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Vol. IX.

HALIFAX, NOVA SCOTIA, SEPTEMBER, 1897.

No. 9.

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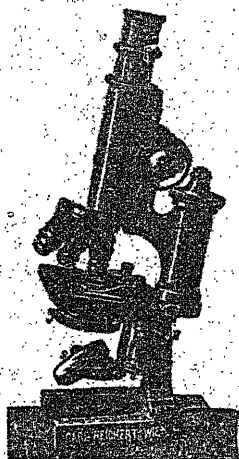
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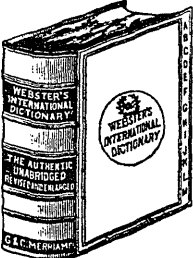


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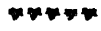
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MARITIME MEDICAL NEWS,
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Vol. IX.

HALIFAX, N. S., SEPTEMBER, 1897.

No. 9.

Presidential Address.

MILK AS A MEDIUM FOR THE SPREAD OF DISEASE.*

By **J. W. DANIEL, M. D., M. R. C. S.,** St. John, N. B.

GENTLEMEN :—I have much pleasure in bidding you all welcome to this the seventh annual meeting of the Maritime Medical Association.

Apart from the pleasure and profit which cannot help but accrue to members of the same profession coming together from different parts of these lower provinces, getting better acquainted, receiving and giving renewed energy in our common lifework, adding stimulus and zest to a vocation which, while it has in many of its aspects a most absorbing interest, has, in others, by its constant rounds of attendance on the sick and ailing, and by its obliging us to live, as it were, in an atmosphere of complaint and disease, an effect wearying to both body and mind,—we must not forget that the Maritime Medical Association is the only one of our associations which has succeeded in giving us any actual material advantage.

For many long years the Canadian Medical Association has struggled with the problem of interprovincial registration; I believe it will struggle with it for many a year to come; but the maritime association met the difficulties as far as these lower provinces are concerned in a business-like manner, and, by a system of give and take in small matters, succeeded in adopting a system mutually satisfactory in fewer months than it has taken years for the larger association to even obtain a simple rapprochement.

This association then has at least that claim to our respect.

* Delivered before meeting of Maritime Medical Association at St. John, N. B., July, 1897.

Those of us who have been permitted to attend its meetings in the different provinces will also say that in professional interest they have been all that was expected, and I am quite sure that our last meeting held in Charlottetown would not suffer if compared, in that respect, with that of the Canadian Medical Association held later in the year.

With regard to the choice of a subject for the presidential address this year—a year in which the strains of God Save the Queen, and Rule Britannia seem to be almost constantly in the air, and the triumphs of the Victorian era in arms, in arts, in song, as well as in sciences, but more especially in the increase of that “glory not of outward magnificence and splendour, but the enduring glory of internal improvement and tranquility,” have been talked of and written of by silver tongued orators and facile pens, it naturally suggested itself, that it might be excusable in me to refer to the great advances which the sciences embraced within the domain of medicine and surgery have made during this epoch, and dilate with pardonable pride on the share our profession has taken in this great glory of internal improvement. This subject has been so fully treated by gentlemen who have had access to sources of information closed to me, that I refer you to the able articles on this subject recently published in the *British Medical Journal* and other widely read magazines, rather than attempt so ambitious a theme. I might be allowed, however, to give a short quotation from Mr. MORRIS in the *Nineteenth Century*: “When the Queen came to the throne in 1837, it was hardly too much to say that the average medical practitioner knew little more about the diseases of the heart, lungs, stomach, liver and kidneys than was known to HIPPOCRATES. Auscultation had indeed been introduced some years before, but long after the commencement of Her Majesty’s reign, elderly gentlemen might be seen, when a stethoscope was offered to them at a consultation, to apply the wrong end to their ear. Fevers were classified with a sweet simplicity into continued and intermittent, and as late as in the fifties an eminent professor of surgery complained that his colleague, the professor of medicine, had invented a number of new fangled varieties. Of nervous diseases nothing was known. The larynx was a terra incognita; of the ear it was said by the leading medical journal of the day many years later than 1837, that the only thing that could be done in the way of treatment was to syringe out the external passage with water. The diagnosis and treatment of diseases of the skin had advanced little beyond JOHN HUNTER’S famous division of such affections into those

which sulphur could cure, those which mercury could cure, and those which the devil himself could not cure. Pathology was a mere notebook of post-mortem appearances, a list of observations as dead as the bodies on which they were made. The new world of bacteriology had not yet found its Columbus. In the domain of surgery progress had been far greater, and as regards operative skill and clinical insight, ASTLEY COOPER, ROBT. LISTON, DUPUYTREN and LARREY were certainly not inferior to men of the present day. Anæsthesia was, however, unknown, and the operating theatre was a place of unspeakable horrors. Wounds were dressed with wet rags and suppuration was encouraged, as it was believed to be an essential part of the process of healing."

The subject which I have chosen as the basis of an address, is one which just now occupies a conspicuous place in public interest, viz: Milk as a factor in spreading disease,—and one or two matters allied thereto.

It is not necessary for me or for any one at this day to give lengthened arguments to prove that milk readily receives infectious germs and as readily gives to those amenable, and who consume it, those affections which are the product of these germs. This fact has been already amply proved and is now generally admitted. There are two methods by which milk may become the means of inducing disease in its consumers. First, it may become the home of disease-giving infection from being the product of an animal itself diseased: or, second, although originally pure and obtained from a healthy animal, it may absorb noxious qualities from its surroundings, from insanitary dairies, from being handled by persons sick themselves or in attendance on persons who are sick—from the utensils in which it is kept or conveyed not being properly cleansed, or indeed from being washed in water which is not only not pure, but the habitat of typhoid bacilli or other disease germs. Here, then, is a question, the importance of which can hardly be over-estimated when we remember the very general use to which milk is put as an article of diet for both young and old. One of the most important papers given to the world in regard to the spreading of zymotic disease by milk, was that read by Mr. ERNEST HART at the International Medical Congress in 1881. This paper gave a list of 72 outbreaks of disease due to milk, and affords all the proof wanted of the power of milk in this respect. Since then Mr. W. H. POWER, F. R. S., a medical officer of the local government board of Great Britain, has added a great deal to our knowledge of the subject. He refers to a

property of milk which he calls "ropiness," and which he found present in milk that had produced an epidemic of diphtheria. This property had a tendency to disappear rapidly. This condition has also been observed in milk responsible for a scarlatina outbreak, as well as one of typhoid fever. Mr. HART states that it is certain that a stringy or ropy condition of milk has its share in the potency of milk to produce disease. He also refers to the fact that the milk of newly calved cows should not be used for food; it is albuminous and coagulates with heat, and appears to have been a factor in the production of disease in cases to which he refers.

