formation, to be followed later on by atrophy and cirrhosis, and the development of the condition known as infantilism, if the orchitis or ovaritis is double, at a period when the sexual characteristics should be pronounced. Syphilitic orchitis happens in about 7 per cent. of all cases of the inherited disease. These organs have also been known to be the seat of gummatous forma-

tions. These morbid changes may occur during the early weeks of life. Orchitis in an infant is very indicative of syphilis.

VIII. Adenitis.

The victims of inherited lues often suffer from enlargement of the lymphatc glands. This condition is not of much value as a diagnostic sign, as many children present enlarged glands who have no taint of syphilis. The condition, however, may put one on his guard, especially if the epitrochlear glands be found enlarged. The enlargement of the glands becomes important corroborative evidence if there be concurrent keratitis, osteitis, arthritis, or skin lesion. When a group of glands enlarge considerably from a syphilitic cause it is usually a late manifestation. This is the opinion held by such authorities as Holt and Hutchinson.

IX. Skin Affections.

Some form of skin eruption occurs in 70 per cent. or over of cases of infantile syphilis. The true syphiloderms are frequently accompanied by ordinary skin lesions. There may be a common eczema about the ears and a true syphilitic psoriasis on the face. If the care of the child is bad the various syphilitic skin affections through wet, dirt, and irritation may come to so resemble ordinary skin inflammations and eruptions as to be quite indistinguishable.

The most usual forms of skin affections caused by inherited syphilis are roseola, psoriasis, erythema, rhagades, pemphigus, hæmorrhagic exanthemata, acne, impetigo, ecthyma, and ulcerations. Of the foregoing it may be said that the psoriasis is very characteristic. "It consists," says Osler, "of bright-red or copper-colored infiltrated areas on the palms of the hands and the soles of the feet, covered by white, dry scales, which are easily detached, leaving a collarette at the periphery."

The erythema may be accompanied by true ulceration, causing permanent scarring. When the rhagades or ulceration is caused by gummata the process is usually rapid, a few days may cause great loss of tissue, the edges are sharply cut, irregular and serpiginous, the ulcers are usually deep, the scar is at first brown, becoming white from centre to periphery, and the ulceration is generally asymmetrical.

Pemphigus neonatorum is a very characteristic lesion. It is usually on the palms of the hands and soles of the feet. It may be present at birth or appear soon thereafter. It is at first a bluish-red infiltration, but vesicles and bullæ soon form. The epidermis then becomes white, while the true skin beneath is of a port wine reddish color. The exudate soon becomes purulent.

The other skin affections, the acne, impetigo, ecthyma, or hæmorrhages are not so pathognomonic, but, taken with other conditions, may aid in the diagnosis.

X. The Eyes and Ears.

The eyes are frequently affected at an early stage of the disease with choroiditis, or choroido-retinitis. The eyes may be seriously damaged as the result of these inflammations. Iritis is much less common, but may appear during the eruptive stage. Keratitis seldom appears under the sixth year, but from this age to that of puberty, or later, it is not uncommon. It is the most characteristic eye disease met with in inherited syphilis. It begins as a diffuse haziness in the centre of one cornea. There is dimness of vision and irritability of the eye. This haziness is made up of a number of minute punctate deposits, and in a few weeks the whole cornea is involved, giving it a cloudy, milky, whitish, or ground glass appearance. The ciliary region is congested. There is fear of light. The second eye soon passes through the same changes. Eye symptoms appear in some form in about 25 per cent. of all cases.

The ears are subject to certain syphilitic inflammations. Otitis media may result from an extension of disease from the naso-pharynx. Later in life, or during the second dentition, there may come on a steadily progressive deafness of labyrinthine origin which may end in complete loss of hearing.

XI. The Nervous System Complications.

In no part of the body does inherited syphilis work such ravages as in the nervous system. The disease attacks this system in several ways and the consequences are far-reaching and disastrous. Epilepsy, convulsions, tabes dorsalis, paresis, arrested mental development, and meningitis are among the progeny of inherited syphilis.

As pathology becomes clarified by better knowledge of morbid changes and the various infections, it becomes established that syphilis is not often a cause of pia-arachnoid meningitis; but there are cases on record with attached autopsies which confirm the belief in the possibility of its occurrence. Thickening and adhesions of the pia have been found that point clearly to a meningitis as the cause. Then, also, there are some known cases of hydrocephalus due to syphilis. Such cases depend upon a prior meningitis. Sir Thomas Barlow has recorded a typical case of syphilitic meningitis.

The brain may suffer in inherited syphilis in several ways. The cortex may undergo sclerosis, there may be hydrocephalus, or vascular

disease causing hemiplegia. These cerebral manifestations are more frequent than is generally supposed. Dr. G. F. Still states that 10 out of 15 cases of inherited syphilis under his care had some form of cerebral lesion. Dr. G. E. Shuttleworth, formerly of the Royal Albert Asylum, uses the following language: "Degenerative changes due to this cause may, indeed, manifest themselves early in life and give rise to cranial osteitis, meningeal inflammations and eclampsia, epileptic and paralytic symptoms so often associated with mental defect in children, and frequently assigned as its cause, though more correctly to be regarded as links in the chain of causation."

The most characteristic form of mental disturbance resulting from inherited syphilis is that form described by Dr. Clouston in 1877 under the term juvenile general paralysis. It is no longer necessary to argue that this form of mental disease is due to syphilis. Such authorities as Mott, Watson, Shuttleworth, Ferrier, and others are all agreed upon this point. Dr. Mott says that it is necessary to look into the family history with very great care. "It is remarkable how often one found absolutely no signs of syphilis on the body of a juvenile paralytic patient suffering from general paralysis, whereas brothers and sisters showed well-marked signs." Dr. Shuttleworth again puts the case thus: "I am inclined to think that inherited syphilis is a more frequent factor in the production of mental defect and abnormality in childhood than can be demonstrated from the institution statistics I have referred to, and to agree with Fournier that many cases of impaired mental development, such as are met with in children relegated to special schools, have their origin in an inherited syphilitic taint, normal brain development having been interfered with by osteitis causing cranial thickening, by meningeal indurations or by localized cerebral sclerosis."

Juvenile tabes is another disease of the nervous system that owes its origin to inherited syphilis. A man would not be living up to the knowledge of to-day who took any other view of its origin. This disease occurs about once to every ten times we meet with juvenile general paralysis. All the evidence proves that juvenile tabes follows syphilis, inherited or contracted in the early years of life. In the inherited form of syphilis tabes comes on earlier in life as a rule than when the syphilis is acquired shortly after birth. Tabes following acquired syphilis in the young is much less frequent than tabes as a sequel to inherited syphilis, perhaps in the ratio of about 1 to 8 or 10. It occurs with about equal frequency among boys and girls. This is accounted for by the fact that while syphilis is much more common among men than women, the disease is about of equal frequency in the two sexes when it is inherited. This explains why as many girls suffer from juvenile tabes as boys. The symptoms are those well known and classical to tabes. In its clinical features there is no sign or symptom which occurs in adult tabes that has not been

also described in juvenile tabes. These views might be fortified by quoting from such writers as Ferrier, Nonne, Kutner, Dydynski, Mingazzini, Marburg, Kalischer, Lasarew, Hirtz, Alzheimer, Skala, Raymond, etc. Juvenile tabes must be sharply distinguished from pseudo-tabes caused by multiple neuritis, and Friedreich's disease.

XII. Diagnosis.

An early diagnosis of inherited syphilis is of prime importance from the standpoint of treatment. In at least 75 per cent. of all cases the symptoms, more or less complete, appear within the first three months, and in about one-half within the first four weeks. By being on the alert for the many complications as already mentioned, there need not be many cases overlooked. The diagnosis is already summed up in what has been said. The serum reaction may soon prove a great aid in diagnosis.

XIII. Treatment.

The treatment of syphilis in the young is simple in theory, but often very difficult in practice. Many of these patients are in an extremely debilitated condition.

The first thing is to secure the best hygienic conditions possible under the circumstances.

The feeding should be looked into. There is no danger to the mother to nurse her own child, even though she show no symptoms herself. Colles's law may be relied upon. If the mother cannot nurse the child it cannot be nursed by any other on account of the risk of imparting infection.

With regard to drugs, there is but one, namely, mercury. Here, as in the adult, the iodides are useful in the later stages, but mercury alone is curative for all lesions containing infection, or the organism of the disease.

Grey powder in doses of half a grain three times a day may be given to a baby a few weeks old. If any diarrhœa occur a little aromatic chalk powder may be ordered with it, or minute doses of compound ipecac powder. Some prefer calomel in doses of one-twelfth to one-sixth of a grain two or three times daily. If this irritate the bowels small doses of opium may be combined with it. Liquor hydrargyri perchloridi may also be employed in doses of 2 to 4 minims thrice daily. This may be combined in various ways to lessen the risk of diarrhœa.

When prompt action is required, owing to the severity of the symptoms, inunction should be had recourse to. A piece of mercurial ointment of about 15 grains should be gently rubbed into the body over the

abdomen, the inner aspect of the thighs, or the arms in the evening, and a flannel bandage applied till morning, when it should be carefully washed off with warm water. If used in this way the results are excellent and there is but little risk of dermatitis.

The intramuscular injections and the fumigation methods of administering mercury are not very suitable for children, and are not so easily managed as those already mentioned.

The duration of treatment is of much importance. So high an authority as Mr. Hutchinson advises that it be discontinued as soon as the symptoms disappear. But as this might happen in a few weeks, the time must be regarded as too short. It may be laid down as a rule that treatment should be continued for about one year, watching the child with the closest attention, so as to guard it against any untoward effects from the mercury.

The combined treatment with mercury and the iodides is recommended by many. Where it is desired to secure quick results the combination is often more effectual than mercury alone. It must be borne in mind, however, that the iodides do not cure syphilis.

Atoxyl is now claiming much attention and may soon take a leading place in the operation of syphilis.

The concurrent marasmus and debility calls for careful feeding, change of air, tonics, cod liver oil, and all means at our command to restore the health of the child.

ON THE CAUSATION AND TREATMENT OF DIABETES.*

By Dr. ARNOLD LORAND, of Carlsbad.

DIABETES is found most frequently amongst those who are great feeders on meat, especially if they also take much carbohydrate food, e.g., sweets. Even dogs can become diabetic with such a diet. One of those animals was a large Bernardine dog, which was fed very richly with meat and sweets. Another was a poodle, whose sire and dam were related to one another as father and daughter. This animal was of weak mental development, and thus illustrated the consequence, as in man, of intermarriage. Diabetes is a frequent result in such cases. The children of diabetics very readily exhibit glycosuria, as we have shown in a paper published in the *Practitioner* several years ago. These children, after puberty, have a diminution of their tolerance for amylaceous food. Therefore, the practical lesson is to restrict the sweets in their diet. It is a fact not to be denied that diabetes, like Graves' disease, has most frequently a hereditary basis. Graves' disease, as we have shown in previous

* A lecture delivered before the Glasgow Medico-Chirurgical Society on 17th October, 1907, *Glasgow Medical Journal.*

works, stands in close relation to diabetes. Why do persons or animals who take much meat and sweets in their diet for years develop diabetes so frequently?

The cause of this is, that such a diet tends to alter those organs which play an important pathogenic rôle in diabetes, especially the pancreas and thyroid. The pancreas aids the digestion and assimilation of a diet of such a kind by certain ferments. But it has also been found by Sobolew and Professor Ebner that after abundance of amylaceous food the islets of Langerhans in the pancreas can be found in animals diminished or otherwise altered. On the other hand, meat food in quantity is apt to produce important alterations in the thyroid, on the basis of the experiments by Chalmers Watson, of Edinburgh. The importance of the pancreas in diabetes is shown conclusively through the experiments of Professor Mering and Minkowski, who were able to produce diabetes in every dog whose pancreas was extirpated. Later on it has been shown, especially by Opie, Weichselbaum, and Stangel, as well as many others, that diabetes can be found also in cases where the secretory parts of the pancreas are not altered, and only that part of the pancreas is changed which was first described by Paul Langerhans in his "Thesis" of 1869. He described islets in the pancreas which have quite a different anatomical and histological structure from the other parts of the pancreas. It is true that there have been found many cases of diabetes where these islets were apparently not changed, although we must remember that the finding of an apparently intact glandular formation does not show that this gland has been producing its internal secretion during life. As shown by Pawlow, the pancreas secretes upon nervous stimulation, and after death it is difficult to find if these nervous impulses have been acting faultlessly, and whether an internal secretion has been produced which could have checked the onset of diabttes.

Besides the pancreas, the thyroid can be brought into etiological relation with diabetes. We have shown in a monograph, published in Berlin, and later in Paris, that diabetes, or glycosuria, very frequently develops in all those conditions where there is a hyperactivity of the thyroid gland, as in Graves' disease, but only when the disease is not too advanced. It has been already noted by Professor Von Noorden that there is in Graves' disease an extraordinary tendency to alimentary glycosuria. Glycosuria is also present with great frequency in infectious diseases, after mental emotions, and after different toxic agencies; and, as shown by many authors, the thyroid gland is altered in the above conditions. As we have found, glycosuria of diabetes is increased during menstruation and pregnancy, and this may be due to the well-known relations between the ovaries and the thyroid, which in these conditions can be frequently observed to be distinctly enlarged.

We have been able to prove our assertions by experiments. Together with Professor Minkowski, then at Cologne, we have made dogs diabetic through extirpation of the pancreas, and then after a diabetes of several days' duration we have removed the thyroid gland. It was interesting to note that the microscopic specimens of these thyroids show a considerable dilatation of the vesicles of the thyroid with a very large amount of colloid substance. Especially was there an enormous difference between the thyroids of two dogs of the same litter; one was diabetic and the other normal. The picture of these specimens can be seen in the *Transactions of the London Pathological Society* (1906, Vol. I.), and also in a communication to the Paris Biological Society (1907, 25th March). It is of importance that each of three diabetic dogs had lost its glycosuria two days after the thyroid was extirpated.

Glycosuria is very seldom found with a degenerated condition of thyroid in myxœdema, quite contrary to its frequency in the opposite condition in Graves' disease. In the few cases of myxœdema where there was glycosuria, either thyroid extracts have been given, or there was no real myxœdema. It speaks for the relation of the thyroid glands to diabetes that thyroid extracts can produce glycosuria and even diabetes.

Besides the thyroid, also the adrenals seem to play an important rôle, for it has been found by Blum that adrenalin can produce glycosuria when injected into animals.

We see, thus, that three of the ductless glands have a pathogenic rôle in diabetes, but also the other ductless glands can be found altered. Alterations of the ovaries produce amenorrhœa; of the testicles, impotency; of the liver, hypertrophy. As we have shown frequently, in previous communications, the different ductless glands stand all in close relation to one another. When one of these is altered the others more or less invariably follow.

To treat diabetes rationally we must prevent it. As long as there is only alimentary glycosuria we may have some chances to cure such a condition and to prevent diabetes. For very often diabetes begins insidiously in a sneaking and creeping way. After previous alimentary glycosuria, with traces of sugar, this may go up gradually to 1 per cent. and later much higher. After nervous emotions, sometimes it may at once jump up to a considerable extent.

Thus everything depends upon recognizing the initial stages. Unhappily, this is very frequently overlooked, and hundreds of diabetics in the early stages are not recognized. Therefore, it should be a maxim for every physician to examine the urine of each patient, not only the urine of 24 hours, but also after giving a test dinner consisting of considerable quantities of sweets and meat. Two hours after such a test dinner, considerable quantities may be found, when before no sugar was present.

Thus, the physicians of life insurance companies may save them from very heavy losses, the insurance of such persons often being very risky. As soon as the quantity of sugar rises above 0.1 to 0.2 per cent., anti-diabetic diet should be given, except in cases of alimentary glycosuria, where the percentage of sugar does not rise after the test dinner. But this must be rational, and never so severe that even a small piece of Graham bread should not be allowed. Variety in diet is a great boon to diabetic patients. To moderate amounts of meat, green vegetables, a few eggs (unless there is distinct albuminuria), kefyr or koumiss of the third day should be added, with a certain amount of sour cream. One to two oranges, which contain only minimal amounts of glucose, should be given. It would be advisable not to give too much meat, for it might stimulate the organs which are provoking glycosuria. It has been found by Von Noorden that after much meat in the diet, even light cases of diabetes might turn into severe cases, and especially in severe cases have we seen deleterious results of too much meat in the diet. Such patients feel immediately better after the meat has been reduced, or entirely taken away for a few days. As they said themselves, they felt much lighter and quite different. It is best to give meat only once a day—to the midday dinner. Graham bread, in certain moderate quantities a day, should never be forbidden. Certain fruits that contain little of glucose—like apples, peaches, not too ripe apricots—could be given stewed, as then the sugar enters in the "gravy." There are some manufacturing houses which are producing, wholesale, fruit prepared in such a way.

As a rule, the diet could be more severe in light cases, and be more lenient in severe cases, especially in cases of young persons like children. In such cases cream, and also milk, in certain quantities could be given. In severe cases it is not so much the sugar as the diacetic acid which should occupy our attention. This substance can easily be demonstrated by a few drops of a solution of perchloride of iron in a test-tube of urine. When the reaction of this test shows us a Bordeaux-wine color, diacetic acid is present in considerable quantities, and then it would be advisable, in order to avoid, if possible, acid intoxication, to give as much as 4 drachms of bicarbonate of sodium a day in some alkaline water, distributed in several doses, to be taken after meals.

At the same time, it will be advisable in most cases to allow at least about 3 ounces of carbohydrates a day—best in the form of milk, or oats, or rice, or potatoes—as it has been found, after Hirschfeld, that such an addition to the diet may be able to cause the disappearance of diacetic acid and acetone from the urine.

The alkali should be given already before the above-mentioned reaction is present; best would be to begin as soon as acetone is found in the urine in distinct quantities. In such severe cases, severe diet, as a rule,

could be deleterious, and it is certain that many cases of slight diabetes may turn into the severe form after an exclusive meat and fat diet with green vegetables only.

Professor Van Noorden and others have seen good results in such cases from a vegetarian diet with oatmeal.

Butter should always be fresh, for rancid butter may contribute to the development of acidosis.

There are many drugs recommended; but there is no drug that can make sugar disappear without dieting at the same time. Opium and codeine are certainly the most efficacious, but they can be given only for a certain length of time, generally for a short time only.