Among the diseases sometimes spread by milk contaminated by disease in the cow, is scarlatina. Many cases are recorded. You will probably most of you remember the celebrated Hendon case. In this case everything about the farm was in an especially perfect sanitary condition; the water supply was of the best and properly laid on to the farm house, dairy and cowsheds; the drainage, cleanliness and ventilation of the whole premises were rigidly inspected and found to be all that could be desired; there were all the appliances for effectual cleansing of dairy utensils by hot water and steam. In addition to this, the health conditions of those looking after the cows, as well as their families had been carefully attended to by the physician associated with Mr. POWER. In fact the whole place, the people and the cattle, were under the closest surveillance at the request of the London retailer and with the consent of the farmer and owner. From a certain date it was found that the milk from this farm was producing scarlatina. On that date some additional cows were admitted to the farm. The condition peculiar to these cows was an eruption on teats and udders, communicable from cow to cow. In some there was a rash on body causing loss of hair in patches. The milking, in some cases, formed sores on the hands of milkers, and the diseased condition was accidentally discovered by the restive state of the cows while being milked. Dr. KLEIN, the well-known bacteriologist, showed that the same micrococcus could be obtained from the diseased tissues of man and cow; and artificial cultures were made of it. These cultures, whether from man or cow, produced in the calf disease identical with the Hendon disease; calves fed on cultures from human scarlatina obtained the Hendon disease, and children fed on milk from cows suffering from the Hendon disease obtained scarlatina.

Then as to diphtheria. We have many cases recorded where the milk from cows suffering from a pustular disease of teats was shown to be the

cause of diphtheria. Take the case at Croydon in 1890. The milk was from one source and supplied by one dairy, the customers suffering to the extent of 40 per cent of households supplied. The same milk formed one-seventh of the supply of another dairy, the customers of which suffered to the extent of 10 per cent of households taking it. The milk from these two sources caused diphtheria in 12 per cent of the households consuming it, against less than 1.5 per cent of household invasions where the milk from other (31) sources was used, or a proportion of 60 to 1. Cases ceased to arise when the implicated milk was stopped. The teat eruptions were stated by KLEIN to be similar to those met with in other diphtheria outbreaks traced to milk of diseased cows.

Then as to tuberculosis. Just now there is a very conspicuous interest taken by the public in this disease affecting cattle. In 1895 the report of the Royal Commission on Tuberculosis was published, and the same year I brought it to the notice of the New Brunswick Medical Society. It showed plainly that milk from cows affected with tuberculosis of the udder was virulently infective, and that butter, skimmed milk and buttermilk from the milk of a cow having tuberculous udders, all contained tuberculous matter, actively injurious to test animals. That commission did not find the milk of tuberculous cows infective unless they had udder disease; later investigators claim that the milk may contain the bacilli even though the udder be not known to be diseased. This commission, with somewhat changed personnel, is still engaged in its work and a valuable and reliable report from it is looked for.

It is therefore necessary the animal from which milk is obtained must be herself healthy. It is also necessary that the utensils be properly cleansed, and with water that is pure and free from disease germs.

A serious epidemic of typhoid fever in St. Pancras in 1883 was traced to milk from a farm where the cans were washed from a well near a cesspool. A foul water course flowing down a ditch was, in the case of the outbreak in Aberdeen in 1883, used for "dairying purposes," whatever they may mean. Mr. HART suggests that probably the meaning is identical with much that passes under the term "washing of dairying utensils." In Louisville, Kentucky, in 1893, in an outbreak of typhoid, Drs. BAILEY and TULEY stated that the cans, after being washed, were cooled by water which was left in them in small quantity and which water was found to contain the bacillus of typhoid fever, so that it is plain we are interested in more ways than one in

our milk vendors having a pure water supply. Many cases are recorded in which typhoid has been caused by the milk. We have very full records of epidemics of scarlatina due to milk contaminated, not only by disease in the cow, but by being exposed to contagion from persons handling it or the cows, who were in attendance on scarlatina patients or recovering from the disease. What is true in this respect of scarlatina is also true of diphtheria. It is not my intention just now to prove an indictment against milk under the circumstances referred to; the facts are already amply proved, and I refer to the cases mentioned more to refresh the memory and increase the interest than to prove the case. My object is principally to call attention to the necessity of dealing with the evil and preventing its recurrence.

We have, of course, in boiling, one means at hand by which we can all free the milk very effectually from the germs producing disease, not excepting the bacillus of tuberculosis, and indeed the process known as sterilization may be sufficient for that purpose. The principal objection to boiling the milk is the trouble involved, although some people object to the alteration in the taste which they think is induced by this process. Apart from this the public has a right to expect when buying milk that the article sold should not only have the normal proportions of casein, fat and other ingredients, but that more especially it should be at least free from any power to produce disease or death. It has a right to expect that the milch cattle are in good health; that the water supply on dairy farms is abundant and pure and so situated that no sewerage or other filth contamination can enter it; that the utensils in which the milk is stored or conveyed are thoroughly scalded and cleansed; that no person in attendance on a case of infectious disease or afflicted with it has anything to do with the milking or care of the cows: that no milk for public use is stored in any house in which is a case of infectious disease; that the cow stables as well as dairy premises should be clean, well drained and ventilated, with a proper amount of air space for each animal, for it is "absolutely essential to the milk business that it should be carried on with scrupulous regard to cleanliness."

To obtain the assurance that these precautions are taken, it is necessary that there should be some method of inspection and supervision of the stables, dairies and animals of milk vendors. In endeavoring to ascertain who has the authority in this matter, we come at once upon the fact that both Dominion and local governments have

power. The Dominion retains power over quarantine of both persons and animals, and especially has taken action with regard to contagious disease in animals. The provincial legislature has control of public health generally. So that there appears a certain amount of concurrent jurisdiction. The Animal Contagious Diseases Act (Can.) requires owners of animals suffering from contagious diseases (and it names a great many of them, including tuberculosis) to give immediate notice to the Minister of Agriculture, under a penalty of \$200 for neglect: a like penalty is imposed for concealment of such disease, for bringing such animals to market, and for selling or putting them off. The Governor-in-Council may order such animal to be slaughtered as well as any animal that has been in contact with or proximity thereto, and may also award compensation for loss; may appoint inspectors, etc., to examine suspected localities, and make any orders they may deem expedient for the prevention or extirpation of any such contagious or infectious disease in animals. The federal government have therefore ample powers, and it would appear that they should at once appoint a sufficient number of qualified inspectors to examine the cattle in these provinces, destroy those affected, and compensate the owners for their loss. To wait for owners to acquaint the minister is to allow the disease to spread woefully, for no matter how well intentioned such owner may be, his cattle may be diseased without his knowing anything about it.

The local government have attended to their part of this work by delegating large powers to provincial and local boards of health. A local board to be efficient should have as its executive a qualified medical health officer, and in cities and populous places it cannot be efficient without one. Among his other duties, such officer should have the power to inspect all places where cows are kept for public milk supply and see that the sanitary surroundings and appliances are sufficient. In cases where he has traced milk-borne disease to any dairy, such dairy should be prohibited from furnishing milk till the cause has been removed. In cases where, in his opinion, the cows may be diseased, it should be possible for him to engage the services of a veterinary surgeon at government expense, to make such examination and take such action as may be suitable in the case. The great point in these cases is that such powers may be afforded as that immediate action may be taken. The legislature of Ontario at its last session passed an act to provide for the inspection of meat and milk supplies to cities, in which

these points are all provided for, and as far as law can do it, has placed that province through its health officers in a position to grapple successfully with the matter. In order to trace epidemics to their cause, the health officer must have a knowledge of the places where the disease exists. The provincial health act provides how this should be done, viz., by making it the duty of parents and guardians, etc., as well as physicians, to notify all cases of infectious disease. Unfortunately, while demanding the professional services of the physician, it provides no remuneration for the same. In so far as this regulation applies to parents, guardians or householders, it is general in its nature and just, and should be obeyed, though it very seldom is; in so far as it places professional work on physicians without remuneration, it is particular in its nature and unjust. Such work on the part of physicians is something more than routine, for it makes him liable for the correctness of his opinion in cases in which very frequently it is extremely difficult to make a correct diagnosis, a liability which might expose him under certain circumstances to very serious consequences. I feel sure the purpose of the act would be much better obtained if this defect, I may say this injustice, were remedied. The act, I believe, is copied largely from the English act, but that is permissive; no health district need adopt it unless it wishes, but having adopted it must take its responsibilities as well as its advantages. Among its responsibilities is the payment of physicians for each case notified, the amount in each case being half a crown. A similar act to ours was passed in the state of Iowa, but the highest court in the state declared it unconstitutional for the reasons referred to. In view of the immense amount of gratuitous work done by physicians, and of the fact that the happy results of increased immunity from disease and increased length of days is a free gift from our profession, such action appears, to say the least, unwarrantable. A proper health act would place the health officer in possession of the preliminary information he requires to enable him to trace epidemics to their cause, and he is then in a position to put a stop to them, as in the case of milk-borne disease, or to use such means as the present state of our knowledge places in his hands to deal effectively with them when they are of a different character or produced by other causes. The ideas expressed if put into active force would give us all the power needed to deal efficiently with this important matter, but it is plain that complete success can only be obtained by combined action on the part of federal, provincial and municipal authorities.

The subject of cattle inspection is one of the utmost importance not only as regards the health of man, but also as affecting the well being of one of the most important industries of this agricultural country. In late years the United States, though formerly behind Canada in this respect, has surpassed it in its attention to this matter, and is reaping its reward. The annual report of the secretary of agriculture for the United States for 1895 and 1896, after giving details of the work of its inspectors says: "These facts demonstrate to the consumers of meat products of United States both at home and abroad that there is a scientific inspection made of all meats intended for inter-state and foreign commerce. The sanitary value of the system is beyond computation. It protects health and life. Inspection will become so general and so perfect that not a single pound of unwholesome meat will find its way from the United States to foreign markets, nor will any be found at home which does not carry certificate of inspection." It may be that Canadian cattle generally are especially free from disease, but recent facts show that tuberculosis, at all events, is very much more prevalent among them than any one had any idea of, and call loudly for that immediate and energetic action which the dominion government have taken power to themselves to exert. The provincial government should also clothe local boards of health with sufficient powers to deal with promptness with local manifestations, and this could be done by granting them power to license milk vendors, the cost of license being nominal, such license, however, being only obtained by those whose cattle are healthy, whose dairies and places generally are in proper sanitary condition, etc.; or by passing an act similar to the Ontario act already cited; while in places like St. John the municipal authorities should see that the health board has an executive qualified officer.

Closely allied to the milk question, and of almost equal importance, is that of meat supply. I say almost equal importance, because no meat, or at the most but very little meat, is eaten raw, and the process of cooking, when it is thorough, has the same inhibitory effect on tubercle bacilli as boiling has in the case of milk. Unfortunately, cooking is seldom so thorough as to give a sufficiently high temperature in the centre of joints unless they are small. What the royal commission said on this subject is that "in the boiling and roasting experiments as ordinarily carried out in kitchen, the temperature, however high it may be near the surface, seldom reaches 60 (C) degrees in the centre of a joint, except in the case of joints under 6 lbs. weight. Ordinary cooking is quite

sufficient to destroy any smeared material that remains on the outer surface of the meat, but it cannot be relied upon in the slightest degree to render innocuous the same smeared material when in the centre of a roll." Also "ordinary cooking such as boiling, and more especially roasting, though quite sufficient to sterilize the surface of a joint, cannot be relied on to sterilize tuberculous material included in the centre of rolls of meat, especially when they are more than 3 lbs. or 4 lbs. in weight. The least reliable method of cooking for this purpose is roasting before the fire, next comes roasting in an oven, and then boiling." That the eating of tuberculous meat will cause the disease we have abundant proof, and I take it that we are all now satisfied on that point. It follows then that meat for food should be the flesh of healthy animals. Where there is no adequate inspection of cattle before and after slaughtering, it is impossible to prevent the sale of meat unfit for food, and if common report may be relied upon, we have lately had in this city abundant proof that the necessity for this inspection is absolute and immediate. It is not difficult to prescribe what should be done to protect the public against unfit meat. The remedy is a public abattoir through which must pass all meat intended for food in the locality for which such abattoir is established, and where all animals, carcasses and meat intended for consumption should be inspected; and a similar supervision should be had of all meat packing establishments in the district.