The alkalies have been much vaunted since old times; and, indeed, certain alkaline waters can give good results. In a number of cases of diabetes we have had good results from the serum of animals whose thyroid has been removed previously. We have related a series of such cases in our above-mentioned monograph, and also lately in the *Therapie der Gegenwart*, of Berlin (November issue). But only such cases will answer to such treatment—those who are very nervous, excited, and suffer from insomnia; especially has this latter symptom been improved in every case.

We have been driven to this treatment by the observation that diabetes often presents nearly all the symptoms of Graves' disease, against which this serum has been recommended by its inventor, Mœbius. Lanz has seen good results against this disease from the milk of goats whose thyroid was extirpated, and Hector Mackenzie has also published quite recently similar cases.

Many diabetics show symptoms similar to Graves' disease; and, on the other hand, in Graves' disease, after previous hyperactivity of the thyroid, its exhaustion may follow with symptoms of a myxœdematous condition. Thus, in severe diabetes, there are often a series of symptoms of a myxœdematous condition—generally in cases where diacetic acid is present in quantity.

We had recently such a patient under treatment, and we were surprised to find that a large amount of diacetic acid had disappeared two weeks after we had given thyroid extracts, beginning two a day and rising to four a day. It is interesting to note that not only have these large doses been well tolerated, but also all the conditions of this patient —who showed symptoms of a very serious condition (he was not yet 30 years old)—have greatly improved. In another case with much diacetic acid and gangrene of the foot, seen in the ward of Dr. H. Vetlesen, in Christiania, there was a diminution of the diacetic acid after a few days' treatment; but, unhappily, the gangrene proved fatal. In a third case, also, acetone disappeared after similar treatment. We think thyroid treatment to be indicated only in severe cases with diacetic acid, and

contraindicated in light cases. The above-mentioned case of very severe diabetes has so much improved that, as his physician, Dr. Billing, of Wara, in Sweden, wrote, several months after the return of the patient to his home, he was surprised at his condition.

Let us hope that it may be really possible to prolong life through such treatment, even in very severe cases of diabetes which, until now, have been invariably doomed to death.

REPORT OF A CASE OF IMPACTED BREECH PRESENTATION TREATED BY HEBOTOMY.

Dr. R. H. Pomeroy, in *Am. Jour. of Obstet.*, April, 1908, reports the case of a primapara, aged 17, who was admitted into hospital after the membranes had been ruptured nine hours. Both feet and scrotum presenting at pelvic brim, R.S.P., D.C. 10 c.m., crests 27 c.m., spines 23 c.m., E.C. 18 c.m. Diagnosis, just a minor pelvis. F.H. 140 to 150.

Hebotomy was decided upon, ether anæsthesia, manual dilatation of the vagina and introitus. Vertical incision 1½ inches long above left pubic bone, exposing periosteum. With blunt dissector and the finger, the bone was bared posteriorly and the needle passed from above downwards, and out through a second incision to the left of the labium magnus, and the Gigly saw drawn through. Hæmorrhage slight. Bone separated after sawing about 2 c.m. Delivered by rapid extraction; some difficulty with the after-coming head. Child, male, weighed 6 pounds 4 ounces. Born slightly asphyxiated, but quickly recovered.

After expulsion of the placenta the upper wound was closed with two through-and-through silkworm gut sutures; perineum repaired and the lower wound repacked with gauze. Recovery uneventful. Catheterization for several days. Packing in the lower wound removed on the second day. Highest temperature, 101.6°. Patient walked on the twenty-fifth day without any disability.

Lord Mountstephen has donated to the King Edward Hospital fund 5,000 shares ($500,000) of securities bearing interest at the rate of 7 per cent.

CURRENT MEDICAL LITERATURE

MEDICINE.

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

RATIONAL TREATMENT OF FUNCTIONAL DYSPEPSIA.

In the *B. M. J.*, April 11th, 1908, Hutchison treats of abnormal digestive conditions from the standpoint of the disturbance of function. The physiological functions of the stomach are (1) secretory, (2) motor, (3) sensory, (4) absorptive, and on this basis the classification of varieties of the disease is made:

1. Secretory: Excess—Hyperchlorhydria and hypersecretion.
   Defect—Hypochlorhydria and achylia.
2. Motor: Excess—Pyloric spasm.
   Defect—Atony and motor insufficiency.
3. Sensory: Excess—Hyperæsthesia.
   Defect—Anorexia and achoria.

The last two we cannot prove present as under the normal condition there is no sensation connected with the activity of the gasric mucous membrane. Any one of them may occur alone, but it is common to find an association of two or more.

Dyspepsia is really only one way in the last resort in which functional disease of the nervous system manifests itself, so such therapeutic agents as rest, change, etc., are applicable to these cases, but we will leave those aside in the consideration, and consider more specific methods.

1. Secretory Disorders.

(a) *Excess of Secretion.*

1. Dietetic Treatment. Avoidance of such articles as produce secretion of hydrochloric acid, e.g., common salt, meat extracts, soups made from meat, alcohol, and all spices and condiments. It is better in most cases, however, to give such a diet as will neutralize the excessive secretion and this will be a diet in which the animal foods predominate, rich in fat, as milk, eggs, meat, and fish.

2. Medicinal Treatment. Theoretically, there are drugs which will lessen secretion, practically the bromides are the only dependence, probably as they lessen reflex activity. The secretion may be neutralized by the use of carbonates and other alkalies; they should be given freely at the time when the secretion is most active, viz., about two hours after a meal.

(*b*) *Defect of Secretion.*

1. Dietetic Treatment. Give such articles of diet as tend to increase the flow of gastric juice as mentioned above.

2. Medicinal Treatment. When secretion is decreased we may either stimulate the natural secretion or replace it artificially.

(i) Bitters are the chief stimulants of secretion, and are improved in action by the addition of a little bicarbonate of soda.

(ii) Both hydrochloric acid and pepsin may be replaced artificially, but their use is in practice often disappointing; it is difficult to give enough of the acid to be of use, though half-dram doses after meals may help. In the case of pepsin there are two difficulties, viz., that of getting a really active preparation, and that the adminisraion is useless unless the acidity of the contents are maintained at the normal.

2. MOTOR DISORDERS.

(*a*) *Excess (Pyloric spasm).*

1. Dietetic Treatment. Associated as a rule with ulcer, the diet indicated is a bland one, consisting of milk and farinaceous foods.

2. Medicinal Treatment. Drugs which lessen acidity, and reduce the sensibility of the mucous membrane, also opium in small doses before meals.

3. Hydrotherapeutic Measures. Most useful are hot fomentations or poultices to the epigastrium, which seem to have a specific effect in lessening gastric spasm.

(*b*) *Motor Defect (Atony, or motor insufficiency).*

1. Dietetic Treatment. Avoid burdening the stomach with a heavy mass of contents, drink no fluid with meals, and only in small quantities at a time between meals; have food thoroughly macerated either by chewing or special preparation.

2. Medicinal Treatment. There is no specific tonic of the gastric muscle. Strychnine is useful, alcohol and mineral acids to a lesser degree, and aloes is used in mixtures empirically for this purpose.

3. Physical Treatment. Massage may be used, but its effect is probably on the abdominal wall. However, in this way the support of the stomach is increased. Electricity in the form of the sinusoidal current may help; it is still in the experimental stage. Hydrotherapeutic measures probably help, as indeed most such physical measures by improving the general tone. Defect of motility is the hardest condition to treat directly.

3. Sensory Disorders.

1. Dietetic Treatment. Theoretically, hyperæsthesia should be treated by bland foods. In some cases, however, it is well to feed the patient up at the expense of some pain, as the condition may be due to malnutrition and be relieved in this way.

2. Medicinal Treatment. Bismuth, bromides, and in severe cases the forms of opium are well known here. Also hydrocyanic acid, hyoscyamus, cannabis indica, chloral, and chloroform, all of which act directly on the nerve endings.

3. Physical Treatment. The local application of heat is the most important measure here.

By dealing with the disorders of the stomach in this rational method if a diagnosis is made the condition indicates the appropriate means of its alleviation.

A CASE OF CARDIAC HYDROTHORAX.

In the *Medical Record,* Feb. 29th, 1908, Gibb, of New York, reports a case of cardiac hydrothorax due to chronic parenchymatous nephritis, and valvular involvement, in a man of 46, a physician, in which case the operation of paracentesis for the relief of distressing respiratory symptoms from the pressure was performed 311 times, drawing off a total of 10,690 ounces of fluid in nineteen months, up to the time of death of the patient.

EPITHELIOMA.

In the *Medical Record,* March 21st, 1908, Bulkley and Janeway give the results of the treatment of 400 cases of epithelioma in private practice. They summarize as follows:

1. The most frequent form of cancer which the dermatologist is called on to treat is, both pathologically and clinically, quite a different growth in its relatively benign course, from the usual conception of cancer.

2. It occurs chiefly about the face, in places where radical operative measures are apt to produce serious deformities, which very materially add to the patient's discomfort.

3. While the experience of 35 years demonstrates that many cases can be permanently cured by caustic pastes, these are at times disappointing and may lead to an aggravation of the trouble.

4. The curette cannot be depended on alone, but requires additional destructive agents to the base left after operation.

5. By the proper use of the *x*-ray we have a safe, and, in cases that have not been grossly neglected or maltreated, a sure method of cure, with the least amount of deformity.

6. In cases where knowledge and experience shows that these lighter measures are not likely to avail in checking the course of the disease, recourse should certainly be made to complete surgical removal, as this has been shown to be permanently successful in a reasonable proportion of cases.

DRINK DIET IN CARDIO-RENAL AFFECTIONS.

Dr. Huchard, in a recent communication before the meeting of the Académie de Médecine, recommended the cure of reduction of liquids in case of dilatation of the heart, accompanied with œdema. In such cases the usual cardiac and renal therapeutic agents fail miserably and place the life of the patient in jeopardy. The dilated heart has arrived at a period when resistance is no longer possible, while the congested kidneys invaded by interstitial œdema cannot support without danger the supplement of work imposed on them by diuretics. The rational therapeutic indication would be, on the contrary, to relieve these organs and thus facilitate their work.

For this reason Dr. Huchard allows only one pint of milk, and two pints of water, mineral or natural, a day, and prescribes at the same time small doses of digitaline (1-10 milligs.).

Sol. of digitaline, 1-1,000—50 drops.

Water, 5 ounces.

One tablespoonful a day, and theobromin (10 grs.) twice a day. After the third day of this treatment, abundant diuresis sets in, relieving the patient of the œdema.

Where the polyuria fails to be produced, the prognosis is fatal, as the dilatation of the heart is proved to be incurable.

Dr. Louis improves on this treatment by suppressing all liquid for a day or two, save a few tablespoonfuls of pure water to ease the thirst. By this simple means, the quantity of urine, which had not, perhaps, exceeded twenty ounces in the twenty-four hours, rapidly runs up to two and three quarts, secretion remaining abundant until all œdema has disappeared to the great astonishment of the patient, and those about him, who think the more a patient drinks the more he will urinate. When the œdema disappears, Dr. Louis administers digitaline, and theobromin in the doses recommended by Prof. Huchard, as excellent adjuvants in the subsequent treatment.

THE AFTER-CARE OF TUBERCULOSIS WITH REFERENCE TO EMPLOYMENT.

In the *Medical Record,* Feb 1st, Landis discusses this phase of the question of the consumptive. It is especially pressing in the treatment of the poorer classes. Charity and the State are rapidly providing the means of treatmentt, but when the patient is dismissed, fortunately with the disease arrested, he is in a quandary. His means are exhausted. If he goes back to the unhygienic workshop where his troubles began he can only fear a return, but unless he can earn his living he is in a worse plight.

He must be taught that his health is the first point to consider in choosing an occupation; it must be in good hygienic conditions; better outdoors if he can get the right kind of work, but preferably indoors if the outdoor work means hard and hurried muscular effort. The great need at present is some bureau for procuring occupation for those who are dismissed, and in connection with the Kelling Open Air Sanatorium in England and the Pennsylvania Society for the Prevention of Tuberculosis such have been formed. They solicit employment and provide candidates, and oversee the care and habits and conditions of the men. For men of limited working capacity, the following may be mentioned: gardening, light farm work, collecting rents, soliciting insurance, light carpenter work, watchman, gate-keeper, driving, etc.; for women, poultry raising, gardening, mending, etc. Then, too, the trained nurse for the care of tubercular cases is always and increasingly in demand, and many of the patients of both classes could be taught as is done at the Phipps Institute.

SURGERY.

Under the charge of H. A. BEATTY, M.B., M.R.C.S., Eng., Surgeon Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital; and Chief Surgeon Ontario Division, Canadian Pacific Railway.

THE CLINICAL SIGNIFICANCE OF McBURNEY'S POINT.

As quoted by Sturmdorf in an article on appendicitis, published in the *New York Medical Journal* of December 21, 1889, McBurney wrote as follows: " . . . . found in all my operations that it lay either thickened, shortened, or adherent very close to its attachment to the cæcum.

"This, of course, must in the early stages of the disease, determine the seat of greatest pain on pressure, and I believe that in *every case* the seat of greatest pain, determined by the *pressure of one finger*, has been *exactly* between an inch and a half and two inches from the anterior

superior spinous process of the ilium on a straight line drawn from that process to the umbilicus.

"This may appear to be an affectation of accuracy, but as far as my experience goes, the observation is correct."

Sturmdorf concedes that McBurney's point marks an epoch and a phase in the evolution of our mastery over appendicitis; nevertheless, while it served to blaze the path through the mazes of earlier controversies, it has proved an equally potent factor in leading to error and fruitless mutilation, and though vested with almost pathognomonic dignity for almost two decades, it must be relegated to the humble rank of a possible contributory factor. He holds that appendicitis may exist in the absence of the McBurney point, and most important, that a typical McBurney point may be present in the absence of an appendiceal involvement. A frank appendicitis tends to substantiate McBurney's findings. There is, however, a group of appendiceal lesions, one rapidly fatal, the other with symptoms referred to the upper digestive tract, in which a McBurney point cannot be demonstrated at any stage of progress. There is a further heterogeneous group presenting a typical McBurney point with perfectly healthy appendix.

After a very brief résumé of the work of Ross, MacKenzie and Head, Sturmdorf states that these observers have established the fact that any given point of pain may be either a direct expression of a contiguous disturbance, or the transmitted manifestation of a distant lesion; or that an existing McBurney's point may represent the direct pain focus of a disturbance within its own area or the reflected pain focus of a distant lesion.

Head demonstrates his pain points by a gentle tactile exploration of the cutaneous surface carried out with a round pinhead employed in the manner customary in testing for analgesia, thus eliciting only superficial hyperalgesia. The McBurney method, however, elicits pain points both superficially and deeply placed, depending upon the degree of pressure exerted. The transmitted pain focus as elicited by Head's method is characterized by increased superficial reflexes, the deep apparently not being disturbed, and the simultaneous existence of concomitant pain points, radiating backward and upward toward the spine, most marked over the bony prominences encountered in tracing the course of the involved nerve trunks to their exit from the cord. The deep pain focus is, however, not necessarily attended by any hypersensitiveness of the skin, whilst the deep muscle reflexes are exaggerated, appearing often in the form of tonic contraction, and the concomitant pains if present radiate downward along the anterior crural nerves and the peritoneum, never upward and backward.

In the group of cases of acute inflammatory appendicitis unattended by a perforation or gangrene, there will be no superficial area of hyperæsthesia, but the typical McBurney deep pain point and the associated signs of a deep-seated inflammatory process are all present, and in addition Blumberg's sign, which Sturmdorf formulates as follows: When the appendicular inflammation is unaccompanied by peritonitis, the deep pain focus in McBurney's area alone is manifest. In beginning peritonitis, the recoil of the abdominal wall following the sudden withdrawal of the examining finger will prove more painful than the original digital pressure.

Sturmdorf's dictum that the rapidly fatal types of appendicular lesion presenting themselves clinically as unfocalizable forms of general sepsis, and also those cases which present but mild disturbances of the upper digestive tract, described by Ewald as "appendicitis larvata, or masked appendicitis," do not during any stage of their progress present any distinct focus of pain in McBurney's area will certainly not meet with general acceptance. Indeed, these cases so habitually present this one localizing symptom in the absence of nearly all other characteristics of appendicitis that it has been very justly relied upon when it is elicited after repeated examination as an indication for operation.

Sturmdorf classes in his third group acute and chronic disturbances of every degree, and many kinds linked by an existing McBurney's point over a normal appendix, and further states that "it is in this group that operative artefacts, resulting from clamp and ligature applied to an unoffending appendix, supply a pathological consolation for misdirected surgical effort, while the true source of the disturbance lurks somewhere between the thorax and perineum, anywhere but in the appendix." With this grimly humorous statement he will fail to find a general concurrence, though there lies within it a germ of truth. A typical and localized tenderness at the McBurney point on deep pressure elicited as a result of repeated examination is extremely rare in the absence of inflammatory lesion in this region. The futile operations performed because of the presence of localized tenderness in the right iliac fossa are usually to be attributed not to the true presence of a McBurney sign, but to unskilful, often rough examination, or the interpretation of the patient's psychological rather than physical condition. The general surgical conception of the McBurney point of tenderness is that it is elicited by deep and sharply localized pressure. The clinical significance of the importance of the superficial pain points has been accepted by comparatively few, though Sturmdorf's statement to the effect that the more superficial the pain focus the more certainty of its indicating a distant lesion and a normal appendix seems to be well founded. That Sturmdorf's statements are worthy of

careful consideration is suggested by the fact that his conclusions are based upon 208 cases observed in public and private service during a period of three years.

That this contribution will relegate the McBurney point to the humble rank of a possible contributory factor is to be doubted. It has never been regarded as in itself pathognomonic.—*The Therapeutic Gazette*, March, 1908.

THE TREATMENT OF GENERAL SUPPURATIVE PERITONITIS.

In the *Maryland Medical Journal* for February, 1908, Dr. Robert W. Johnson, of Baltimore, writes a very interesting article on this subject. He gives to Murphy, of Chicago, the credit of assembling, in a very able manner, the technique and concludes the paper with the following points:

"First. In removing the cause of the peritonitis the less the peritoneal surfaces are handled the better, for nature has thrown out protective lymph which inhibits the absorption of toxic substances, and in handling such surfaces there is danger of bruising and rubbing off the lymph, opening up new avenues for absorption and infection. Therefore Murphy believes that no attempt should be made to sponge the peritoneal surfaces or to wipe off any lymph that may be found, as such manipulation would increase the danger of septic absorption.