Gentlemen, I leave this subject with you believing that any advice you may give, or any action you may recommend, will receive the thankful and serious consideration of the various authorities upon whom rests the responsibility of dealing with the important matters I have brought to your notice.



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Original Communication.

FRACTURE OF SPINAL VERTEBRÆ.*

BY JOHN STEWART, M. B., Adjunct Professor of Surgery, Halifax Medical College.

Fractures of the spinal column have always possessed much interest for the surgeon. The appalling suddenness of death in some cases, the helpless and miserable condition of the sufferer in others, and the unexpected recovery of not a few, have always attracted attention and stimulated investigation.

Much of the importance of these injuries depends on the composite character of the spinal column.

There are the osseous components, so irregular in shape, and this irregularity varying in different regions; differing also in consistence, the bodies, with their cancellous tissue and the elastic nature of the intervertebral disc, contrasting with the compact tissue of the apophyses.

Then, there are the innumerable ligaments and muscles, which knit and brace the bones together and are so essential a part of the vertebral column that we can scarcely consider fractures of the bones apart from lesions of the soft parts.

There are also the functions of the column as a support to the body, and as a point of origin for the many muscles which act on the extremities, and also its relations to the viscera as forming a part of the wall of the thoracic and abdominal cavities.

But unquestionably the paramount importance of injury to the spine, depends on its function as the receptacle for the spinal cord, and the support, to a great extent, of the nerves which proceed from it.

In accepting the invitation of your committee to open a discussion on Fractures of the Spinal Vertebrae, an invitation which I consider a very high honor, it has appeared to me the better plan that I should take a survey of these injuries in general, trusting that in the discussion which follows, those points which seem to this association to be of most interest will be more fully considered.

First, then, fractures of the spine resemble fractures in general. They are caused in the same way, they occur in the same class of persons, and they present the same symptoms.

*Paper opening the discussion in Surgery, Maritime Medical Association meeting, 1897.

With regard to causation, they may be due to direct or indirect blow or pressure. Indirect pressure, as by forced flexion, is by far most common. M. POLAILLON, in his recent work on injuries of the trunk, reports 23 cases. Of these 3 were due to direct blow or pressure, 19 to inflexion of the spine, and one, a rather remarkable case, to muscular contraction.

Direct blows generally limit their effect to the nearest points of the spine and may cause fracture of spinous processes or laminæ only. But violent bruises or pressure, as from the wheel of a carriage, cause injury to more than one vertebra, and may crush the bodies as well as fracture processes.

In the one case the fracture is a comparatively unimportant accident, in the other it is always multiple and very grave, on account of displacement of fragments and lesions of the cord or of viscera.

Fractures through flexion are much the most frequent. Falls on the loins may bend it from behind, on the head, side, or feet, from in front. The accident has frequently happened when a man, driving under a low arch or gateway, miscalculates its height; he bows his head, but the lower cervical spine is caught and an acute flexion is caused. The resulting fracture may be not in the cervical, but in the lumbar or lower dorsal region.

As might be expected, fracture of the spine is more common in men. Of M. POLAILLON'S 23 cases, only 3 were in women.

SOME of the cardinal features of fracture, deformity, crepitus, preternatural mobility, may be absent, but pain is almost constantly present, and another sign, peculiar to this class of injury, viz.: paralysis of motion and of sensation over a greater or less extent of the body. Pain, too, is not always most severe at the seat of injury, it may be at a distance, in the terminal distribution of an implicated nerve.

In fact, the signs due to the implication of the spinal cord and its nerves are the characteristic signs of spinal fracture, and those on which our diagnosis mainly rests.

Now, before considering the special diagnosis, let us consider the morbid anatomy of spinal fracture, what conditions do we find present at the autopsy?

First as regards the bones: we may have every gradation of injury, from a slight fissure or "latent fracture" to complete crushing of the body and splintering of the processes. Dislocation is generally associated, pure fracture and pure dislocation furnishing about 15 per

cent. each, and the "fracture-dislocation" fully 70 per cent. of such injuries. Pure dislocation is most common in the cervical region, and fracture here, without dislocation, is rare. In the dorsal and lumbar regions pure fracture is more common than dislocation, as we should suppose from a study of the articular surfaces.

The fracture may be impacted, or there may be displacement; the displacement is usually of the upper fragment or segment downwards and forwards. It may be unilateral. It may be irreducible, or, if reducible it may be impossible to retain it in position. A not uncommon injury is temporary displacement, or *diastasis*, in which the displacement caused by fracture or dislocation is immediately rectified, as by recoil, so that no deformity is present. The peculiar elasticity of the vertebral column accounts for this condition, which has been doubted by some authorities. But THORBURN, of Manchester, to whom we owe perhaps the most important work of recent years on this subject, considers it quite frequent, indeed believes that in the cervical region there are twice as many cases of this kind as of permanent displacement. So there may be severe fracture with little deformity or none, or fragments and spicules of bone may project in various directions. The most frequent deformity is a projection of a fragment from the posterior surface of the body into the spinal canal.

Then, we have laceration and rupture of the ligaments and muscles, and, perhaps more important when it occurs, laceration of the venous plexus on the anterior wall of the spinal canal, so that blood is extravasated into this space and may press injuriously on the cord.

When the membranes of the cord are injured, it is generally through laceration by spicules of bone. It is a serious complication, as it may lead to meningitis.

Last and most important are the injuries to the cord itself; and these may vary from complete division, or total crushing, to simple over-stretching, with perhaps punctiform hæmorrhages. Total crush is generally due to approximation of the laminae of one vertebra to the body of the vertebra below. In some cases the injury to the cord is unilateral. We sometimes find total crush of the cord with no gross lesion of bones. But this may be due to secondary myelitis. Hæmorrhage into the cord (*hæmatomyelia*) is into the grey matter, and may be extensive, destroying this tissue widely. Gravitating hæmorrhage is a condition in which the blood extravasated into

the canal passes downwards for some distance, and then, accumulating, causes pressure symptoms, which ascend as the blood accumulates.

With these pathological facts, and bearing in mind the elementary anatomy and physiology of the spinal cord, we are in a position to make a diagnosis.

This is in some cases a very simple problem; in others it may tax the ability of the ablest surgeon, and remain unsolved. In nothing is more care required than in examining a case of supposed fracture of the spine, care in handling the patient, tact in expressing our opinion.

In the first place, all contusions of the back in which sensation is modified in any way, as in numbness, tingling, altered temperature, disturbed reflexes, may be serious.

The superficial reflexes are, as a rule, useless in diagnosis.

Secondly, we must be on our guard against pseudo-paralysis, of the *bona fide* sufferer, or the malingerer.

Then we must take account of symptoms of injuries to other viscera, as liver, kidney, brain, so common in connection with severe spinal injury.

We should be able to define the actual seat of the lesion, and to estimate its extent.

Not many years ago rigidity with exaggeration of the deep reflexes was considered the sign of total transverse lesion. We now know that when these conditions are present there is *some* conducting tissue still left. The sure sign of total transverse lesion is that all the conducting power of the spinal cord ceases at the level of injury, and thus paralysis, loss of sensation, hyperpyrexia, and loss or exaggeration of reflexes are explained.

We must direct attention to the nervous mechanisms of the respiratory organs, as in dyspnœa, due to paralysis of intercostal or accessory muscles of respiration, or in hiccough, as well as the tympanites, which so often indirectly causes dyspnœa. Also, to those of the alimentary system, in vomiting, and constipation, or incontinence of fœces. Certainly also those of the urinary organs in paralysis of the bladder, or mere automatic emptying of it. Also, we find symptoms in the eye, caused through the cilio-spinal system.

Certain postures or attitudes are characteristic. One in particular, designated by THORBURN as the "5th root group attitude," is frequently seen in injury near the 5th nerve. The upper arms are abducted, the elbows flexed and the hands lie on the chest

In fracture of the cervical vertebræ we must examine the pharynx for forward displacement of bone, as in injury to the sacrum we examine the rectum.

Pain and spasm or rigidity are often due to pressure of clot on the nerve roots, or, at a later date, to that of inflammatory effusion. Or it may indicate meningitis.

There is frequently found, at the junction of the anæsthetic and the normal areas, a zone of hyperæsthesia. This is more common in fracture than in dislocation and is probably due to implication of a nerve root at the seat of injury.

When the hæmorrhage is in the substance of the cord, the anæsthetic area is often irregular, so-called patchy anæsthesia.

Then, with unilateral injury we may have paralysis of motion on one side and of sensation on the other (Brown-Sequard palsy). Motor paralysis is not always associated with sensory paralysis, but sensory without motor paralysis is not met with.

The question of prognosis demands some attention. It should be guarded. There are cases, of course, where there is no doubt as to the speedily fatal end: these are severe lesions high in the cervical enlargement. Some are instantly fatal, others in a few minutes or hours, through paralysis of respiration, e. g., injury of phrenic nerves. As a rule, the lower the lesion the less the danger.

With all the signs of fracture and displacement, there may be no nerve lesion, as in two of POLAILLON'S cases, while with no apparent displacement there may be serious nerve lesion, which was the case in three of POLAILLON'S 23 cases.

Then, occasionally, serious symptoms are delayed, for hours, as in hæmorrhage, or for days as in secondary myelitis. Finally, there are cases in which all the serious symptoms of paralysis, and loss of deep reflexes are present at first, but are recovered from in a few hours (cases of shock) or even after longer intervals. So that our prognosis, good or bad, must often be given with considerable reserve.

Lastly comes the question of treatment:

I.—We may adopt an expectant treatment, rest, immobility, attention to general health. Life may be prolonged for years. One of the great difficulties is that due to paralysis of the bladder. THORBURN has suggested a supra-pubic opening, with drainage, so that the patient is kept dry. Bed-sores must be attended to.

2.—We may attempt reduction of deformity. This is possible and urgent in unilateral displacement, in bilateral it may be done, but is apt to recur. In the cervical spine it is dangerous, and in fracture of the first and second cervical vertebræ, unjustifiable.

3.—After reduction, or without it, a plaster or leather jacket may be applied. Many cases have done well in this way. DENNIS, in the *Annals of Surgery*, two years ago, wrote strongly in favor of this. He recommends extension by means of two tables or stretchers, leaving space to apply the plaster.

Suspension, except in the lower spine is a doubtful expedient.

If the jacket is applied too soon its pressure may cause sloughs; otherwise it is a great convenience in moving the patient.

In most cases carefully adjusted sand bags and splints with perhaps extension apparatus to head, and a perfectly flat bed, answer well. Consolidation occurs on an average in 45 days.

4.—There are various operative procedures, chief among which at present is laminectomy.

I was present at the meeting of the British Medical Association in 1894, in Bristol, when a discussion took place on this subject. It was opened by THORBURN of Manchester, who considered the field for operation in this class of injury a very limited one. He began his researches into this subject in a very hopeful spirit, but the result of his investigation and experiments has been to limit his view of the value of the operation.

The operation was advocated with much zeal by BURRELL of the Boston City Hospital, U. S. A., who pointed to the discouraging results of expectant treatment.

I believe the indications for operative interference are:

1.—In compound fractures, for the purpose of removing spicules, bullets, etc.

2.—In fractures of the spinous processes, and laminæ. But when we remember how rarely these are found without serious lesion of the bodies, we see in this direction a very limited field. ASHURST reports only two cases of fracture of the spinous process alone, in 394 cases. THORBURN, at the Manchester Royal Infirmary where 9,000 cases of accident are admitted yearly, found only one uncomplicated case of fracture of the spinous process, in ten years. ASHURST gives the proportion of fracture of laminæ alone as one per cent.

3.—In compression from hæmorrhage, or accumulation of inflammatory products, or, later on, from chronic inflammatory thickening. These cases are very rare.

4. In no other cases except in fracture below the first lumbar vertebra (cauda equina.)

The statistics generally quoted are those collected by GURLT, which show that these fractures unoperated upon have a mortality of 80 per cent.