"Second. When the patient is placed in the Fowler position the fluids in the peritoneal cavity will tend to gravitate toward the pelvis, and in addition the action of the diaphragm during respiration will help to pump the fluids in that direction, making drainage of the lowest part of the pelvis with a tube very important. If there is sufficient fluid in the pelvis to fill the tube, each excursion of the diaphragm will pump a certain amount of it out, which will be absorbed in the dressings. It must be remembered that it is not the quantity of the fluid present which is harmful, but rather the extent of the peritoneal surface which comes in contact with it; so that a quart of pus contained in a round cavity would be less dangerous than an ounce thinly coating over the peritoneal surface.

"Third. It is well known that patients with a diffuse septic peritonitis stand a short operation well, but a prolonged one badly; therefore when all one's energy is directed to at once removing the cause of the peritonitis, and all other procedures except drainage eliminated, an operation can be speedily completed, on an average, perhaps in six or eight minutes. This naturally permits of a minimum amount of anæsthetics, thereby directly decreasing the chances of shock and vomiting after operation.

"Fourth. The advantages of the Fowler position are so well recognized now that it only needs to be mentioned.

"Fifth. Murphy's method of introducing large quantities of water into the rectum is novel. He inserts a nozzle containing three or four openings into the anus to which is attached a rubber tube leading to a bag. This bag is filled with water and elevated but a few inches above the plane of the rectum, the idea being that the water shall just trickle into the rectum not much faster than absorption takes place. In this way from a pint to a quart of water should be allowed to trickle in during an hour, the process being a continuous one and the flow so regulated that no accumulation of fluid takes place in the bowel. In other words, an attempt is made to run the water in as fast as it is absorbed. The object of having more than one outlet in the nozzle is that in case flatus accumlates in the rectum it will pass out through one of the openings in the tube, while the others continue to discharge the water into the rectum. When it is desirable to stop the flow of water the tube is disconnected from the nozzle, the later remaining in the anus, thereby avoiding irritation to the anus by the constant removal and insertion of the nozzle and at the same time facilitating the passage of flatus. By this method large quantities of water will be absorbed within the first few hours of the operation. This absorption does two things: First, it reverses the current of lymph in the peritoneal lymphatics, so that, instead of absorption taking place from the peritoneal surface, the mouths of the lymphatics pour out fluid, bathing the peritoneum with this free discharge. The posture, together with the action of the diaphragm, constantly sends this fluid downward to the pelvis, washing away the infectious material from the peritoneum in its descent and escaping from the pelvis through the drainage tube. Second, the free absorption of the fluid from the rectum stimulates the heart and kidneys and largely increases the amount of urine passed, eliminating through this channel the septic material which has gained entrance to the circulation. After the ordinary abdominal section in non-septic cases the average amount of urine secreted in the first twenty-four hours is perhaps fifteen ounces, and in the presence of sepsis it is apt to be even less. In the first case that I shall report this evening more than sixty ounces of urine were secreted in the first twenty-six hours.

"Sixth. Stopping all food and liquid by the mouth will check peristalsis and prevent the dissemination of septic material by peristaltic movements. The absorption of large quantities of fluid by rectum is quite sufficient for forty-eight hours or more, but if the condition of the patient is so precarious that food seems a necessity, small quantities of it can be run into the rectum with the water."

Under this method Murphy reported 33 cases, with but one death, and the list of successes grows daily.

The author further says: "Personally, I have seen and treated a limited number of diffiuse or general peritonitis cases most satisfactorily by this method. It has taken the despair out of this disease, as antitoxin did out of diphtheria, and has relegated it to about the same category as diphtheria under antitoxin treatment. I heartily commend it to you from its simplicity, ease of performance, physiological basis, and lastly, and most convincing, its life saving results."

GYNÆCOLOGY AND ABDOMINAL SURGERY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist to the Toronto Western Hospital, and Consulting Surgeon Toronto Orthopedic Hospital.

NOTE OF A CASE IN WHICH A GALL-STONE FORMED ROUND A CATGUT SUTURE.

Hamilton Drummond, M.B., B.S.Durh., late house surgeon to the Royal Victoria Infirmary, Newcastle-upon-Tyne, reports this case:

The patient the subject of this note was first admitted to the Newcastle Infirmary in December, 1901. She was a stout woman, aged 48 years, with a history of severe attacks of pain in the right hypochondriac region of 29 years' duration. A diagnosis of gall-stones was made and on December 7th, 1901, she was operated upon by Mr. Martin.

The gall-bladder was found to be enlarged and adherent about the neck. It was opened and found to contain bile and six stones (three-eighths of an inch by three-eighths of an inch) with facets were removed from the cystic duct. The common duct was then explored after separating adhesions and several stones were removed by incision. No other stones were discovered. The common duct was drained with rubber tube and no sutures were inserted. The gall-bladder was closed with through-and-through ordinary catgut and a layer of silk Lembert sutures. The hepatic pouch was drained from the posterior end of the incision and the rest of the incision closed with layers of catgut. The patient made a good recovery and was discharged with the incision perfectly healed on January 7th, 1902.

On September 25th, 1907, she was readmitted with a history of good health up to four days before admission, when she complained of slight pain over the old scar on going to bed. The pain persisted next day, but was not severe, and allowed her to perform her household duties as usual. On the following day it suddenly became very acute and she felt sick, but did not vomit. In this condition she was admitted into the Royal Victoria

Infirmary some seven hours after the onset of the acute attack. On examination a distinct tender swelling was found in the region of the gall-bladder. A diagnosis of acute distension of the gall-bladder from impaction of calculus was made and an operation was decided upon. Mr. J. Clay made a longitudinal incision through the right rectus muscle over the swelling and the distended gall-bladder imbedded in dense adhesions was exposed. The adhesions were separated and the gall-bladder aspirated and several ounces of clear mucus were evacuated. After incision a large rounded stone was found wedged in the neck of the gall-bladder, which was very much hypertrophied, though the cystic duct opening was patent. The patient did well and went home quite healed on October 11th, 1907. There was nothing unusual about the appearance of the stone, which was round and measured one and a quarter inches by three-quarters of an inch and weighed 80 grains. On attempting to section it the stone broke in layers, showing different strata, and in the centre, forming a nucleus, was a bit of catgut tied in double knot and loop, which was well preserved. The calculus was composed of cholesterin and bilirubin calcium.

There are other cases on record in which gall-stones have formed round sutures: for example, Mr. Sinclair White exhibited a specimen at the Exeter meeting of the British Medical Association in which a gall-stone had formed round a catgut suture 18 months after operation. Dr. J. Homans reports a similar case where three gall-stones had collected round a piece of silk 20 months after cholecystotomy; and Mr. J. Bland-Sutton in his book on gall-stones quotes an interesting experiment on a dog, where, after five months, two calculi formed round a thread which was suspended and allowed to float freely in the gall-bladder.

I have to acknowledge my indebtedness to Mr. Martin and Mr. Clay for permission to publish the above note.—*London Lancet,* April 25, 1908.

FORMATION OF A SUSPENSORY LIGAMENT AFTER HYSTEROPEXY.

Frank E. Taylor (*Pract.*, Dec., 1907) cites three cases of hysteropexy subsequently operated upon for some other uterine trouble. In all three cases well-formed fundal or suspensory ligaments were formed. Both ventrofixation and ventrosuspension are highly satisfactory as regards the cure of uterine retrodisplacements. Each method possesses certain grave disadvantages. Ventrofixation may cause serious dystocia; while ventrosuspension allows the formation of a fundal ligament which may be the cause of strangulation of the intestines. —*Am. Jour. of Obs. and Dis. of Women and Children,* March, 1908.

OVARIAN CYST.

Frank E. Taylor (*Jour. Obst. and Gyn. Brit. Emp.*, Nov., 1907) describes the removal of an ovarian cyst from a patient who eight months previously had typhoid fever. The contents of the cysts gave a pure culture of the Bacillus typhosus. The bacillus isolated from the cyst had nearly lost its vitality.—*Am. Jour. of Obs. and Dis. of Wom. and Chil.*, March, 1908.

SHORTENING OF THE ROUND LIGAMENT FOR BACKWARD DISPLACEMENTS.

John W. Taylor (*Jour. Obst. and Gyn. Brit. Emp.*, Dec., 1907), in reviewing a series of eighty-five cases of backward displacement of the uterus operated on and the round ligaments shortened, reports the following results: There was no mortality; in about fifteen or sixteen cases there was slight suppuration. In no case was there any untoward complications, save one case of hernia. In only three cases has there been any indication of relapse, while two cases have stood the test for eighteen years. In fourteen cases, nineteen pregnancies have followed without any difficulty. In two cases the backward displacement was accompanied by hypertrophic elongation of the cervix, which excess was removed. Another case subsequently had a tubal pregnancy. The writer chooses his cases carefully, selecting the cases chiefly from those of complete displacement in single or early married life, where there is no hope of pregnancy, and serious complaint is made of constant backache, dysmenorrhœa, menorrhagia, and discharge due to the accompanying endometritis. If possible the writer puts a pessary in place to prove that most of the symptoms could be relieved by replacement before operating. When there are intraperitoneal adhesions or tumors fixing the uterus, or when there has been old pelvic cellulitis, it is obvious that drawing out the ligaments may be difficult or impossible.—*Am. Jour. of Obs. and Dis. of Wom. and Chil.*, March, 1908.

VAGINAL HYSTERECTOMY FOR FIBROMATA.

M. LeBec, Paris, has performed 490 hysterectomies for fibromata; 310 abdominal and 180 vaginal. Although vaginal hysterectomy has lost its popularity, it still has indications. For instance, in all fibromata, the upper border of which does not extend beyond a point midway between the symphisis pubis and the umbilicus, it gives a rapid cure. It avoids the abdominal cicatrix and does not expose to hernia formation. In 180 vaginal hysterectomies, he had 10 deaths. They were due to the following

causes: Two from hæmorrhage, , from exhaustion, 3 from acute septicæmia, 1 from emboli, 1 from u æmia.—*Surg., Gyn. and Obs.*, Feb., 1908.

APPENDICULAR ILIOPSOITIS.

M. Lardennois, Reims, reports two cases of appendicular iliopsoitis. In one of them, the patient had four recurring attacks of suppurative psoitis without a sign of appendicitis. The removal of the vermiform appendix showed that the extremity of this organ penetrated under the ilias fascia and was in direct contact with the muscular fibres. It is unusual to have a left-sided psoitis. When it does it occur, it occurs chiefly in women and is secondary to pelvic suppuration. Psoitis is usually due to an extension of an inflammatory process. This inflammatory process is almost always a latent appendicitis—an appendicitis which has not been diagnosed because it is retrocæcal. Since psoitis is usually of appendicular origin, the surgeon will not only drain the suppurative focus in the psoas, but will also suppress the causal affection, that is, the appendicular focus.—*Surg., Gyn. and Obs.*, Feb., 1908.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty, McGill University, Montreal.

THE PATHOLOGY OF TUBERCULOSIS IN CHILDREN.

John McCrae (*Arch. of Ped.*, April, 1908), after reviewing briefly the different varieties of tubercle bacilli, states that they are more or less closely related and thinks that it is probable that the average human being can overcome an infection of bovine bacilli more easily than that of human bacilli. He thinks that the "bovine" type of infection in children takes the form of a slowly progressive tuberculosis, tending to much overgrowth, and to dry caseation which affects mainly lymph nodes.

He discusses the infection of milk and states that about 9 per cent. of all specimens submitted to examination have been proved to contain tubercle bacilli. Statistics seem to show that four-fifths of the cases in children under 5 years of age have resulted from air-borne human bacilli and one-fifth may show the bovine form. When infection occurs in children some part of the lymphoid tissue of the upper air passages or the mesenteric nodes of the intestines are the favorite sites.

The author states that in 437 autopsies made upon infants, chiefly foundlings, of whom 60 per cent. were three months old or under, he found tuberculosis in but 5 cases, 0.66 per cent. One of these cases was in an infant ten days old which exhibited tuberculous mesenteric glands and tuberculous ulcers of the ileum and cæcum; which he thinks must have been infected by swallowing amniotic fluid, although the mother presented no evidence of tuberculosis.

He thinks that bone and joint infections are not necessarily bovine, but are due to varying resistance of tissue.

He suggests that when we malign the resisting powers of a child suffering from the scrofulous diathesis, we make a mistake, as it may be the concentration of the disease in the lymph nodes, is but a mark of a tremendous fight made by the lymphoid tissue.

Speaking of meningeal tuberculosis, the author states that in the Royal Victoria Hospital of Montreal 29 cases have been met with, in 21 of which there was generalized tuberculosis of many organs, while 2 others had active tuberculosis elsewhere in the body. Ninety-five per cent. of cases of generalized tuberculosis show the most frequent site of involvement is the lung.

EIN NEUER HANDGRIFF ZUR BEHANDLUNG DER ATONISCHEN NACHBLUTUNGEN.

L. Goth, in *Zeut. f. Gyn.*, No. 15, 1908, suggests a new method of controlling post partum hæmorrhage due to atonic conditions of the uterus. His method consists in grasping the uterus between the thumb and forefinger of one hand placed just over the symphysis pubis so as to surround the organ as near as possible in the neighborhood of the contraction ring. The uterus is then raised upwards by means of this hand, while the other hand, placed on the fundus, drags it forward and friction is made so as to stimulate contraction. In this way compression and stimulation bring about uterine contractions and this arrests the hæmorrhage.

The author then gives a series of eight cases in which the manœuvre controlled the hæmorrhage in one-half to three minutes. He thinks that the method he recommends acts by direct irritation of the cervical ganglia bringing about uterine contraction.

The advantage of the method recommended is that it is entirely without danger, being applied externally.

He then records two cases in which the method failed, and concludes his article by stating that where the procedure fails to set up good uterine contractions a careful intrauterine examination should be made for placental fragments or blood clots which, if found, should be removed at

once and the combined pressure resorted to again. If uterine contraction does not immediately follow the cavity should be packed with gauze.

CHANNELS OF COMMUNICATION IN TUBERCULOSIS: THEIR RELATIVE SIGNIFICANCE.

S. McC. Hamill states that fœtal infection (*Arch. of Ped.*, April, 1908) as compared with other forms is exceedingly rare, though advanced lesions of tuberculosis have been met with in infants dying within two or three weeks of birth. These, the author thinks, are cases of post-natal infection, though difficult to explain. He thinks that it is difficult to determine the portals of entry of the tubercle bacillus from the appearance of the lesion found at the autopsy. The author quotes extensively Flügge's experiments on inhalation tuberculosis, though he thinks the observations require confirmation.

Intestinal tuberculosis is discussed at length, an extensive review of recent literature on the subject forming the basis of the author's remarks, that the infection through the intestinal tract, as well as through the respiratory tract, has been pretty well established.

The author thinks that inhalation infection is the most common, though in children he is inclined to believe that infection by the intestinal tract is more common than through the lungs.

PREGNANCY AND DENTAL DISEASE.

Jas. E. Power, in an article on pregnancy as an etiological factor in dental disease (*Jour. A. M. A.*, Feb. 15, 1908), is inclined to think that during pregnancy women undergo a certain amount of nervous depression leading them to neglect the ordinary laws of hygiene to a certain extent, and this is particularly the case in regard to the oral cavity.

He advises physicians to lay considerable stress on the care of the teeth throughout pregnancy, as the natural degenerative processes, together with lessened resistance resulting from pregnancy, may cause complete destruction of the teeth. The author states that the teeth should be put into the very best condition during pregnancy, due consideration being given to the physical state of the patient, her nervous irritability and the period of her pregnancy.

All broken-down roots should be extracted, the mouth should be inspected by the dentist at least once a month, when any caries has been noticed. The author believes that the degree of morning sickness and the degree of caries are very closely related. He explains this by sug-

gesting that the acid contents of the stomach, passing over the teeth as a result of the vomiting, produces the bad effects. The patient should be instructed to use floss silk to remove all particles of food from between her teeth after each meal, which should be followed by the use of a tooth powder containing equal parts of ordinary powder and carbonate of soda.

Rinsing the mouth with a solution of bicarbonate of soda or of milk of magnesia at intervals of four hours is recommended.

He advises, in case of dental abscess, the removal of the offending tooth under local anæsthesia.

Care must be taken not to be misled by referred pain, as during pregnancy disease in other organs may be associated with pain in a tooth in consequence of disturbed reflexes.

PULMONARY TUBERCULOSIS IN INFANCY AND CHILDHOOD.

In the *British Medical Journal,* March 7th, there is a paper on this subject by Young, of Middlesex and Brompton Hospitals. He discusses the matter under a number of heads:

1. *Incidence.* Early diagnosis of intra-thoracic tuberculosis in infants and young children is often a matter of great difficulty on account of the absence of sputa, the frequency and variety of respiratory infections at this time, the difficulty of recognizing clinically any but gross lesions, and the tendency to the appearance of the condition after the various infectious diseases. Widely divergent statements are made as to the incidence, owing to the fact that some writers have included the affections of the tracheo-bronchial glands, which are admittedly very numerous, while others more correctly restrict its use to those destructive lesions of the lung itself which are comparatively rare. The methodical examination of school children in different countries has afforded interesting if varying statistics. Grancher, in Paris, found 15 per cent. showing glandular or pulmonary tuberculosis, but Squire and Gowdey found only 13 per cent. showing pulmonary tuberculosis in London schools, and this includes a number of doubtful cases; German statistics are about similar to the latter.

Post-mortem reports show that about 40 per cent. have tubercular lesions, and of these 50 per cent. are in the lungs and over 90 per cent. in the bronchial glands, but these are doubtless terminal affections, and cannot be regarded as pulmonary tuberculosis in the ordinary use of the term. The writer has analyzed the records of 337 cases under 15 coming to the out-door at Brompton, complaining of cough, expectoration and wasting, and found only 45 showing definite signs of tuberculosis of the lungs.

2. *Etiology.* As to manner of infection, there are in all five possibilities: (1) transmission in utero; (2) inoculation of wounds—these two need not be discussed; (3) inhalation of tubercle bacilli; (4) swallowing bacilli in food, as milk; (5) infection through the ear, tonsil, etc.

Numbers 3 and 4 have supplied the battlefield for some time, but the question is by no means settled, and the arguments need not be reviewed here, while No. 5 is obviously rare.