But in POLAILLON'S 23 cases, 14 were healed, a mortality of only 40 per cent.

THORBURN collected 61 cases of operation, with a mortality of 57 per cent.

We really cannot learn much from statistics, for the cases are not yet sufficient in number nor properly classified.

CHIPAULT, who has done much good work in this department, comes to the following conclusions :

“In cases of lumbar or sacral fracture with permanent and irreducible displacement, interfere at once. In case of fracture reduced spontaneously or by surgical manipulation, wait. If there is a tendency to recovery, wait further. If stationary, operate at one month or six weeks, for natural restoration of function may be delayed until then, and secondary degenerations are apt to begin about the same time.”



Clinical Report.

A CASE OF EXTRA-UTERINE FŒTATION.

By H. H. READ, M. D., Halifax, N. S.

It is not so very long ago that extra-uterine fœtation was regarded as outside the limits of surgical interference, but, thanks to LISTER and PASTEUR, the practitioner who at the present date allowed such a case to pass without at least an attempt to save the patient's life, would be regarded guilty of culpable negligence, unless indeed, the patient's environment forbade hope of success.

To this result, probably no one has contributed more than LAWSON TAIT.

April 5th, 1897, Mrs. C——, a young woman who had been married less than a year, consulted me for what appeared to her to be a singular menstrual irregularity. Her last monthly period had postponed for a week and then occurred with rather less than the usual flow; but after the lapse of a week it had returned more profusely than before, and was accompanied by discomfort if not distress in the right inguinal region.

I prescribed caulophyllum, and directed her to go home and remain at perfect rest in bed. After two days I visited her and on examination found a flow of grumous blood, and a distinct tumour to the right of the uterus which itself was not enlarged. Enjoining strict rest, I desired her to inform me immediately should any urgent symptom occur, and accordingly on the morning of April 16th, I was summoned in haste. Taking Dr. LINDSAY with me, I found that probably rupture of an extra-uterine fœtal sac had occurred at midnight, and a fresh hæmorrhage had taken place at 9.30 in the morning. Dr. LINDSAY entirely concurred in that opinion, and we urged an immediate removal to the hospital with a view to an immediate laparotomy. She assented, and was removed as early as convenient by the ambulance. On visiting her, however, we found that a recurrence of hæmorrhage had been occasioned by the removal, and she was in a condition forbidding operative interference, a condition which continued all the following night. The most active restoratives were used, and with so good effect that next morning she rallied, and as early as possible I proceeded to operate with the assistance of Dr. LINDSAY and Drs. McDONALD and DOYLE of the house staff.

The antiseptic preparation of the patient was performed of the most hurried character, and on opening the peritonæum directly through the rectus, about an inch and a half to the right of the median line, I found that cavity filled with black clotted blood. On bringing up the right Fallopian tube I found the cyst, about the size of a small hen's egg, with a rupture on its anterior surface. It was composed of the distended tube at the external third, and was at once removed together with the right ovary, after tying the pedicle in sections with strong silk.

The abdominal cavity was then irrigated with a hot saline solution and a drainage tube placed in position. After closing the peritonæum with a continuous suture of fine cat-gut, I passed four deep sutures of strong cat-gut through and around the fibres of the muscle, forming what Dr. HELMUTH, of New York, who designed it, calls the sausage stitch. Three deep sutures of silk-worm gut were then passed through the skin and muscle, entering and leaving one inch and a half from the wound, but were tied only after the wound had been closed with cat-gut sutures. By this method the firm muscle is drawn close up to the wound, and Dr. HELMUTH states that since he adopted it he has met with no case of hernia following laparotomy. After the operation the patient received only one dose of morphia, which was given on the succeeding night. Every means of conserving the patient's strength was used during and after the operation, and I desire to express my deep obligation to Dr. LINDSAY and the house staff, and the nurses as well, for their able assistance and unremitting attention.

The only untoward incident that occurred was a stitch abscess, which formed on account of my leaving the silk-worm gut sutures too long in position. In closing this I found the most effectual agent to be injections of campho-phenique.

The drainage tube was removed on the third day.

The patient remained in the hospital four weeks, and on my first visit after her return home she came down stairs to open the front door to admit me. I found the stitch abscess closed and no further attention needed.

Since the operation, although she has only one ovary and tube, menstruation has continued regularly every month.

I attribute her rapid restoration to her ordinary health largely to the marvelous restorative powers of the arsenite of quinine.

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Editorial.

THE PHYSICIAN'S SELF.

THE doctor, in his practice, preaches, but rarely does he practice what he preaches. While keen to detect in his patients evidences of strain, and strong in his insistence upon such change of habits and conditions as may appear indicated to ward off actual disease, he seldom shews his own health the least consideration. The patient is lectured upon the necessity for regular hours for sleep and for meals; and the lecturer gets to bed at a fixed hour about twice in a month, and scarcely averages one regular meal a day. The patient is told of the folly of permitting long-continued anxiety, of an over-plus of excitement, and of too close application to work; and the example set is a never-ceasing round of the most trying and most wearisome work at which man could engage. Holidays, change and recreation are urged upon the patient, but hardly ever indulged in by the physician. Is all this inconsistency due to the physician's inattentiveness to his own self, or is it self-sacrifice, or is it necessity?

That it is inattentiveness, few will say. The doctor usually knows all too well that the advice so earnestly given to others often fits his own case, and that he risks much by not yielding to the impulse to do as he would have his patient do. But his interest in some special case, the desire of some patient not to be left in other hands, or the certainty of monetary loss, usually, the one or the other, serves to decide him in favor of a longer or shorter postponement of the adoption of the required and desired measures. And the doctor finds the risk of delay doubly dangerous in his own case. For not only does he suffer by the failure to submit to the desirable at the proper time, but he finds the same

difficulties in his way after the week's or month's postponement is past as at its beginning.

Now it is beyond argument that a man is bettered by occasional change of scene and associations. And to no class of men does this apply more aptly than to those engaged in the practice of physic. The holiday of the doctor is twice blessed. It blesseth him that takes and also, materially altho' indirectly, him that gives—that is, the patient. For the doctor comes back from his holiday not alone strengthened and rejuvenated by the temporary rest and freedom from care, but usually with a stock of new ideas gleaned from his casual rubs against brother physicians in various parts. So while it may appear self-sacrificing in a physician to remain constantly at his post without any change, it is a form of self-sacrifice which does injury to patient and doctor alike. A degree of narrowness and mental myopia is engendered which cannot but lessen greatly the physician's usefulness.