As to predisposing causes, we know at least that infancy is a time of high susceptibility, and that hygienic surroundings lessen liability, while local injuries or diseases may depress local resistance, and cases are recorded of a series of cases fatally infected in quick succession by the same nurse. As to heredity, there is difference of opinion, and Squire and Maxon-King have both brought forward statistics which they believe show that children of tubercular parents show if anything a lessened susceptibility.

3. *Pathological Anatomy.* While the histological alterations produced by tubercular processes in young children are in all essentials identical with those found in adults, there are certain differences in distribution, course, and consequences which it is well to bear in mind. The tubercles, which are of typical giant cell variety, develop rapidly and show a marked tendency to coalesce; as to secondary changes, caseation is the almost invariable rule, while calcification are extremely rare, especially before 4. Secondly, there is a marked tendency for lymphatic structures to be implicated primarily or early, and third is a tendency toward generalization by the blood stream, leading to miliary deposits and especially meningitis. The tendency to spread from apex to base seen in the adult is not apparent in the child. The writer describes four pathological varieties: (*a*) Tuberculosis of the tracheo-bronchial glands, (*b*) acute miliary tuberculosis, (*c*) acute caseous tuberculosis, (*d*) chronic or fibro-caseous tuberculosis. The fibroid form of the adult type can hardly be said to exist in young children. The glands on the right side are most frequently involved in unilateral cases, but as a rule both sides are affected. Cavities are not so rare as usually stated, but are hard to diagnose. Intestinal ulceration with localized peritonitis and involvement of the mesenteric glands are frequent as a result of the swallowing of sputa.

4. *Symptoms and physical signs.* (*a*) Bronchial glandular phthisis. In this condition a number of signs have been described, none of which are diagnostic, but their presence in association with the general symptoms may be of value. Among these may be mentioned a distressing paroxysmal cough, worse at night, dilatation of the veins of the upper part of the chest and puffiness of the face, glandular enlargement in the episternal notch on palpation, dulness over the manubrium or beside the upper dorsal spine especially on the right side on percussion, alteration in the breath

sounds, including weakening of inspiration over one lobe and bronchophony below the seventh cervical vertebra.

(*b*) Miliary tuberculosis of the lungs. It must be borne in mind that most of the cases in this class are in the terminal stages of the disease; the symptoms vary as the distribution is general or only pulmonary. There are four clinical types: marasmic, occurring almost without exception in infants, the symptoms are progressive emaciation, diarrhœa, and exhaustion, there may be little or no fever, and pulmonary symptoms may be entirely lacking; the acute febrile type, simulating typhoid, marked fever of continuous or remittent type, rapid prostration and emaciation, early enlargement of the spleen and sometimes diarrhœa, cyanosis and dyspnœa out of proportion to the pulmonary signs are suggestive; there may be a febrile period, it frequently closes with meningitis; the meningeal type which need not be described; the pulmonary type, the course of which is as a rule longer than in the others, except the first; the symptoms are those of a disseminated broncho-pneumonia, the onset may be either acute or insidious, with progressive languor, anorexia and wasting; respiratory symptoms soon intervene, notably increasing dyspnœa, tending towards an expiratory type, short inspiration succeeded by puffing expiration, the rate goes up to 60 or 80 with dilating nostrils and cyanosis develops; a frequent dry cough is often present, but may be lacking; expectoration is either absent or swallowed. Death occurs from exhaustion or with convulsions or meningitis. As a rule, no dulness is found on percussion; areas of broncho-vesicular or tubular breathing may be found, or perhaps only areas of harsh breathing varied with areas of quiet; the adventitious sounds are fine bubbling or fine crepitant rales, rarely crepitations.

(*c*) Acute caseous tuberculosis. This condition represents a slightly higher resisting power and occurs in later infancy and early childhood. It is the form which frequently follows an attack of one of the infectious diseases; the children affected often belong to one or other of the types described as strumous, the clinical features are in the main similar to those in the adult, one of the earliest manifestations being night sweats. There is emaciation and hectic fever, a loose cough with sometimes vomiting and sometimes expectoration loaded with bacilli, but hæmoptysis is rare. There is early dyspnœa, but not cyanosis. The voice is affected. The physical signs are those of consolidation, sometimes of cavitation, the chest shape is characteristic owing to respiratory changes and muscular wasting. Movement is limited, there may be dulness, and the breath sounds may vary from weak to tubular.

(*d*) Fibro-caseous or chronic pulmonary tuberculosis. The onset of this form varies as in adults. It may follow an acute chest condition, or its beginning may be insidious with a succession of colds, weakness,

dyspepsia, and malaise. Loss of appetite with persistent cough and night sweats should lead to an examination of the chest. A cough with expectoration in a child should lead to suspicion. Symptoms are much the same as in adults. Hæmoptysis is rare in the young child and very rarely fatal.

5. *Diagnosis.* This may be very difficult. The tracheo-bronchial type has to be distinguished from pertussis and asthma, the febrile type from typhoid, and the caseous type from pneumonia. Examination of the sputa has been undertaken by emptying the stomach and even by examination of the fæces, but Holt's suggestion that irritation of the pharynx will get a discharge on a piece of gauze is the most sensible, and he found bacilli in 54 out of 67 cases. The tuberculin tests are not yet definite enough for an absolute diagnosis, but will aid, and Calmette's bids fair to be the most useful in the examination of children.

6. *Prognosis.* The prognosis which is extremely bad in infancy improves as age advances. The bad clinical record is due to the fact that these cases are so difficult to recognize, as when they have reached the miliary or caseous stage the disease is very far advanced. Post-mortem records in cases of death from other conditions show that tuberculosis often exists unrecognized.

7. *Treatment.* Prophylaxis is most important on account of the great susceptibility of the young. Where other cases exist the greatest care is necessary. Kissing by strangers should not be allowed. The health of nurses and others in charge should be beyond suspicion. The source and care of milk hould be carefully scrutinized.

Treatment of the grave conditions is largely palliative and symptomatic. When the condition is recognized the child should be taken from school and a place with warm, equable and fairly dry temperature chosen for residence if possible. The stay must be prolonged and the regimen strict; in febrile cases rest in bed is indicated. Diet should be liberal and fats in excess. Emulsion of codl-iver oil, syrup of the iodide of iron in glandular cases, etc., as indicated. Tuberculin in minute doses from 1-12,000 to 1-8,000 milligram for infants up to 1-3,000 at 10 may be used, the opsonic index being watched. Cases showing a high or a fluctuating index, showing auto-intoxication, are not suitable for the treatment.

A METHOD OF MILK PRODUCTION.

In the *Medical Record,* Feb. 15th, '08, there is an article on this subject by North, of New York, who has made a practical and personal study of the matter; for four years he was a producer, an experience both difficult and costly, but he learned there the lessons required to teach

others. He was successful in producing a milk as required by the Certified Milk Commissions, with an extremely low bacteria count, but the demand was soon so great that some additional means had to be devised. In the absence of the necessary working capital, an old barn was procured, whitewashed, and covered inside with tar-paper, with a close flooring. Twenty cows were installed. The men who did the milking received the sterile cans and pails at the dairy house, and brought back the milk, where it was bottled and cooled. Here the milk was daily analyzed and records of bacterial counts kept. Comparing these results with the results shown by the milk from the sanitary stable, while they were always in slight excess, the average per c.c. was only 3,102 as compared with 1,097 from the sanitary stable for a year. The availability of the ordinary barn for milk production was evident when there was access to proper means of sterilizing and cooling. A second old barn was utilized and was left as it was found with dirty walls and broken ceiling and floors, just the kind of barn where we would naturally expect the worst results. The same precautions as to the vessels were taken. The count varied from 1,920 in March to 10,530 in June, while an analysis of the air by the exposure of a Petri plate for a minute showed 12,965 colonies as compared with 35 in the air of the sanitary stable. Here again the fact was shown that it is the care of the vessels that counts. At the writer's suggestion, Dr. Stewart, City Bacteriologist of Philadelphia, undertook a series of similar experiments and found the same results, for example, one case showed with the ordinary farmer's method an average for four cows of 21,122 per c.c., while with the sterilized covered pail the average of four was 167. From the results of these experiments with his own, a plan was worked out by which both parties could participate in the advantages of higher prices for purer milk. The plan is: (1) Take the whole matter of washing utensils out of the hands of the individual producer, sterilize all the pails and cans at the central dairy; (2) insist on the use of some kind of covered pail, and a good suggestion is to use a small sized can for milking and carrying the milk; (3) take all cooling and bottling out of the hands of the farmer; (4) let the farmer deliver the milk twice a day, within an hour of the completion of milking; (5) let the milk dealer offer financial inducements to the farmer to follow this method, say 5 cents a quart for the milk; (6) let the public pay a higher price for this milk, say 10 cents when certified milk sells for 15 cents; (7) concentrate operations for a district at one dairy and so save expenses.

Of course the writer thoroughly believes in the sanitary stable and certified milk, but while 1,200,000 quarts of raw milk are sold in New York per day, there are only 16,800 quarts of certified milk, hence the advantage of any plan which makes for the purification of the average product.

BREECH PRESENTATIONS: AN ANALYSIS OF 250 CASES OCCURRING AT THE BOSTON LYING-IN HOSPITAL.

In *Jour. Surgery, Gyn. and Obstet.*, April, 1908, Dr. R. L. De Normandie gives the records of the cases in his paper which occurred in the Boston Lying-in Hospital from August 1, 1887, to November 14, 1907. One hundred and forty-three were primaparæ.

With regard to the positions, S.D.P. occurred in 27, S.D.A. in 49, S.L.P. in 35, and S.L.A. in 73. There was no record in 12 cases. One hundred and eleven of the patients delivered themselves spontaneously with the aid of intelligent suprapubic pressure. In 112 cases manual extraction was resorted to.

A careful analysis of the operative procedures with their attendant results then follows and the author draws the following conclusions:

1. Breeches in primaparæ are common.

2. Manual extraction occurs in one-half of all breech deliveries.

3. Forceps to the after-coming head is at times a life-saving procedure.

4. Lacerations of the maternal soft parts occasionally are very extensive.

5. Injuries to the child are much more common than in vertex deliveries.

6. Sepsis is no more common in breech than in vertex deliveries.

7. Breech presentations in contracted pelves should have an early Cæsarean section.

8. The fœtal heart in breech presentations should be listened to at short intervals after the rupture of the membranes.

9. If the cord prolapses, immediate extraction should be done.

10. A long labor, *per se*, is not an indication for operative interference.

11. Early rupture of the membranes, without advance in labor, is an indication for immediate operative interference.

Dr. A. Cantonnet, of the Hotel Dieu, Paris, has found in 89 cases of juvenile tabes dorsalis that 57.1 per cent. showed inherited syphilis clearly, 8.5 per cent. acquired syphilis in the first year of life, and 13.9 per cent. gave evidence of syphilis in keratitis and choroido-retinitis.

OPHTHALMOLOGY AND OTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., L.R.C.S., Edin., Professor of Ophthalmology and Otology Medical Faculty, University of Toronto.

THE CONSERVATIVE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR.

Samuel Theobald, M.D., Clinical Professor of Ophthalmology and Otology, Johns Hopkins University, Baltimore, writes:

"No one will deny that a chronic suppurative process of the middle ear, because of the dangerous complications to which it may give rise, is a matter of serious concern, and that the condition should not be permitted to continue indefinitely all will admit. The only point on which there can be a difference of opinion is as to the remedial measures that should be employed for its control.

"The prevailing tendency of the day in dealing with this condition, it seems to me, is to resort too hastily to radical operative procedures without giving sufficient thought to the more conservative measures through which, as abundant experience has shown, the end in view in many instances may be attained.

"Not every chronically suppurating ear, it should be borne in mind, is necessarily a useless organ, and this fact furnishes an additional argument in favor of conservative methods of treatment; for while the radical procedures just mentioned are usually effectual in putting an end of the suppurative process, they are very apt, at the same time, and as effectually, to put an end to useful hearing.

"In my method of treating chronic suppurative otitis media there is little of novelty. The two points on which I would lay especial stress are, first, that the patient should not be made wholly dependent on the surgeon for the carrying out of the treatment—that he should be taught to make use, himself, of the remedies that have been found most efficacious; and, second, that in controlling the condition constitutional measures are almost, if not quite, as important as local measures.

"Because the affection is a chronic one the treatment, in many instances, must likewise be chronic, and, furthermore, after an intermission of weeks or months or, perhaps, of years, it may have to be resumed. For these reasons there are obviously great advantages in making the patient measurably self-dependent. I am aware there are otologists who contend that this is impracticable—that home treatment is is ineffectual, is of little or no avail. I can say emphatically that this has not been my experience.

"Apart from the removal of polypi, if they are present, operative procedures, unless there are evidences of mastoid implication, are, in my judgment, seldom called for in the treatment of the condition under consideration. Even the removal of granulation tissue by curettage and the scraping of tiny areas of carious bone seem to me superfluous, for the granulations quickly shrink and the exposed bone is soon covered by periosteum, when the discharge has been brought under control and the parts restored to a healthier condition by the effectual employment of a suitable antiseptic agent.

"In years gone by I used, as did most others at that time, astringent and antiseptic powders in treating middle ear suppuration. I was, however, one of the first, if I am not mistaken, to abandon this plan of treatment and to commend, instead, the employment of antiseptic solutions,* and this practice I have followed to the present day.

"Bichloride of mercury and boracic acid are the antiseptics that have been found of greatest value, the former being used in solutions varying in strength from 1—8,000 to 1—4,000, the latter in saturated solution. In chronic cases my first choice is the mercurial salt; in acute cases preference is usually given to the boracic acid solution. With whichever solution is used the ear is thoroughly syringed as often as may be found necessary to control the suppurative process. In chronic cases this is seldom oftener than once a day, even at the outset of the treatment, and in a short time it is usually found that much less frequent syringing is called for. In acute cases, if the discharge is abundant, the syringing may have to be repeated as often as three times a day, but the necessity for such assiduous attention is not apt to last more than a very few days. The cleansing of the ear is made more effectual by the use of the Politzer bag, and especially by Valsalvian inflation.

"In recent years the only cases in which antiseptic powders (usually boracic acid or a mixture of boracic acid and zinc oxide, equal parts) have been employed are those in which the otorrhœa is of long standing and in which there is extensive destruction of the drum head, and then only after the solutions have been tried without avail.

"As the chronicity of many cases of middle ear suppuration is due to concurrent nasal disease, and of many others to systemic disorders, it is important that these matters should receive attention. The digestive apparatus, the state of the bowels and the general health, therefore, are taken into account. When the system has seemed to need building up, a combination of iron, quinine and strychnine, particularly in the form of phosphates, has been found especially valuable, and in the treatment of

* The Employment of Boracic Acid in Solution, in the Treatment of Otitis Media Suppurativa. Trans. Amer. Otol. Soc., 1888. The value of Weak Solutions of Bichlorid of Mercury in the Treatment of Otitis Media Suppurativa. Ibid, 1892.

nasal catarrh the systematic spraying of the nose with a 1—5,000 bichloride of mercury solution, to which sodium chloride, 2½ gr. to 1 oz., is added, has proved very efficacious.

"That every case of chronic suppuration of the middle ear can be cured, or even brought under control, by the employment of the conservative measures outlined, is not for a moment contended, but that many such cases can be cured in this way, and that many others can be kept in a condition in which the risk of serious complications supervening is reduced to a minimum, there can be no question.

"The class of cases which are least amenable to such measures, in my experience, are not those in which there is extensive destruction of the drum head, but rather those in which the membrana vibrans is intact and in which the discharge finds exit through a comparatively small perforation in the membrana flaccida.

"I have spoken of the great advantage derived in the management of chronic otorrhœa from the patient's being put in a position to carry out the treatment himself and to resume it from time to time should occasion require. One of the chief merits of the treatment commended is that it renders this entirely practicable, for even without assistance any one not exceptionally awkward, by means of a rubber bulb syringe, can use the bichloride of mercury solution, to which sodium chloride, 3 gr. to 1 oz., for it, with a hand atomizer, can spray the nasal passages successfully.

"As I have had occasion to say heretofore,† 'A weekly or fortnightly syringing of the ear by the patient is no great hardship, and if it were necessary to continue it indefinitely would be but a small price to pay for the comfort and safety which it insures; but, as a matter of fact, the cases in which this is required are the exception, and the rule is that after the suppuration has been checked for a few weeks the ear remains for weeks or even months without requiring attention.'

"In conclusion, I may add that in my experience, even when the mastoid antrum is involved in the suppurative process, it does not follow, necessarily, that operative measures must be resorted to; for if the passageway between the antrum and the tympanum is capacious, so that efficient drainage is provided, it not infrequently happens that the antral trouble disappears when the tympanic suppuration has been brought under control. Especially in cases of this character has the administration of sodium pyrophosphate in liberal doses (20 gr. every two to three hours) —as commended in the paper just quoted—proved efficacious."—*Jour. A. M. A.*, 23rd Nov., 1907.

† What Means, Other than Operative, Have We for Preventing and Combating Inflammation of the Mastoid Cells? Trans. Amer. Otol. Soc., 1902, and New York Med. Jour., Sept. 13, 1903.

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EDITORIAL.

HOSPITALS AND TUBERCULAR PATIENTS.

At the recent meeting of the superintendents of hospitals, held in Toronto, Dr. Bruce Smith, the inspector of hospitals, said:

"Are the general hospitals doing anything to care for poor tubercular cases? They say it is not their province? The sad fact is that many are allowed to die in want, not only in want, but are spreading the disease. We are not taking care of chronic cases.

"I would suggest that general hospitals, particularly in rural districts, should erect a separate building by way of an annex, for the care and treatment of tubercular cases.

"I believe the Government would be willing to give financial encouragement to any hospital doing this work."

There is much force in these remarks. In almost every city or large town there is now general hospital accommodation; but none for tubercular patients. This is not right nor wise. Why should these places be dependent upon the accommodation to be found in Weston or Muskoka when, for a very moderate outlay, they could have good accommodation for their own consumptives at home and among their own friends.

We believe this view should be the prevailing one. We do not think that tubercular patients should be placed in the same building, nor on the same grounds, with other patients; but a separate piece of land and building is an easy way of solving the difficulty. The same management could look after both.

This country has about 40,000 consumptives with an annual death loss of about 8,000. This is likely to continue under the present system of talk and no positive and definite action. The loss to the country in any one year is enough to pay for the erection of all the hospital accommodation required, and the saving of life and the lessening of sickness would more than pay for cost of maintenance thereafter.

Let us begin to be doing something. We have done enough educating. We all know that consumption is both a communicable and a preventable disease, and, in the language of King Edward, "Why not, then, prevent it?" The whole question comes back to this: Will we spend, or

rather invest, enough money in this industry to make it pay? We mean the industry of saving human lives. The annual loss now to Canada is about $25,000,000 on account of the sickness and deaths caused by consumption.

HOSPITALS ARE PUBLIC UTILITIES.

Few people regard our hospitals in the proper light. These institutions all over the country are doing a great work for the people. The vast amount of pain that is relieved, sickness that is cured, and lives that are saved in these institutions, is so great that we do not realize it.

Why should it be necessary to go round begging continuously for their support? Why do not the wealthy come forth with their money and give to these charities? Why do not the various municipalities give of the public wealth such sums as would place our hospitals on a proper basis.

It is most discouraging to work with an inefficient plant in any business. Hospitals are business places where large amounts of money are expended daily in the treatment of the sick and injured. These are the raw materials of our hospitals on which skill and labor are to be expended with the object of improving their value to the community.

The community should aid. We mean every one should aid. The small taxpayer and the large taxpayer should all give. The rich man may say, "Well, I have a large house, and can afford to hire trained nurses, so that I have no need for hospitals." This is the wrong view. This sort of argument would apply equally well to our public schools. He could hire a tutor for his children, and so the poor would be deprived of our public schools.

If any one will take the trouble to read the reports of the hospitals, he will soon satisfy himself that there is no other set of institutions more worthy of his support and sympathy. It is a standing disgrace to be refused a small donation for the relief of suffering and see in the newspapers that the same person gave some big dinner party that would cost hundreds of dollars.

THE HEALTH OF THE SCHOOL CHILD.

We have been reading a little book, just published, from the pen of Dr. W. Leslie MacKenzie, who is medical member of the Local Government Board for Scotland. The book is marked throughout by its practical character.

He deals with such important topics as the hygiene of school life, normal growth in the school ages, medical supervision and examination schools and school children, the school doctor in Germany, and other matters of the utmost importance.

In these articles there is much that is applicable to this country. The location of schools and their construction is gone into fully. Attention is wisely directed to the need for a thoroughly sanitary condition in connection with all school houses.

The author relates much of his experience in visiting schools, and also that of others, in showing that a much larger percentage of children attending suffer from some form of physical disease or defect than is usually supposed.

The author gives much attention to the subject of the normal growth in the school child. On this point he condemns too great stress in school life. He lays much stress on the need for proper exercise in order that the brain may develop properly and be in good condition for the reception of education. While this is true, he condemns too great indulgence in sports and athletics, declaring that the saints of athletics do not live long.

There is a considerable amount of useful information regarding the inspection of schools in Germany, and the sanitary regulations in operation. It would appear that most countries are now beginning to realize that the proper care of the children during their growing years is one of the most profitable subjects to which they can direct attention.

THE CAUSATION OF DIABETES.

On several occasions we have referred to the work of Dr. Arnold Lorand on this topic. In another portion of this issue we give our readers the full text of his address before the Glasgow Medico-Chirurgical Society.

In the first place, he emphasizes the fact that the children of diabetics are prone to suffer from the disease.

The next point to which he directs attention is the close relationship which exists between diabetes and Graves' disease.

He also refers to what is now becoming accepted, that a diet rich in meats and sweets is apt to disturb the thyroid gland and the pancreas. An excessive meat diet may so stimulate the thyroid body as to cause exophthalmos and diabetes, which in turn may change into myxœdema with the disappearance of the sugar. Too much amylaceous food may lead to the disappearance of the islets of Langerhans.

It would appear, also, that the adrenals play an important rôle in the etiology of glycosuria.

In the treatment of diabetes it is, therefore, of prime importance to ascertain the cause, and note in what way these glands may be taking part in its causation.

The remarks on treatment are most timely. It cannot be too much insisted upon that great injury may be done to patiens by restricting the diet too severely.

It is now recognized that drugs do not play a very important part in the treatment of diabetes. Alkalies are useful in preventing or removing acidosis. Opium and codeine are still our best drugs. The milk of thyroidectomized goats has been found useful. In other cases where symptoms of myxœdema appear the employment of thyroid glands has been attended by good results.

ALCOHOL IN THE CAUSATION OF INSANITY.

In the *American Journal of Insanity*, published by the Johns Hopkins Press, for April, 1908, Dr. Henry A. Cotton, of the Davers Insane Hospital, Hathorne, Mass., concludes his article in these terms:

"We might go on indefinitely quoting statistics, but they would, in the main, only substantiate the views based upon what we have already quoted, i.e., that alcohol accounts for an alarming number of the commitments in the insane hospitals to-day, both directly, indirectly, and through inherited influences, and that this percentage is slowly but steadily increasing.

"The statistics given by Kraepelin are noteworthy from the fact that the Germans boast that alcohol (in the form of beer-drinking) does not affect them as a nation. But these statistics would tend to refute that theory, and I have no doubt that the statistics compiled from other communities would coincide with those of Kraepelin. That a people can become immune to the effects of alcohol through generations of drinking habits, an often quoted theory by those who would uphold drinking in European countries, has been entirely discredited. That they may be able to drink more without its affecting them, may be true, but there is no reason to believe that they are not subject to the same harmful effects of alcohol in both body and mind as in those countries where habitual drinking has not been the order for centuries."

To the foregoing might be added the testimony of F. W. Mott as to the causative influence of alcohol in the production of insanity. Bevan Lewis has gone very fully into the influence of alcohol on the heredity of crime and insanity. In his opinion he supports the position taken by Kraepelin, Forel, and others. These men take the position, justified by

modern biology, that alcohol can affect the germ plasm and so adversely affect the offspring.

Alcohol directly causes perhaps about 15 per cent. of the commitments to asylums. But then it acts indirectly in helping to cause, or in aggravating, other diseases, such as general paralysis, epilepsy, etc., which land many in our asylums. The baneful effects of alcohol on posterity in the way of causing degenerates are beyond dispute.

The problem is not as bad in this country as in many of the older countries of Europe, but we are now laying down our foundations, and it is very necessary that such problems receive timely and thoughtful consideration. The field for the medical profession here is a large one, and, if wisely cultivated, will yield an excellent return in the prevention of disease.

THEORIES REGARDING MONSTERS.

In ancient times terata were sometimes deified, and were regarded as the progeny of gods.

There was another ancient belief that monsters were created by the gods for their own amusement.

A later theory was that monsters were warnings of the wrath of some deity and called for due propitiation. This belief spread among the early Christians as well as among heathens. Monster is derived by some from *moneo,* I advise.

There was still another theory to the effect that this was one of the ways God took to display His power and inspire fear.

There is a belief among many to-day, which has come down to us from very remote times, that monsters were sent as a punishment for some sinful act.

Then there was the belief that evil spirits possessed the power of sending monsters. This belief was prevalent in the middle ages and led to some most revolting acts.

In very ancient times the moon and the stars were thought to exercise power in their causation. The appearance of a monster was often regarded as an omen of great significance. The philology has been advanced that monster means moon's animal, from the German *tier,* an animal.

In many ages monsters were regarded as the result of the union of man and brutes. They were regarded as hybrids.

These theories have long gone into oblivion, but there is still a widespread belief in the force of maternal impressions. This is an ancient theory which still holds place with many, and even with many medical

men. Several leading text-books on obstetrics of to-day lay down a belief in the validity of maternal impressions in the causation of monsters.

This whole theory rests upon the foundation that because a certain number of women, who have had impressions, or seen some unpleasant object, or had suffered from some fright, gave birth to deformed children, therefore these impressions, sights and frights were the true cause. This is not reasoning at all, but jumping at conclusions.

If one will only take the time and trouble to look at the anatomical relationship between the fœtus and the mother, he will see at once that no impression made upon the mother could affect the child. They are not one at any time. They are always two separate beings. There is no nervous connection between them, and the blood is quite independent, the child receiving its nourishment by a process of osmosis. One might just as well expect that the impressions made upon a hen would pass from her to the chick in the egg upon which she is sitting.

It is high time that the medical profession as a whole raised its voice against this theory. It is entirely wrong that expectant mothers should live under the belief that external events can mar the fœtus *in utero*. That this foolish, and often cruel, belief still lives is not to the credit of the medical profession.

Apart from the anatomy of fœtal life, there is the proof that monsters are not more frequent in those cases where the mothers have experienced some unfavorable impression than in a similar number of examples where no such impressions occurred. This should surely settle the matter for all time.

SUDDEN DEATH.

By this term is understood death which comes unexpectedly; or, in other words, of which there has not been any definite warning. To many sudden death would be preferred to a lingering and painful illness preceding their demise. Such a death as that of Professor Annandale was much more preferable than one like that of Professor von Bergmann.

Sudden death may be the ending of an acute illness, may be the termination of a lingering sickness, or may occur in apparent health.

In acute diseases we may meet with sudden death when there has been no warning of such an event. This is the case sometimes in pneumonia, typhoid fever, and especially in diphtheria. Sudden heart failure in diphtheria is not so common now as it once was, yet it may occur. Then in the convalescence of pneumonia death may come with marked suddenness when an uninterrupted recovery was expected. Sudden death in typhoid fever may result from heart failure or severe hæmorrhage.

In chronic disease sudden death may intervene under many conditions. In consumption the rupture of a blood vessel or the existence of an embolism may terminate life in a few moments. In some forms of heart disease, such as in degeneration of the heart muscle or aortic incompetency, death may be ushered in at any moment. Aneurism, too, is a cause for some sudden deaths. It has been known also to be caused by rupture of varicose veins. In cirrhosis of the liver hæmorrhage from the mucous membranes may be violent enough to end fatally. Sudden death may occur to those who have incarcerated herniæ, abdominal adhesions, chronic pelvic disease, impacted gall stones, ulcer of the stomach, and chronic appendicitis. Rupture of the spleen has been known to cause a sudden and fatal ending to cases of disease of that organ, especially malarial enlargement. Chronic Bright's disease by coma, apoplexy, œdema of larynx or lungs, or dyspnœa has ended many a life, and often when the victims were unaware of their kidney trouble. It is well known that diabetics may die suddenly in coma, or by heart failure after a slight exertion, or from some shock or emotion. In some forms of insanity, as general paralysis, in middle ear disease, in Graves' disease, in acromegaly, and in bulbar paralysis sudden death is always a possibility.

Persons in apparent good, or in actually good, health, may die suddenly. Examples of this would be found in such events as a foreign body entering the larynx. The rupture of a tubal pregnancy has caused sudden death. In some cases of cirrhosis of the liver there may be very little to disturb the person and his condition undetected until some internal vessel ruptures. Persons may have atheromatous arteries or an aneurism and not know of these. In fatty degeneration of the heart the organ may suddenly give way and acutely dilate or rupture. And all these in persons who were going about in seemingly good health.

THE ACT FOR THE PROTECTION AND REFORMATION OF NEGLECTED CHILDREN.

A very much needed piece of legislation found its way to the statute book of Ontario during the recent session of the Legislature, in the form of an Act that deals with the care, protection, and education of neglected children. It deals with children's aid societies, courts of summary jurisdiction, foster homes, inspectors, the municipality, the neglected child, places of safety, etc.

The office of Superintendent of Neglected Children is provided for, and his duties defined, such as visiting industrial schools, shelters, instructing children's aid societies, seeing that a proper record of these is kept, etc.

Children's shelters are provided for. It is stipulated in the Act that every city or town having 10,000 of a population or over shall provide proper shelters for neglected children for temporary use. These shelters must be entirely distinct from any penal or pauper institutions.

Provision is made that a judge, on the application of a society having the custody of neglected children, may make an order on the municipality for an amount not to exceed $1 per week for the maintenance of a child. The municipality may, however, recover from the parent.

The Act establishes a proper course of procedure whereby a neglected child may be apprehended and brought under the custody of a society or person under the authority of the Act.

Children's aid societies may select foster homes for neglected children. The inspector may in turn transfer these to industrial schools. The parent is granted certain rights and a course is laid down whereby such parent may appeal to again secure the custody of the child.

Power is granted municipalities to regulate by by-law the hours at night beyond which children shall not be out in public places without proper guardianship.

The Act further provides that no one shall cause a child to beg, to sell goods in a public place after 10 p.m., to be in a circus for the purpose of performing, or causing a child to be neglected.

Juvenile offenders shall not be placed in a lock-up or police cell before trial, nor shall they be placed among persons charged with crime. Their cases must not be tried in the police court room ordinarily used. These offenders must be tried either in a separate court room for such cases or in the judge's private room, or in the ordinary police court room two hours after the other cases have been disposed of. The judge may hand over such offender to the custody of some society instead of ordering a commitment.

For the purposes of this Act a "child" is defined as a boy or girl actually or apparently under the age of sixteen years.

This Act will no doubt accomplish much for these neglected children and for our juvenile offenders. It clears the air and defines the duties of societies, of court officials, of the officials under this Act, the disposition of these children. The confusion on these points in the past will now disappear.

THE BIER TREATMENT.

Of late a good deal has been written upon the subject of the Bier treatment of inflammations and infections. It is the application to treatment of what nature tries to do for an injured or infected part—get more blood to it.

It must have always been evident that the inflammation in the neighborhood of a boil is not a meaningless act of nature. But when we came to know a good deal about the habits of the staphylococci and the phagocytes, it became clear why there was so much blood around a boil. Nature was sending into the seat of war her soldiers to defend the region against the spread of the enemy on the one hand, and to drive it out on the other.

A person sprains his knee and it becomes swollen, red, hot and painful. Why? The part has been injured, and the injured tissues must be repaired. In this case the white blood corpuscles are the principal carpenters, as in the previous example they were soldiers. They go to work to fix up the injured tissues. True, the serum of the blood is very necessary. But this process means more blood in the part than is its wont in health.

In some instances for some cause, such as lack of blood in the body, low vitality, overly powerful infection, or some other reason, nature is not doing well either in its warfare against infection or in its fixing up of the injured part. The cry is more soldiers, or more repairing material.

This is the Bier treatment. But it is not new. It did not have its practical application with Professor Bier. Long before Bier took up the advocacy of this method of treatment, Dr. Hugh Owen Thomas, the noted authority on orthopedics, made use of this method of treating the chronic inflammations of joints, and as an aid in effecting the union in bones that united too slowly.

The science of this method of treatment is simple, is in accord with the plans of nature, and the credit for its advocacy should go to the good old Dr. Thomas.

PERSONAL AND NEWS ITEMS.

ONTARIO.

A hospital tent for tubercular patients has been secured for London.

Dr. Preston, M.P.P. for North Lanark, has been again nominated for the Provincial Legislature.

Dr. E. Stanley Ryerson, of Toronto, has announced that he will devote his entire time to surgical practice.

Dr. C. H. Herbert, Hawkestone, has been appointed an associate coroner for East Simcoe.

Dr. Morley Currie retired from the political contest in Prince Edward County on account of his recent severe illness.

Dr. William Spankie, of Wolfe Island, will be a candidate for the Local Legislature for the County of Frontenac.

Dr. Jackes, of Jarvis, was nominated for the Ontario Legislature for the County of Haldimand.

Dr. W. F. Bryans will be one of the candidates for East Toronto in the election for a seat in the Local Legislature.

Dr. John Carruthers, of Little Current, has accepted the nomination for Manitoulin as a candidate for the Ontario Legislature.

Dr. James A. Robertson and his son, Dr. Lorne F. Robertson, of Stratford, have gone for a trip to Egypt.

Dr. A. C. Bennett, after two years' study in London and Dublin, will return to Toronto in early part of June.

Dr. W. H. B. Aikins, of Toronto, is taking a trip through Europe. He will visit many places of interest, mainly in Germany.

Dr. Forbes Godfrey, of Mimico, has been again nominated for the Ontario House for West York. He was the member during the past session.

Dr. J. T. Fotheringham, Toronto, will represent, at the Military Section of the British Medical Association in July, the Canadian Army Medical Corps.

Dr. G. W. Crosby, formerly of Parry Sound, has located at 78 College street, Toronto, where he will devote his entire attention to diseases of the eye.

At a special meeting of the Six Nation Indian Council, when Dr. Bryce, a Dominion medical officer, was present, it was decided to erect a hospital for consumptives on the reserve, at a cost of $5,000, to be shared equally by the Government and the Council. Two large tents, costing $150 each, will be established for immediate wants.

Regarding a filtration plant for Toronto, Dr. Sheard reported thus to the Board of Control: "The typhoid returns must be admitted as evidence that any expenditure undertaken for the purification of the city water is not at present rendered imperative because of the prevalence of typhoid; nevertheless, the statistics which I have given prove conclusively that the city water is far from being in a satisfactory sanitary state, and it may be admitted that we have escaped typhoid because the water supply has not at any time recently been contaminated with specific typhoid germs."

Dr. John Noble's scheme for a "people's hospital for Toronto, open to everybody, built by everybody, and maintained by everybody," is not regarded by Dr. Sheard, City Medical Health Officer, as practicable. Dr. Noble's proposition is to establish a hospital through the contributions of the people individually in sums of $1 annually for five years, and by various businesses and organizations in sums ranging from $2 to $25 per year; citizens to subscribe $100,000 and the City Council $100,000, making a total of $200,000. The idea of the hospital is that all patients in it

shall pay the same price and receive the same attention, the charges to be just sufficient "to keep the hospital funds from running too low," and that there shall be no clinics therein. A restaurant in connection with the hospital is a part of Dr. Noble's scheme.

The monthly report published by the Provincial Board of Health, Ontario, states that smallpox, scarlet fever and diphtheria were more prevalent in March than in the corresponding month of last year. The returns give 85 cases of smallpox and two deaths, but the most marked increase is in scarlet fever, there being 529 cases reported, with 15 deaths, while for the same month in 1907 only 235 cases and 5 deaths were reported. The mortality for both periods, however, may be considered low. Diphtheria caused 27 deaths, being an increase of 11. Measles appear to have been much less prevalent, only 80 cases and one death being reported. Typhoid fever also reached a low point, only 12 deaths having been reported. Tuberculosis continues to carry off its many victims, causing over 200 deaths for the month. The total number of deaths from all causes was 2,648.

WESTERN PROVINCES.

In Regina the marriages during March numbered 7, the births 18, and the deaths 9.

In Winnipeg the marriages for the month were 106, the births 316, and the deaths 122.

The Brandon statistics for January, February and March were 37 marriages, 78 births, and 55 deaths.