The best self-sacrifice, if the doctor desires to feel that he is self-sacrificing, is that which causes him some monetary loss in his endeavours to maintain a proper standard in his own health, and a proper standing in the line of advancement in medical knowledge. For a holiday has a definite effect in causing emaciation of the pocket-book, and it is doubtless the case that the majority of men, in these days of such keen competition, could only afford a holiday by denying themselves some or many of the comforts which they would like to enjoy at home. But there ought to be enough loyalty to one another, manifested by the members of the profession, to limit the financial loss entailed by a recreating physician to a nominal amount, and to prevent any loss of practice.

Perhaps there is no holiday which a doctor could take which permits of more thorough enjoyment and greater profit than that which includes attendance at a medical meeting. The holiday should not be limited to the meeting, but let it be so timed that the meeting of the provincial, or maritime, or Canadian association may conveniently be attended at some time during the trip. One of the most notable features about medical gatherings is that very nearly the same men attend year after year. If it were not that these men appreciate the benefits to body and mind, and the exceptional opportunities for social enjoyment, afforded by such meetings, they would not attend so regularly from year to year. If those who are strangers to our annual meetings would but attend once as an experiment, we would ever after have very large

gatherings, characterized by an interest which large attendance only can secure.

It is not too soon to urge upon the physicians of these maritime provinces the desirability of planning to be present at the next meeting of the Maritime Medical Association, which takes place in Halifax in July next. The meetings of this association have been increasing in interest every year, and the last meeting was the largest and most successful ever held. Halifax will not allow the next meeting compare unfavorably with the last. Active committees will not fail to provide a profitable and attractive scientific programme, and those who visit our city at that time may be assured of a warm welcome and of hospitable treatment by the local profession.

SPEEDY AND EASY TREATMENT OF SPRAINS.—Dr. I. A. BRIDGES, of Gilford, Me., has this to say (*Atlantic Med. Weekly*, May 15, 1897), regarding the treatment of sprains: "For the past two years I have ordered rest for the injured member, applications of electricity, once a day for five to seven days, and massage. In most instances, my patient can use the injured joint with freedom at the end of a week. I regard this mixture treatment as the best that has come to my notice; for it gets the patient well in a much shorter time and saves him days of suffering."

The patient presents himself with a joint highly inflamed, extremely sensitive to the touch, and full of pain. At once use the faradic current of tention for a period of thirty minutes. At the end of that time the temperature of the joint is lowered, the pain has disappeared and the joint can be freely handled. Immediately begin massage, commencing at the elbow, if the injured joint is the wrist, or the knee, if it is the ankle, and continue for five minutes. This is to be repeated twice during the day, by some member of the family. "This is all that I do." This mixed treatment, so Dr. BRIDGES states, he has employed in many cases, and so far he has had no failure.—*Virginia Med. Semi-Monthly*.

PIN-WORMS.—Injections of lime-water administered every morning for two or three days, is said to be a positive cure for pin-worms.—*Post-Graduate*.

Matters Personal and Impersonal.

Dr. A. W. H. LINDSAY, Professor of Anatomy at the Halifax Medical College, is enjoying a vacation trip to the Western States.

A movement is on foot for the establishment of a Home for Incurables in Halifax. We will soon be abreast of New York and St. Louis in the matter of medical coddling and the abuse of charity.

It is stated that there are 1,000,000 blind people in the world, or one to every 1,500 inhabitants.

New York is felicitating itself upon an unusually low death rate. Cholera infantum has been much less prevalent than usual, and it is doubtless mainly owing to this that the mortality ranges so low. Improved sanitation, especially as applied to the streets and to the milk supply, explains the decrease in mortality.

Halifax also has been unusually free from choleraic affections this summer, and the death rate has been much below the ordinary. Doubtless we owe this immunity, in large part at any rate, to the attention which has been devoted to sanitation of late years.

Professor VIRCHOW has been elected a foreign associate of the French Académie des Sciences. There are six other foreign associates of the academy, three of whom are Englishmen.

A bill was recently submitted to the legislature of the State of Michigan providing for the asexualization of inmates of the home for feeble minded and epileptic before being discharged from the institution; of all persons convicted of felony for a third time; and of those convicted of rape. The sum of twenty-five dollars is suggested as a suitable honorarium to the surgeon entrusted with the operation, only those who are not regularly in the state service being eligible for this remuneration.

Dr. E. V. HOGAN has resigned his position as senior house surgeon at the Victoria General Hospital, to accept a position on the cable ship Mackay-Bennett, made vacant by the retirement of Dr. H. H. McNALLY. Dr. O. C. DORMAN has been promoted to the place lately held by Dr. HOGAN, and Dr. J. J. DOYLE has been appointed junior house surgeon.

The calendar of the Halifax Medical College for 1897-98, recently issued, shews several important changes in the allotment of work to the teaching staff. Prof. REID resumes the teaching of Hygiene. Prof. CURRY will teach Clinical Medicine in addition to his usual subjects (Obstetrics and Gynæcology), but will be relieved of part of the obstetric work by Prof. JONES. Prof. MURRAY will teach Clinical Medicine, and Prof. CHISHOLM, Clinical Surgery. Dr. GEO. M. CAMPBELL has been promoted to a professorship (Histology). Dr. HATTIE will take up Pathology in addition to Bacteriology, and Dr. M. A. B. SMITH will lecture on Therapeutics in addition to his work as class instructor in Clinical Medicine. The indications are that the classes will be larger this winter than ever before.

Dr. GHADIALY, the assistant of Prof. HANKIN in the Agra laboratory, has discovered a bacterium which is possessed of the power of destroying the bacillus of typhoid fever in water and milk, and, to a lesser extent, in bouillon. It also seems to have some power of destroying the bacillus coli in water. It is not in the least pathogenic to man. The suggestion is made that this microbe might be used for freeing infected water from the typhoid bacillus.