In the month of March there were in Edmonton 37 births, 19 marriages, and 21 deaths.

The vital statistics of Strathcona for March were 47 births, 22 marriages, and 11 deaths.

Calgary is to have a private hospital under the control of Drs. Egbert, Gibson and Aikins.

The Senate of the University of Alberta has decided to start classes in September, 1908.

The Municipal Hospital for Regina is to be called the Regina Victoria Hospital. The city has voted $100,000 towards its erection.

It has been decided that Ninette is not a suitable location for the tuberculosis sanitarium for Manitoba.

Dr. G. M. Foster, of Greenwood, has gone to Vancouver to enter upon practice there.

Dr. Condell, of Brandon, after spending a winter on the west coast, has resumed his practice.

Dr. Scott, of Stony Plain, has been appointed physician to the Grand Trunk Pacific camps.

Dr. J. E. Lehmann has been appointed surgeon to the Winnipeg General Hospital, and Dr. Milroy has been made consulting physician.

Dr. L. Scott, of Wascada, Man., has been made Dominion Medical Inspector on the border.

Dr. Tolmie, of Winnipeg, has gone to Hartney, Man., to take up the practice of Dr. Graham.

The Winnipeg Council has declined to submit a by-law for $225,000 for the extension of the Winnipeg General Hospital.

Drs. J. S. Matheson, L. M. More, J. A. McDiarmid, J. MacDonald, G. C. Beer, G. McKenzie, M. S. Fraser, J. J. Anderson, and Latimer have been appointed as the staff of Brandon Hospital.

Dr. Seymour, the Provincial Health Officer for Saskatchewan, is making an effort to secure a sanitarium for the treatment of tuberculosis in that Province.

It is proposed that the people of Brandon make a grant of $35,000 towards the hospital fund and that the city have five members on the hospital board.

Dr. W. B. Donald, of Fort Saskatchewan, has been appointed surgeon to the police of Lesser Slave Lake and Peace River Valley. The Indian reserve will be under his charge.

The *Western Canada Medical Journal* is advocating the formation of a medical society for Manitoba, Saskatchewan and Alberta, on lines similar to the Maritime Medical Association for New Brunswick, Nova Scotia and Prince Edward Island.

BRITISH COLUMBIA.

A small hospital of twelve beds is to be erected in North Vancouver.

It is found the sanitarium for tuberculosis for the Province has only accommodation for about one-third of the applicants.

The Government has granted $15,000 for the current year to the Royal Jubilee Hospital in Victoria.

The Medical Inspector of Schools for Vancouver found 180 cases of defective eyesight. There is a general willingness on the part of the parents to aid in suppressing infectious diseases.

Justice Clement, of Vancouver, has decided that the Provincial regulations regarding the adulteration of foods are ultra vires, and that prosecutions for such come within the Dominion statutes.

Dr. Boyle, of Vancouver, has returned after a lengthy trip to Europe. Dr. Howitt, of Victoria, has gone on a trip to Mexico, and Dr. Brown, of Nanaimo, has been paying a visit to Vancouver.

Drs. Brydone-Jack, Mills, Langis, Poole, W. B. Kechnie, Keith, Proctor, R. E. McKechnie, Monro, Pearson, Tunstall, Weld, G. D.

Johnston, I. G. Campbell, and B. D. Gillies, have been appointed as the staff of the Vancouver General Hospital.

The Government intends spending large sums on the asylum at New Westminster. Already $60,000 has been appropriated for this purpose. It is thought that in all about half a million dollars will be expended on the institution.

The British Columbia Medical Association meets this year in Vancouver on the 20th and 21st of August. Dr. R. Eden Walker, of New Westminster, is the secretary. There will be a good programme of papers and amusements.

QUEBEC.

The fourth meeting of the Association of Physicians of the French Language for North America will meet in Quebec on July 20-22, 1908. An excellent programme has been arranged.

The Medico-Chirurgical Association for Joliette has adopted a resolution that the fee for life insurance examinations shall be $5. A question was submitted asking under what circumstances it was justifiable for a physician to do an operation, attend a confinement, or extract teeth under a general anæsthetic, without an assistant.

The officers of the McGill Medical Journal Club are: Dr. E. W. Archibald, president; Dr. A. A. Robertson, vice-president; Dr. A. G. Nicholls, secretary; Dr. Campbell Howard, treasurer, and executive, Drs. Morrow, Klotz and Chipman. The object of the club is to aid the medical library of McGill in the matter of medical and scientific journals. The club had a very successful year.

The *Montreal Medical Journal* for April raises a strong protest against the admission into this country of undesirable immigrants. The position taken is that the medical inspection is very lax and that persons are allowed to pass who will soon be a charge upon the community on account of their physical or mental infirmities. It is contended that there ought to be a strict medical inspection.

FROM ABROAD.

Dr. Terrier, Professor of Clinical Surgery in the Paris Faculty of Medicine, died quite recently.

From the *Antiseptic* it appears that the Government of India has resolved to raise the sanitary standard.

It is strongly urged by Professors Woodhead, Allbutt, Marsh and others that teachers in Britain should be taught hygiene.

Sir R. Douglas Power has been again re-elected president of the Royal College of Physicians of London by a large majority.

By the death of Karl Gustaf Lennander, Professor of Surgery at Upsala, Sweden has lost one of her ablest surgeons.

In reply to a criticism on the South African Medical Society, the *Transvaal Medical Journal* states that it is more than self-supporting.

It is proposed to found a gold medal in clinical surgery in memory of the late Professor Annandale, of Edinburgh, and also to place his bust in the lecture theatre of the Royal Infirmary.

London, England, has opened a school for defective children. The chairman of the London School Board said it was the twenty-eighth school for this class.

The seventy-sixth annual meeting of the British Medical Association meets this year in July in Sheffield, under the presidency of Mr. Simeon Snell.

Dr. Charles E. Underhill, the President of the Royal College of Physicians of Edinburgh, died on 24th April. He was born in 1845 and was sixty-three years of age.

Dr. W. B. Bannerman, in a lengthy article in the *Edinburgh Medical Journal,* arrives at the conclusion that the plague is spread from rat to rat by the rat flea, and from the rat to man by the same insect.

A number of influential ladies in Dublin have organized a National Health Association. The main object of the association is to deal with the tuberculosis question.

Professor Blumenthal, of Berlin, in *Folia Therapeutica*, has an article in which he speaks highly of the serum treatment for exophthalmic goitre. The serum is obtained from thyroidectomized goats.

Malaria has made its appearance in North Queensland, Australia. The cause given is that malaria patients have gone to the district and become feeders to the mosquito anophiles existing in the locality.

Professor Loeffler and Dr. Russ report from the University of Grufswald that they have cured sleeping sickness experimentally induced by the use of arsenious acid.

The New South Wales Medical Practitioners' Emergency Fund is growing. As the result of a recent appeal to the profession £440 have been raised.

A case was decided in Michigan lately to the effect that a doctor who attended a society at a contract rate could charge extra for surgical cases and operations, as his agreement was only for medical services.

Sir Frederick Treves has gone into his quarters at Thatched House, the royal residence at Richmond, which was recently placed at his disposal.

The treatment of early syphilis by atoxyl is meeting with much favor. It is claimed that it is more effective than mercury, speedily destroying the spirochætes.

A meeting of medical men was held in Manila with the object of establishing an association for the study and prevention of tropical diseases.

Prof. Leopold von Schroetter, Professor of Medicine in Vienna, died very suddenly, April 25th, after delivering a lecture. He was one of Vienna's most distinguished medical men.

The late Sir Thomas Watson once remarked that when a young practitioner he had twenty remedies for every disease, but when he grew old and experienced he had twenty diseases for which he had no remedy.

From the report of Sir Eldon Gorst it appears that 22 graduated from the Medical College in Egypt, that 38 new students entered, and that there are 150 in attendance.

According to the returns to the British House of Commons, the deaths among persons engaged in various forms of the liquor trade is as 2 to 1 of occupied males in other callings.

It appears from a recent issue of the *British Medical Journal* that there are from 40,000 to 60,000 professional nurses in the Kingdom. A bill for the registration of nurses was rejected in the House of Lords.

The infant mortality for Britain last year was 118 per 1,000 of infants of one year of age. This is the lowest rate since 1837, when registration of births and deaths became general.

The Trades Union Congress of Western Australia recently passed a resolution to the effect that all private hospitals ought to be under Government inspection, and that the police should have power to enter such hospitals at any time for this purpose.

Dr. Simon Flexner, of the Rockefeller Institute, New York, has been devoting much time to the securing of a serum for cerebro-spinal meningitis. Up to date 130 cases have been treated in this way with 95 recoveries and 35 deaths, or a death rate of 27.5 per cent.

An effort is to be made in Cape Colony to arrest the spread of syphilis. It appears from the medical officer's report that syphilis is very prevalent in Bechuanaland. Dr. Gregory, in his report states that inaction means serious spread of the disease.

During the past five years 5,402,245 persons have died of the plague in India. The population is about 300,000,000. This gives one death in every sixty persons. This makes it quite clear that the Government of the country has a heavy task on its hands.

The nuisance of flies has been attracting a good deal of attention in London for some time. The Public Health Committee of London has reported that there is an undoubted connection between flies and the spread of disease, and that all forms of filth are their breeding grounds.

In Bombay, Dr. Bannerman is hard at work on a vaccine for the plague. He is carrying on his work along the lines of Dr. Haffkine. It

has been fully established that the vaccine is not injurious to health and is a very valuable preventive and curative agent.

An influential society has been formed in London known as the Research Defence Society, for the purpose of placing before the public proper views on scientific experiment, and meeting the statements of the antivivisectionists. Dr. Cromer is president, and Dr. Stephen Paget is secretary.

The *Boston Medical and Surgical Journal* issued on 7th May a superb number in honor of the sixty-fifth birthday of Professor Reginald Heber Fitz, of Harvard Medical College. The number contains twenty-six articles by his former house physicians. There is an excellent frontispiece of Prof. Fitz.

The American Health League is doing good work in the United States. The committee of one hundred has issued some useful information regarding its plans, and the need for a national organization of health. It is the intention to publish an official journal. The first number is to hand and contains some useful information.

Professor Deycke, of Hamburg, in working on leprosy, noted the numbers of a certain kind of streptothrix present in the cultures. From these he obtained a fatty substance to which he gave the name "nastin." This is now combined with benzoyl-chloride and called nastin-B. When given hypodermically it appears to be a valuable remedy.

Professors Neisser, of Breslau, and Wassermann are convinced that the fluids of persons infected with syphilis react specifically. This reaction occurs early in the disease, and continues long after the symptoms have disappeared. This reaction is present in ataxics and paralytics. This is a valuable aid in diagnosis. They also assert that atoxyl will destroy the infection in its early stage, so that the ape may be reinfected.

According to some of the most recent researches on typhoid fever, it is fully settled that the fæces, urine, blood, bone-marrow, and internal organs are infected by the bacilli. It has been shown that they may persist in the body for several years. The most interesting feature of these investigations is that the gall bladder is the place where the bacilli live and constantly infect the intestinal tract for years.

An interesting case was tried in Vienna. Two surgeons performed on a woman a gynæcological operation. While under the anæsthetic her respiration failed. Artificial respiration was had recourse to, and she recovered. In these manipulations she claimed that her spine was injured, and sued the surgeons. The judge dismissed the action with the comment that he had never heard of an action so unjust.

CORRESPONDENCE.

THE VITAL STATISTICS' ACT.

Editor CANADA LANCET:

SIR,—I have much pleasure in enclosing herewith, outlined memo re the Vital Statistics Act.

The Amended Act will, it is hoped, facilitate the collection of vital statistics and be useful to the public in permitting of the registration of more particularly deaths; and also enable them to secure more readily than has heretofore been possible, certificates of either births, deaths or marriages of recent date.

The provisions of the Act have been extended to the Indian districts, they being deemed territories, and the Division Registrar of the same appointed by Order-in-Council, being paid for his services in a formal manner, as has heretofore been the custom in the unorganized portions of the Province.

Much confusion has existed in the past in reference to definition of a search. This, according to section 7, subsection 4*a*, refers to one county or district, covering a period of not more than three years, the fee for searching being 25 cents, while for a search for one registration extending beyond one county, or for more than three years, the maximum fee is placed at $2. The fee for a certificate as issued by the Registrar-General (which is prima facie evidence in any court) is 50 cents, the same as heretofore.

Duties of Division Registrars. The officers will now be provided with schedules in duplicate of births, marriages and deaths, and returns have to be made to the Registrar-General on or before the fifteenth days of January, April, July and October, and not half-yearly as heretofore, together with original returns as received from clergymen, physicians and householders. According to subsection 6 of section 11, if a Division Registrar has reason to believe that any birth, marriage or death has not been registered, it is now his duty to inform the proper person, and on failure of such person to make the registration, information has to be sent forthwith to the Inspector of Vital Statistics.

For the convenience of the public, the Division Registrar upon application and upon payment of a fee of 25 cents shall give a certificate in the prescribed form, which has not been included in any quarterly return made to the Registrar-General; and the statute distinctly states that he fee is for the personal use of the Division Registrar issuing the same.

Section 14 provides that every legal medical practitioner who attends at the birth of a child, shall forthwith give notice on the prescribed form

to the Division Registrar. And section 22 provides that the duly qualified medical practitioner last in attendance during the last illness of a person who dies shall, before interment, supply to the Division Registrar all the particulars required to be registered of such and such a death; and in order that there may be no uncertainty as to these requirements on the part of medical practitioners when other parties notify of either a birth or death, subsection 3 of section 31 provides that in no case is the doctor relieved of these responsibilities, and it is the intention of the Department to enforce these two important measures.

Re the notification of a birth or death, section 15 provides as follows:

(*a*) The father if living; or

(*b*) In case of his inability, or if he is dead, by the mother, if living; or

(*c*) In case of the inability of both parents, or, if neither be living, by the person standing in the place of the parents of the child.

(*d*) If neither of these can notify, then by the occupier of the house in which the child was born, if he has knowledge of the birth, and by the nurse or midwife present at the birth.

These notices to be given within thirty days after date of birth. And in the case of a new-born child found exposed, it is the duty of any person finding such child to register such information as is required, with the Division Registrar.

As to the notification of a death, the order is as follows: Section 22. The occupier of a house in which a person dies, or if the occupier be the person who has died, then every adult person residing in the house in which the death took place. Where a death does not take place in a house, then every person present at the death or having any knowledge of the circumstances, or the coroner who views the body.

Section 20 provides for the altering or inserting a name after the registration of a birth has been made, up to a period of ten years after the occurrence of the same.

In order to facilitate interment of the dead, subsection 2 of section 22 provides that where the death has occurred in a township or territory without municipal organization, the return may be made to the nearest Division Registrar, who, upon the payment of a fee of 25 cents, *shall register the same and issue a certificate of registration of death.* The fee in this case being for the personal use of the Division Registrar. And where the duly authorized Division Registrars are remote from any particular section of the Province, the Registrar-General, upon proper presentation of the facts, may appoint sub-registrars for the purpose of issuing certificates of registration of death. The fee being paid by the applicant, and the sub-registrar must make his return direct to the Division Registrar of the district in which the death occurred, and to the Registrar-General.

A very important amendment is that contained in section 25. The first part reads as follows: "The removal for burial or the embalming of any body shall not take place, and an undertaker, clergyman, sexton, householder or other person shall not engage in the burial of a body unless a certificate of registration has been previously obtained from the Division Registrar. The importance of this in criminal cases is quite evident to the medical profession.

Under section 27, caretakers, owners of cemeteries or burying grounds are required to transmit to the Division Registrar of the division in which the cemetery is situated, quarterly returns, and subsequently transmitted by that officer to the Registrar-General.

Yours, etc.,

CHARLES A. HODGETTS.

Toronto, May 12th, 1908.

OBITUARY.

HON. WILLIAM ARMSON WILLOUGHBY, M.D., M.P.P.

Hon. Dr. William Armson Willoughby was born in the Township of West Gwillimbury, Simcoe County, February, 1844, and graduated M.D. at Victoria College in 1867. The doctor served the municipality of Colborne for many years as a member of the Council, the School Board, and other bodies, and in 1884 was Warden of the united Counties of Northumberland and Durham. He held the rank of surgeon lieutenant-colonel in the volunteer forces. His political career had not been one of uninterrupted success. First elected to the Legislature in the general election of 1886, he was unseated on petition, and at a bye-election, February 1, 1888, was defeated by Mr. Clarke. The latter shortly afterwards died, and a new election was held in October, 1888, and Dr. Willoughby was this time successful. He was re-elected at the general elections in 1890 and 1894, and defeated in those of 1898, and returned in 1902, and in January last. The doctor in private life was a cordial and likable man.

Hon. Dr Willoughby recently visited Europe with a commission of asylum superintendents to obtain information respecting the treatment of the insane. The announcement that Hon. Dr. Willoughby would not again take part in politics caused no surprise, owing to the state of his health.

He passed quietly away at his residence in Colborne on 28th April. The doctor had been ill for some time and hopes for his recovery had been very slight. Hon. Dr. Willoughby had represented East Northumberland

in the Local Legislature for many years, and for the last three years was member without portfolio in Mr. Whitney's Cabinet.

Dr. Willoughby went to England in search of health and came back little improved. Then he tried Clifton Springs, but returned home on February 1, since which time he had seldom been outdoors. Shortly before his demise, however, the day being mild, he was taken through the town for a drive. He was looking bright, but was very weak.

In politics Dr. Willoughby's sense of honor always rang true, no matter how keen might be the vigilance with which he watched over the interests of those who had put their trust in him. A political career, from which honorable men sometimes shrink, would be robbed of much of its repulsiveness if all members of Parliament were as kindly and as honorable as he was. In religion he was an Anglican, and was unmarried.

HON. DR. DOUGLAS.

Dr. Douglas, Speaker of the Provincial Legislature, Prince Edward Island, since February 5, 1905, died at his home at Hunter River on 6th May after ten days' illness from pleuro-pneumonia. He was born at Hillsboro in December, 1860, educated at McGill University and New York, and graduated M.D.C.M. at the former institution. He represented the second district of Queen's since July 11, 1900, when he was elected in a bye-election. As Speaker, his rulings have given general satisfaction to both sides of the House. He leaves a widow and three children.

C. McLEOD, M.D.

Dr. McLeod, of Winnipeg, died at Rochester, Minnesota, a short time ago.

DR. GOHAN.

Dr. Gohan, of Hartney, Manitoba, died in the early part of March of this year.

JOHN LEIGH GOLDIE McCARTHY, M.D.

Dr. John Leigh Goldie McCarthy, father of Mr. Leighton McCarthy, K.C., M.P. for North Simcoe, died in Barrie on 17th May. In the death

of Dr. McCarthy the medical profession loses a highly-respected and successful practitioner, and Simcoe County one of its best known residents. Dr. McCarthy passed away from cancer of the stomach, he having been ill about a year. Deceased, who was 63 years of age, was a brother of the late D'Alton McCarthy, K.C., and leaves a widow, two sons and a daughter. For about thirty-five years the late Dr. McCarthy was surgeon of the 35th Regiment, and was very popular with the members of the regiment. Deceased was a member of Trinity Anglican Church and of the St. George's Society. The funeral was private.

R. B. STRUTHERS, M.D.

Dr. R. B. Struthers, the oldest practising physician of Sudbury, died on 14th May, of heart failure, after an illness of less than four hours. His death came as a shock to the citizens generally, by whom he was well known and highly respected. Deceased went to that section in 1884 as C.P.R. physician on construction, taking in the territory from Mattawa in the east to Algoma Mills on the Soo line, and to Chapleau on the main line west. Since 1889 he has been a resident of Sudbury, serving for a number of years as trustee on the Public School Board, and as town councillor. Any movement tending to advance the interest of Sudbury always had his support and assistance. He was a member of the Church of England. He was nominated as the candidate in opposition to Hon. Frank Cochrane. The doctor was 49 years of age, was born in Phillipsburg, Missisquoi County, Quebec, where the remains were taken for interment. A widow and two children survive.

JAMES STEPHENSON, M.D.

The death of Dr. James Stephenson occurred recently at Iroquois. He was in his seventy-third year. When he was engaged in active practice he had one of the largest clienteles in Eastern Ontario.

WILLIAM S. ENGLAND, M.D.

Dr. England died at his home in Winnipeg on 24th April, 1908. His death was very sudden and unexpected from an attack of cerebral hæmorrhage. He graduated from McGill University in 1889, and, after a year in the Montreal General Hospital as house surgeon, he located in Winni-

peg. He enjoyed a large practice and was professor of anatomy in the Manitoba Medical College, surgeon to the Winnipeg General Hospital, and consulting surgeon to the hospital in St. Boniface. He took a lively interest in various medical societies. He leaves a widow and a brother, Dr. F. R. England, of Montreal, to mourn his loss.

B. F. PEARSON, M.D.

Dr. Pearson died at the home of his son-in-law, Mr. T. P. Stewart, of 212 Poplar Plains Road, Toronto, on 17th May, 1908. The doctor had not been in good health for over a year. He was in his sixty-eighth year, was a graduate of the University of Toronto, and had practised in Queensville, in the County of York, Ontario, for many years. Four daughters and two sons survive him. He was a member of Sharon Masonic lodge. The interment took place in Queensville cemetery.

JOSEPH HENRY SCAMMELL, M.D.

Dr. Scammell, of St. John, N.B., took suddenly ill on 21st April with an attack of pleuro-pneumonia, and died four days later. He was in his thirty-third year. For a number of years he had enjoyed a good practice in St. John. He leaves a widow, to whom we extend our sympathy. The late Dr. Scammell took an active interest in all things pertaining to the elevation of the medical profession where he resided.

BOOK REVIEWS.

BIER'S HYPERÆMIC TREATMENT.

Bier's Hyperæmic Treatment in Surgery, Medicine and all the Specialties: A Manual of its Practical Application. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital; and Professor Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University Germany. Octavo of 209 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, $3.00 net. Canadian Agents: J. A. Carveth & Co., Ltd., Toronto.

So much has been said of recent years, and especially within the past year, about the Bier treatment of disease, that a book upon the subject is sure to attract a good deal of attention. Many new lines of treatment have found vogue in the past, and soon pass out of notice. The reason

is that they did not fulfill expectations. In the Bier hyperæmic treatment we are inclined to think that much of it will become a permanent asset in the advance of the healing art. Our reason for this view is that treatment is along nature's own methods. When a part of the body is attacked by an invading organism an extra volume of blood is sent to that part. This extra blood supply is nature's reserve army sent to the front. In other words, there is a warfare, and the blood corpuscles and the blood serum are nature's soldiers. They drive out the invading germs. In the Bier treatment we have laid down the ways and means at our command to aid nature in her efforts to fight infection and cure disease by means of a liberal supply of blood to the affected part. This line of thought and investigation may in time show that much of the so-called antiphlogistic treatment of the past by means of ice bags, elevation of the inflamed or injured part, local blood-letting, compress and bandage, etc., were not well calculated to hasten recovery, indeed, might be factors in delaying it.

This book gives an account of how the hyperæmia is to be induced. This is made clear by means of excellent illustrations, aided by carefully worded descriptions. In this way it is made clear how the treatment may be carried out on all parts of the body to which it is applicable. The book then goes on to explain how this treatment is useful in traumatisms, inflammations of all sorts from infections, and in a number of surgical diseases. The range of its application is carried into the special fields of diseases of the eye, ear, nose, throat, skin, pelvis, etc.

We wish to congratulate the authors and publishers on the production of this excellent work on an interesting subject. It should meet with a large circulation. Every practising physician and surgeon ought to be familiar with the Bier method of treating disease.

LABORATORY HANDBOOK OF BACTERIOLOGY.

By Rudolf Abel, Medical Privy Councillor, Berlin, Germany. Translated from the tenth German edition by M. H. Gordon, M.A., M.D., B.Sc.; with additions by Dr. A. C. Houston, Dr. T. J. Harder and the Translator. London: Henry Frowde and Hodder & Stoughton. Toronto: D. T. McAinsh & Co., 123 Bay St. Oil cloth covers, $1.50.

This book belongs to the series of well-known Oxford medical publications. To find a place in this series is sufficient praise in itself. On looking carefully over this book we have only words of commendation to offer both on the matter contained in it and the practical arrangement of the subjects.

This book, which has already reached the tenth edition, is the standard laboratory book throughout Germany, and gives a complete account

of every important technical detail which is in practice in the Bacteriological Laboratory of to-day.

The translator has added those methods which his own large experience has proved of value in the examination of the air. A special article has been written by Dr. Houston, of the Metropolitan Water Board, on the examination of water for sewage contamination. An article has been written by Dr. Horder on the examination of organs, etc., and the work is brought up to date by an account of present methods with regard to opsonins. It takes up, in practical detail, culture and staining methods, examination of the blood, post-mortems, bacteria in air, dust, milk, water, sewage, etc., etc.

The success of the book has been justified by the great pains the author has taken and the attention he has given to every practical detail as well as in keeping up with the progress—the very rapid progress—of science.

In order to make the book up-to-date with regard to the work done in Great Britain, important additions have been made, with the author's approval.

HUMAN MONSTERS.

A Study of the Causes Underlying the Origin of Human Monsters. Third Contribution to the Study of the Pathology of Human Embryos, by Franklin P. Mall, Professor of Anatomy. Johns Hopkins University, Baltimore, Md. Philadelphia: The Wistar Institute of Anatomy and Biology, 1908.

In this volume we have a superb work of 367 pages, printed on superior paper and illustrated with many very fine engravings. The work is a very complete one, and is founded upon a study of 163 pathological human embryos. The author lays down two theses as the outcome of his studies: (1) The identity of pathological embryos and small monsters; that is, many of them would have developed into real monsters if they had not been aborted; and (2) that all of them are developed from normal ova due to external influences—in man to a condition which is termed faulty implantation. The author refers to the various beliefs as to the causes of monsters, such as the influence of gods good or bad, the moon and stars, a cross between man and beast, and maternal impressions. This latter belief is of great antiquity, and is still of very wide distribution. It was attacked in the eighteenth century by Blondel on philosophical grounds, and a little later by Haller from a scientific standpoint.

The question resolves itself into the one as to whether monsters are germinal and hereditary, or produced from normal germs by some influence. Gradually this latter view has gained ground and is now the

accepted one amongst scientists. But here there are two schools: one that monsters are from normal germs influenced by maternal impressions, the other that they are from normal germs influenced by mechanical conditions. The author states: "That the power to become a monster is present in every ovum is fully demonstrated by experiments upon a variety of vertebrates as well as by all of my pathological ova, especially those obtained from tubal pregnancies."

The following quotation disposes of the maternal impression theory in precise words: "It may be noted here that the obstetricians and gynæcologists of America as a class advocate strongly the theory of maternal impressions, due largely, no doubt, to their insufficient scientific education. On the other hand, we may pride ourselves over the masterful strokes of American teratologists against this theory, the experimental teratologists have produced double monsters, spina-bifida, and cyclopia, under the very noses of these practitioners, but they continue their futile speculations over mere coincidences."

The immortal John Hunter showed that monsters were no more frequent in cases where the mothers had experienced bad impressions than in a similar number of women where no such impression had occurred.

We have had much pleasure in reviewing this book at some length. We could wish that it found its way into every physician's library. It belongs to that class of books that make opinions, removes the incorrect and establishes the sound. With the distinguished author we hope to hear but little about maternal impressions in the future as a cause of monsters.

NEW JERSEY BOARD OF HEALTH REPORT.

Thirty-first Annual Report of the Board of Health of the State of New Jersey, 1907, and Annual Report of the Bureau of Vital Statistics. Trenton, N.J.: The John L. Murphy Publishing Co., Printers, 1908.

This report contains much useful information on the subject of public health. It shows what the State is doing along the lines of preventive medicine. The statistics show a steady fall in the death rate in the State. Such important topics as the inspection of streams, creameries, laboratory hygiene, are discussed. The death rate from consumption has steadily declined from 27 to 16 per 10,000, during the past 28 years. The mortality from pneumonia shows a steady tendency to increase, and is now 14.19 per 10,000 of the population. The death rate among children under five years of age has declined from 24.26 in 1879 to 15.81 in 1906. The death rate due to diphtheria and typhoid fever is markedly reduced, about one-third of what it was thirty years ago. The cancer death rate has increased

from 1879 to 1906 from 3.7 to 6.32 per 10,000. The State Board issues from time to time very useful and instructive circulars on health topics. This report will prove very helpful to those engaged in hygienic and public health questions.

SAUNDERS' FORTHCOMING BOOKS.

Messrs. W. B. Saunders Company, medical publishers, of Philadelphia and London, announce for publication before June 30th a list of books of unusual interest to the profession. We especially call the attention of our readers to the following:

Bandler's Medical Gynæcology—treating exclusively of the medical side of this subject.

Bonney's Tuberculosis.

Volume II., Kelly and Noble's Gynæcology and Abdominal Surgery.

Volume IV., Keen's Surgery.

Gant's Constipation and Intestinal Obstruction.

Schamberg's Diseases of the Skin and the Eruptive Fevers.

John C. DaCosta, Jr.'s Physical Diagnosis.

Todd's Clinical Diagnosis.

Camac's Epoch-making Contributions in Medicine and Surgery.

All these works will be profusely illustrated with original pictures.

MARRIAGE, ANNULMENT, DOMICILE, DIVORCE.

This interesting little brochure is from the pen of James Mitchell Donovan, LL.B., of Sioux Falls, South Dakota. The booklet is full of information on the topics included in the foregoing heading. The author has given much study to this phase of the laws of most civilized countries, and can speak with no uncertain voice. The price of the booklet is $1, and can be obtained from the author.

MISCELLANEOUS.

AN ACT TO AMEND THE PHARMACY ACT.

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Section 26 of the Pharmacy Act is amended by adding thereto the following subsections:

(2) No person shall sell by retail, furnish or dispose of alkaloid cocaine or its salts or alpha or beta eucane or their salts or any admixture of cocaine or eucane except upon the written prescription of a legally qualified medical practitioner, which shall be retained by the person who sells, furnishes or disposes of the same.

(3) The prescription shall not be filled more than once and no copy thereof shall be taken by or given to any person by the person who has the custody or control thereof.

(4) Alkaloid cocaine or its salts and alpha and beta eucane or their salts shall not be sold or disposed of by wholesale except upon the written order of a pharmaceutical chemist, a legally qualified medical practitioner, a licensed veterinary surgeon or a licentiate of dental surgery unless the person so selling or disposing by wholesale affixes or causes to be affixed to the bottle, box, vessel or package containing the articles sold and also upon the outer wrapper of the package as put up by the manufacturer a label distinctly displaying the name and quantity of cocaine or its salts or alpha or beta eucane or its salts, sold or disposed of, and the word "poison" with the name, address and place of business of such person, all printed in red ink.

(5) The person who so sells or disposes by wholesale shall before delivering any of such articles make or cause to be made in a book kept for that purpose an entry of the sale or disposal thereof, stating the date of sale or disposal, the quantity, name and terms in which the sale or disposition was made, the name in full and the address of the person to whom the sale or disposal was made and the name of the person by whom the entry was made, and the book shall always be open to inspection by the proper authorities and shall be preserved for at least five years after the date of the last entry made therein.

TELEPHONE OTITIS.

No one who has witnessed the nerve racking activities of the professional telephone operator can wonder at the occasional occurrence among these workers of nervous or other troubles that are attributable to their employment. Indeed, it is rather a matter of astonishment that this result does not more often follow, and it is even stated that the functional capacity of the ear is improved rather than impaired. A somewhat unusual instance of disease referable to the habitual use of the telephone is reported by Hamm (*Berliner klinische Wochenschrift*, December 30, 1907) in which an inflammatory process of the external ear was caused. The patient was a post-office official who was obliged to transact a large amount of busi-

ness daily by means of the telephone. He came to the author with the statement that for over a year he had been suffering from increasing pain and tenderness and deafness in the left ear which had compelled him to use the right in telephoning, until now this was also affected in the same way. The diagnosis of fetid, diffuse external otitis was made and it was found that improvement promptly attended non use of the telephone, only to be followed by a relapse when an attempt was made to resume the regular routine. The author believes that the malady was caused by the continued action of electrical currents escaping from the receiver when held to the ear, and quotes the opinion of Professor Peukert, a technologist to whom the case was submitted, to the effect that measurements show that the act of telephoning is regularly accompanied by the passage into the body of currents which by cumulative action are capable of inducing organic lesions.—*Medical Record.*

THE BRITISH COLUMBIA MEDICAL ASSOCIATION.

The ninth annual meeting of the British Columbia Medical Association will be held in Vancouver on the 20th and 21st of August next, and any members of the profession present from the Eastern Provinces will be heartily welcomed. A number of papers have been promised and some interesting discussions are expected, especially on the question of school hygiene. The officers of the Association are: Dr. I. M. Pearson, Vancover, President; Dr. D. Corsan, Fernie, Vice-President; Dr. J. D. Helmcken, Victoria, Treasurer; Dr. R. Eden Walker, New Westminster, Secretary. An excellent social and scientific programme will be provided, and it is hoped the attendance will be large.

A QUACK HEAVILY FINED.

The following item is taken from the *New Zealand Herald*:

A case of considerable interest was heard at the Police Court by Mr. R. W. Dyer, S.M., when Max Gotch, a "herbal specialist," carrying on business in Wellesley street east, Auckland, was charged, on the information of Dr. Purdy (District Health Officer), who was represented by Mr. Mays, that, on December 31 last, he wilfully and falsely used a description implying that he was recognized by law as a practitioner in medicine; that on January 11 he sold a certain poison (ergot of rye) to one Albert Percival Bennett, without distinctly labelling the bottle containing it "poison," as required by the Sale of Poisons Act, 1871; that he did sell

the poison without making an entry in a proper book for the purpose, as required by the Act; and, further, that he did sell the preparation without being a person registered under the Act to sell it.

Mr. Sharples appeared for defendant, who pleaded guilty to the three last charges, but denied falsely representing himself as a doctor.

Albert Percival Bennett, inspector of the Health Department, gave evidence as to going into defendant's shop, and complaining of a nasty feeling in the throat. Gotch said that whatever was wrong he could effect a cure. Witness expressed a doubt. Gotch offered to cure him in five months. The medicine was to cost 1s. 6d. an ounce for internal use, and 2s. 6d. an ounce for outside application. Gotch told witness he was suffering from bronchial affection, and that it was a good job it had not gone down to the stomach, or it would have been a bad case. (Laughter.) Defendant had told witness on the occasion of his first visit that he was not registered in New Zealand, but he was registered over "on the other side." On another occasion Gotch had said that he had spent five years in the Berlin Sanatorium. Defendant had also stated that he had a practice among 3,000 Austrians, from whom he was drawing £800 a year.

Defendant's counsel, Mr. Sharples, submitted that the witness Bennett had admitted that defendant had said he was not registered as a fully qualified medical practitioner in New Zealand.

Mr. Dyer said that was not the question. He supposed the greater number of doctors in New Zealand qualified outside, but that did not debar them from practising here. Registration in New Zealand only enabled a doctor to sue a patient for fees due, and defendant was charged here with pretending.

Further evidence having been tendered, the magistrate said that even taking the most liberal view of the case, defendant had pretended that he was duly qualified by law.

Mr. Mays asked for the full penalty, with costs on the highest scale. The man was "an arrant humbug and a quack of the worst type."

Mr. Sharples protested against such strong terms.

Mr. Dyer: Well, what is a quack? He is a man who states that he is a doctor, and practises medicine without any qualification whatever. At the same time, I do not think that you are, under the circumstances, justified in making an attack upon the man. I certainly consider, however, t..at he comes within the term "quack."

Counsel withdrew the charge of failing to comply with the regulations by not putting the label "Poison" on the bottle.

Mr. Dyer said that on each of the two charges under the Poisons Act defendant would be fined £5 and costs £5 19s. "On the charge of

falsely representing yourself to be what you knew you were not," continued the magistrate, "I am not going to inflict the maximum penalty, because, as far as I know, you have not been convicted before, but I am going to impose a fine which I hope will have the effect of stopping you and men like you from carrying on this sort of thing."

Defendant was fined £30 and costs £3 16s.

EXAMINATIONS, QUEEN'S MEDICAL COLLEGE, KINGSTON.

The Senate of Queen's University has announced the following graduates in medicine: J. O. Baker, Newington, Ont.; W. Beggs, Hallville, Ont.; H. E. Bond, Kingston, Jamaica; R. M. Bradley, B.A., Boston, Mass.; J. C. Byers, Eganville, Ont.; S. V. Carmichael, Spencerville, Ont.; F. A. Cays, Kingston, Ont.; J. A. Charlebois, Hull, Que.; J. P. I. Clancy, Lumsden, Sask.; W. H. Cole, Ottawa, Ont.; T. J. Collinson, Piercefield, N.Y.; H. A. Connolly, M.A., Vancouver, B.C.; W. F. Cornett, B.A., Kingston, Ont.; M. C. Costello, Calgary, Alta.; I. D. Cotnam, Pembroke, Ont.; T. V. Daley, Kingston, Ont.; H. Dunlop, B.A., Kingston, Ont.; L. H. Fraser, Truro, N.S.; R. A. Hughes, Kingston, Ont.; G. H. V. Hunter, Kingston, Ont.; J. R. Hurtubise, Ste. Anne de Prescott, Ont.; J. M. Kelly, Addison, Ont.; W. D. Kennedy, Ottawa, Ont.; A. V. Laing, Dundas, Ont.; A. L. Magill, Kingston, Jamaica; H. H. Milburn, Peterboro', Ont.; W. Morrison, B.A., Ashgrove, Ont.; E. T. Myers, Portland, Ont.; A. MacDonald, Regina, Sask.; F. B. McIntosh, Edmonton, Alta.; J. F. McDermott, Kingston, Ont.; N. J. McKinley, Seeley's Bay, Ont.; C. T. C. Nurse, Georgetown, B.C.; C. A. Patterson, Athens, Ont.; G. H. Patterson, Stella, Ont.; P. J. Quinn, Oswego, N.Y.; J. E. R. Ramdeholl, New Amsterdam, B.C.; T. R. Ross, Abernethy, Sask.; F. R. Sargent, B.A., Kingston, Ont.; Beresford Harty Thompson, Kingston, Ont.; F. S. Young, Forfar, Ont.; W. L. Yule, Ganonoque Junction, Ont.

Faculty prizes in anatomy: W. E. Anderson, Kingston; S. M. Polson, M.A., Kingston.

Faculty prize, $25, for highest mark on second year examinations in anatomy, physiology, histology and chemistry: W. E. Anderson, Kingston, Ont.

The New York Alumni Association scholarship, $50, for highest mark in honor physiology and histology; papers open to arts and medical students: S. M. Polson, M.A., Kingston.

Faculty prize for highest percentage of marks on second year examination in materia medica: James Polson, Kingston, Ont.

The Dean Fowler scholarship for highest percentage of marks on work of the third year: J. J. McCann, Perth.

Faculty prize for best written and practical examination in third year pathology: D. Robb, B.A., Annaheim, Sask.

The Chancellor's scholarship, value $70, for highest percentage on four years' course, tenable only by those who take the examinations of the Ontario Medical Council: H. Dunlop, B.A., Kingston, Ont.

Prize of $25 given by Dr. W. C. Barber for the best examination in mental diseases: F. R. Sargent, B.A., Kingston, Ont.

Medal in medicine: C. T. C. Nurse, Georgetown, B.G.

Medal in surgery: I. D. Cotnam, Pembroke, Ont.

LONDON MEDICAL COLLEGE EXAMINATIONS.

The results of the London Medical College examinations have been given out. The year has been very successful. Following are the graduates: A. L. Campbell, Belmont; L. E. Downing, Clandeboye; G. H. Farquharson, Whierlwood, Sask.; J. F. Folinsbee, Strathroy; W. G. Hutchinson, Walsingham Centre; W. Harcourt, Arthur; W. A. Kenny, London; F. A. Jeillor, Wallacetown; F. N. McPherson, London; A. R. McMillan, Burwell Road; F. L. Neely, Dorchester; A. Ross, London; C. W. Sawers, Brucefield; J. L. Stapleton, London; J. S. Schram, London; W. J. Taylor, London; Victor Trottier, Tilbury; E. L. Walker, Glencoe; R. A. Worthington, Clinton.

First year scholarship, Cyril Imrie, Johannesburg, South Africa.
Second year scholarship, W. H. McFarlane, London.
Third year scholarship, E. F. Jeffries, London.
Fourth year scholarship, F. S. MacPherson, London.
Gold medalist, F. S. MacPherson, London.
Silver medalist, R. A. Worthington, Clinton.

THE CONDITIONS OF TORONTO GRANTS TO THE HOSPITALS FOR CONSUMPTIVES.

Conditions in connection with the distribution of the $35,000 to the Toronto Free Hospital for Consumptives and the $15,000 to the Hospital for Consumptives at Gravenhurst, these being the Board of Control's apportionment of the $50,000 voted by the ratepayers, have been recommended by Dr. Sheard, City Medical Health Officer. He suggests that

the Toronto Free Hospital for Consumptives, in consideration of receiving $35,000, shall undertake to provide accommodation for fifty consumptives, through all time, irrespective of any stage or condition of the disease with which they are afflicted. These are to be admitted on the order of the Medical Health Officer, and to be maintained without further cost to the city than the usual per diem allowance paid to hospitals for maintenance of patients. The Medical Health Officer may cancel any of the orders on giving thirty days' notice. The hospital also is to permit a representative of the City Council to have a seat on the Board of Directors. The Hospital for Consumptives at Gravenhurst, in consideration of the receipt of $15,000, is to maintain through all time fifteen patients, and such cases are to be approved of by the authorities of the Hospital for Consumptives at Gravenhurst as suitable cases before being admitted. The matter will likely come before the Board of Control.

MUSKOKA SANATORIA MEDICAL STAFF.

W. B. Kendall, M.D., C.M., L.R.C.S., L.R.C.P., Physician-in-Chief of the Muskoka Cottage Sanatorium, has been appointed Physician-in-Chief of both the Cottage Sanatorium and the Muskoka Free Hospital for Consumptives, and C. D. Parfitt, M.D., M.R.C.S., L.R.C.P., Physician-in-Chief of the Free Hospital since its opening in 1902, becomes resident consultant of the two Sanatoria, each giving his entire time and effort to these institutions. The medical staff will also include a trained resident pathologist and two assistant doctors, together with a staff of specially trained nurses.

MEDICAL INSPECTION OF SCHOOLS.

One of the most important discussions in the Ontario Educational Association at its recent meeting was that in the inspectors' department on "Medical Inspection of School Children." In the course of a comprehensive paper on the subject, Inspector W. F. Chapman, B.A., of Toronto, after stating that many children have been blamed in the past for stupidity and incorrigibility, who of themselves were innocent of either, but were sufferers from some physical defect brought on by neglect or heredity, outlined the history of medical inspection of school children.

France first instituted medical inspection of schools, introducing it in Paris in 1843. The growth of the system was at first very slow; while some of the large cities of Germany and England have medical inspection of schools, it remained for new world enterprise to carry it to success.

Boston was the first city on this side of the Atlantic to adopt it in 1894. To-day many of the cities of the United States and a few in Canada have a more or less complete system. New York has the most perfect system, having a large staff of physicians and a special corps of trair .d nurses. Philadelphia also has a very complete system along two lines: (*a*) Sanitary inspection of buildings; (*b*) systematic examination of pupils. Following the example of New York, Montreal has lately added the system of nurses. The speaker knew of no city where the teachers do the work. Their duties are sufficiently arduous at present and they have not the technical knowledge.

Among the advantages that result from medical inspection of school children, Mr. Chapman noted: The prevention of the spread of communicable diseases by excluding from school those contagious cases that are rare in their incipiency, and have not been recognized by parents; the placing of every child in the most favorable condition for progress by remedying, wholly or partly, those defects which retard a normal physical and mental growth; the securing of greater protection of other children, and the giving of medical advice, especially as regards defective vision, defective hearing and defective breathing.

Mrs. Huestis stated that for over a year efforts had been made to do something of the kind in Toronto schools, and that other countries all over the world were far in advance of Canada in medical inspection. The health of the school children was a wide and complex problem. It had been recognized in recent years that the State owed more to the child than merely its intellectual instruction. As for the results of inspection in Montreal, for example, nearly 50 per cent. of the children examined were found to be diseased or in danger of disease from their home surroundings. Inflammation of the glands, decayed teeth and defects of vision were some of the most prevalent troubles.

Then there was another important thing—the mentally defective children. Many of these had been found in going through Toronto schools, and if they were properly looked after they could be helped and made almost or entirely self-supporting, instead of being a burden and a menace to the country.

By 1868 all the public schools in Sweden had medical officers attached to the staffs, and France and England had long had medical inspection. Chicago had 100 medical practitioners on its school staff.

INSANITY AMONG IMMIGRANTS.

Dr. Clarke, Medical Superintendent of the Toronto Asylum for the Insane, is credited with recently making the statement that of the 200

patients admitted to the asylum during the past year 120 were foreigners, and the greater part of these were recent arrivals.

This, he said, was unfortunate in a way, on account of the great expenditure to which the Ontario Government was submitted. He said that the cost of the maintenance of the ones who could not be deported and were left over would be for the Toronto Asylum alone at least $300,000. But besides this there were a number of similar institutions in the Province, and the expense would be enormous.

The cause of it, he said, was the lack of supervision of immigrants. He thought that some benefit could be derived by studying the methods employed in the United States.

THE TRAINING OF NURSES.

Dr. Henry M. Hurd, of Johns Hopkins Hospital, Baltimore, at the meeting of the Hospital Association, discussed the proper length of the period of training for nurses. First leaving out of consideration the exact length of any course he pointed out some of the essential requisites. The course should be properly graded. The hours of duty should be so arranged that the nurse would not be too exhausted as to be unfit for study.

The third requisite should be the restriction of the amount of time spent in practical work to eight hours with two hours at least each day for study.

Then there should be a preliminary training.

A course of three years is advisable only where shorter hours of service have been established and where the hospital is large enough to give a good training in all branches. In the matter of training the smaller and the larger hospitals should co-operate. Courses of training for nurses should be standardized and no one should bear the title of registered nurse who has not been fully trained in the various branches. Special private sanitaria or hospitals owned by physicians and maintained for their own patients should cease to operate training schools, but should supply themselves with nurses who have already received training. Nurses should not spend two years, or even one year, in a limited specialty.

From the *Canadian Nurse* for June much information may be gathered as to the growth and development of nursing all over the world. Nurses are becoming organized into influential societies.

MEDICAL PREPARATIONS, ETC.

A FINANCIAL "SIMILE."

The prudent financier always has, at his command, a reserve store of sound securities with which to meet the demands of a period of monetary stringency. Likewise, the *healthy* individual maintains, in his vital bank account, a reasonably liberal balance of forceful energy, upon whch he may draw during periods of physical stress and strain. When, however, the business man gambles with his capital, his financial reserve is often hypothecated and is thus unavailable in times of emergency. So it is with the man or woman who improvidently consumes the physical capital with which nature liberally endows the human organism. Too liberal and too frequent drafts deplete the vital store more rapidly than the normal deposits of force and energy are credited to the physical account. It is just at this period that the physician is consulted in his capacity as a physico-financial expert. Upon his advice, at this critical juncture, depends the vital solvency of the patient. The undue expenditure of energy must be checked: the vital assets must be conserved: timely deposits of negotiable funds must be entered to the credit of the impaired balance. The vital bank account of the depleted anæmic, the over-tired, over-worked neurasthenic, the chronic dyspeptic, the exsanguinated surgical patient, the marasmic infant and the exhausted convalescent are all in need of such deposits of vital energy As the round gold "coin of the realm" is the standard of financial value, so is the round hæmoglobin-carrying, oxygen-bearing red corpuscle of the blood the circulating medium of all vital exchange and interchange. To avert an impending physical bankruptcy, there is urgent need for the adoption of prompt measures to increase the deposit of these necessary erythrocytes. Pepto-Mangan (Gude) quickly adds to the circulating medium, by constructing new red cells and reconstructing those that have retrograded because of over-drafts of force and energy. It increases the appetite, stimulates and encourages the absorption of blood-building nutritive material, augments the hæmatinic richness of the circulating fluid, increases the number and establishes the structural integrity of the corpuscular elements of the blood. It thus successfully plays the rôle of the depositor of vitality to the account of the patient who needs such essential additions to his or her physical credit.

PUBERAL ANÆMIA.

Broad clinical experience certainly tends to support the opinion of many medical men that chlorosis is practically limited to the female sex,

and to these during the child-bearing period. As is well known, chlorosis is hardly a true anæmia, inasmuch as it consists rather of a decrease of hæmoglobin than any marked or constant diminution in either the corpuscles or mass of the blood. There is a true anæmia, however, which occurs at or about puberty and is common to both sexes. This may properly be spoken of as a puberal anæmia and manifests itself by both oligocythæmia and aligæmia. Young men as well as young women are attacked and the cause seems to rest on actual structural deficiencies rather than on emotional influences, as is generally believed to be the case in chlorosis. It is slow and insidious in its onset and is characterized by a pallor or bloodless appearance quite different from the greenish color of chlorosis. Examination of the blood shows a greater or less decrease of hæmoglobin, but unlike chlorosis, the red cells and total quantity of the blood are lowered very markedly. Strange to say, however, the specific gravity is usually raised in puberal anæmia, while in chlorosis it is generally lowered.

One pronounced clinical symptom referable to the pulse, according to a prominent English authority, will, moreover, be found in puberal anæmia, which is not common in chlorosis. In anæmias of failing quantity, such as puberal anæmia, the pulse is almost invariably feeble and empty, while in chlorosis it is often dull and even of quite excessive pressure.

The type of anæmia under discussion is probably due to

(1) Excessive demands on, or actual destruction of the blood elements;

(2) Deficient renewal of its elements;

(3) Or both.

The first is a sequence of some disease like fever or toxæmia; the second of inanition or malnutrition; and the third of some wasting process, which not only depreciates the blood, but by lowering functional activity militates against any physiological tendency to restoration.

In any instance the paramount need is to stimulate hæmatopoiesis, and for immediate and satisfactory effect in this direction Pepto-Mangan (Gude) has been found of very great value. Under its administration, the hæmatogenic function is actively increased and the appetite and general nutrition rapidly raised. The digestion is improved and never embarrassed —a statement that can be made of none of the inorganic prparations of iron.

It goes without saying that the best of hygiene, good food and as much outdoor life as possible should also be prescribed in the treatment of puberal anæmia. The condition if allowed to continue is always dangerous, principally because of its predisposing tendencies to graver disease; but the results of the treatment recommended are usually so prompt and decisive that there is rarely any excuse for its not being controlled.

At any rate, "it is the stitch in time" that saves serious trouble, and Pepto-Mangan (Gude) in this class of cases will be found a very dependable stitch.

THE PERIODICAL NERVOUS HEADACHE.

Among the most common ailments, especially among the young, are the periodical nervous headaches, and three or four times as many females as males are afflicted with them. Dr. A. F. Schellschmidt, of Louisville, Ky., states that "they generally manifest themselves about the time of puberty and are very severe for a few years, but with increasing age the attacks become less frequent, until at the age of forty they seem to almost disappear and are seldom or never seen after fifty. They are associated with vertigo, nausea and vomiting. The pain is in and around the eyes, and while the attack lasts there frequently is partial or total blindness. Those who complain of this trouble suffer from prodromal symptoms for several days before the attack shows itself in an active form, which symptoms differ in different patients.

When treatment is demanded it is more for the pain than anything else. Opium will relieve, but does more harm than good, as it leaves the system in a worse condition to resist a subsequent attack. Antikamnia tablets give great relief and act quickly. An emetic will sometimes abort an attack. The bowels should be kept open and those diuretics which hasten the elimination of the urea should be administered. If the attacks are due to a reflex nervous condition the cause must be sought and treated.

The adult dose of antikamnia tablets best suited for the relief of these headaches, is two every three or four hours."

FEEDING OF TYPHOID PATIENTS.

There are two points of clinical importance which should influence the physician in the selection of a proper diet for typhoid fever. They are, first, the supposed danger of mechanically irritating the ulcerated surface in the intestine and the danger in overloading the gastro-intestinal tract whose digestive functions are impaired by the fever.

Second, the relations of the chemical ingredients of the food to the increased tissue change that causes, or accompanies, the excessive production of heat. If the proper fluid can be furnished as a food the tissues are spared too great self-consumption in producing heat. In regard to the first fact, the danger of mechanical irritation of the intestinal wall is somewhat exaggerated. In prescribing a sole milk diet for typhoid fever in order to lessen this danger, many overlook the fact that milk, alone, on

entering the stomach becomes almost solid, and large, firm curds are likely to prove quite as irritating to the ulcerated surfaces, or even more so, than starchy food. When patients are fond of milk and seem to digest and absorb it thoroughly, there is no better diet when employed with Bovinine. It answers every requirement of a perfect fever food. It contains all the essential elements of nutrition, is readily digested, furnishes fluid to the tissues, is a good diarrhœtic, and if properly administered it is soothing to the stomach when gastric catarrh exists. Those who dislike milk or do not seem to digest it, do well on Bovinine in barley, rice, or plain, and later when the digestive condition has improved, milk may again be taken up. It is largely the custom with the profession to give an exclusive diet, but this should not be prescribed in routine for all cases. Many authorites have advocated a departure from the strict milk diet which has come to be the rule for typhoid fever, and it is found beneficial to enlarge the dietary of some patients considerably and this can be most perfectly obtained by the addition of Bovinine. It is usually the case in hospitals to put the typhoid patients on a routine milk diet, but of late it has been proven that far better results were obtained where the Bovinine was given in combination. In typhoid fever every effort should be made to maintain complete and normal stomach digestion. If all food is thoroughly disintegrated before it enters the digestive tract, there need be but little fear of mechanically irritating the ulcerated surface. Far more danger may occur through malnutrition of the intestinal wall, which prevents absorption of nutriment. An accumulation of undigested food in the intestine is, therefore, highly undesirable, and where Bovinine is employed an examination of the stools will show no undigested curds of food matter.

Milk for some persons, in health or disease, is clearly a poison. They completely fail to digest it, and it produces a gastro-intestinal disturbance which in many cases is quite serious. Patients of this class digest milk even less when they acquire a prolonged fever. Others, with whom milk agrees, become very tired of it after taking it exclusively for a long period. This complication does not occur when the Bovinine is employed and the convalescent period is undoubtedly shortened.

CLINICAL RECORDS.

The Postum Cereal Company have issued a neat little booklet on Clinical Records and the Elements of Dietetics. The first part deals with dietetic principles, the second with Grape-Nuts and the mode of manufacture, part third gives a number of useful formulæ for foods, and part four contains a series of clinical charts and records. The booklet is interesting and useful.