JUDGMENT ON CASE INVOLVING SALE OF PRACTICE.—Equity Court, N. B. Barker J. presiding. Judgment was also delivered in Ryan v. McNichol. This was an action for specific performance between two physicians at Sussex. Ryan moved to Los Angeles and sold his practice and leased his property to the defendant, McNichol, for \$200 a year. The plaintiff agreed not to practice for two years, and the defendant agreed at the end of two years either to purchase plaintiff's property or to refrain from practicing in Sussex, but on the expiration of the term refused either to purchase or to leave Sussex. He defended the action on the grounds that a physician's practice is not capable of sale; that Ryan had no practice to sell, and that the agreement is illegal. The decision was against the defendant, and a decree made for the specific performance of the contract.—*Daily Sun, Aug. 18.*

Dr. FARQUHAR FERGUSON, Professor of Pathology at the Post-Graduate Medical School, New York, recently spent a holiday in Nova Scotia.

SANARELLI, of Montevideo, claims to have discovered the cause of yellow fever in a short bacillus, with rounded ends, which he has pro-

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Laxative
Acting without
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We make many hundred cathartic formulas of pills, elixirs, syrups, and fluid extracts; and for that reason, our judgment in giving preference to the MEDICATED FRUIT SYRUP, we feel is worthy of serious consideration from medical men.

The taste is so agreeable that even very young children will take it without objection; the addition of prunes and figs having been made to render the taste agreeable rather than for any decided medical effect. It is composed of Cascara, Senna, Jalap, Ipecac, Podophyllin, Rochelle Salts and Phosphate of Soda, being treated separately, enabling us to deprive the vegetable drugs of the bitter and disagreeable taste, inherent in nearly all of them.

The preparation has been carefully tested, largely and freely in hospital, dispensary and private practice, by a number of physicians (many of whom were interested in determining satisfactorily if the combination deserved the claims urged upon them by us), for quite a year previous to asking attention to it from the medical profession at large, being unwilling to bring it to their attention until we were confident of its merits, and had exhausted every effort to determine by satisfactory results.

The absence of any narcotic or anodyne in the preparation, physicians will recognize is of great moment, as many of the proprietary and empirical cathartic and laxative syrups, put up and advertised for popular use, are said to contain either or both.

It will be found specially useful and acceptable to women, whose delicate constitutions require a gentle and safe remedy during all conditions of health, as well as to children and infants, the dose being regulated to suit all ages and conditions; a few drops can be given safely, and in a few minutes will relieve the flatulence of very young babies, correcting the tendency of recurrence.

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It Differs in its Effects from all Analogous Preparations ; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulative, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt ; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy ; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, FINDS THAT NO TWO OF THEM ARE IDENTICAL, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen, when exposed to light or heat, IN THE PROPERTY OF RETAINING THE STRYCHNINE IN SOLUTION, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing to write "Syr. Hypophos. FELLOWS."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles ; the distinguishing marks which the bottles (and the wrappers surrounding them, bear can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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visionally dubbed "bacillus icteroides." Its isolation is difficult, and, for various reasons, possible in only about 58 per cent. of cases. "The bacillus icteroides, when it has once penetrated into the organism, not only determines a general intoxication, but produces specific alterations: in the liver, rapid fatty degeneration of the histological element; in the digestive canal, hæmotogenous gastro-enteritis; in the kidney, acute parenchymatous nephritis, which is one of the earliest lesions, and that to which the anæmia which is very quickly established must be attributed."

The toxin produced in cultures is of extreme virulence, and causes in dogs the same symptoms as the bacillus itself. Injections of sterilized and filtered cultures were made under the skin and into the veins of five men, and typical yellow fever was produced in each case. Prof. SANARELLI'S lecture, describing his researches, appears in the *British Medical Journal* of July 3rd, 1897.

DR. BAYARD'S SEXAGENARY.

On the 31st July, Dr. WM. BAYARD completed his sixtieth year of practice in medicine, having graduated at Edinburgh University on the 1st August, 1837. He then joined his father who was practicing medicine in St. John.

Dr. BAYARD'S career is well known throughout the Maritime Provinces as a leader of the profession in New Brunswick for many years. Not only has he been actively engaged in a large private practice, but he has taken a most prominent part in matters of public health. He was the promoter of the General Public Hospital and filled the positions of coroner and chairman of the local board of health, and at present is the chairman of the Provincial Board of Health. It is not to be wondered at then that Dr. BAYARD'S sexagenary was befittingly celebrated.

An address engrossed on parchment, bound in blue morocco, with his coat of arms in gold, and signed by numerous ladies who had been his patients, was presented to him. Accompanying it was a very handsome punch bowl, a ladle of gold and silver, and other gifts.

The medical profession of St. John and vicinity waited upon him with a gold mounted clock and the following address:

To WILLIAM BAYARD, ESQ., M. D. :

Dear Sir,—The occurrence of your sexagenary as a member of the medical profession calls forth once more the sincere congratulations of your professional brethren.

It is with no ordinary feelings of respect and admiration that we see one who has fairly earned the repose of age still taking his share in the battle of life, and doing so with faculties unimpaired and with all the vigor of youth.

It is with pride we remember how, during an era noted for its wonderful progress in all departments of science, you have continuously kept pace with the ever advancing wave of medical and surgical knowledge. We congratulate you and ourselves that through the course of a more than ordinarily busy life you have found time to acquire and retain the warm regard of your fellow practitioners; and that we have here a united profession is doubtless very largely due to your precept and still more to your example.

We fervently pray that this, the evening of your days, may be brightened now and always with the joy of kindness; and that the blessedness of the highest love of all may end a life "sans peur et sans reproche."

St. John, August 1st, 1897.

The Commissioners of the General Public Hospital also presented him with an address, accompanied by a gold headed cane.

Dr. BAYARD was banquetted at the Union Club by a large number of representative citizens. The chairman, Mr. GEORGE MCLEOD, in proposing the toast of the evening, said:

"I have the honor and very pleasant duty of proposing the health of our guest this evening—Dr. BAYARD. It has been my privilege to know Dr. BAYARD for the past 37 years, during which time he has been more or less my family physician, sometimes on occasions of joy, at other times on occasions of sorrow, but under all circumstances he was ever the clever physician and the sympathetic friend, and I may add it was possibly owing to my long acquaintance with him that I have been asked to take the chair this evening. It is quite unnecessary for me to say anything as to his record in this city, where he has resided for the last 60 years. His interest in all matters pertaining to the health of the city was always active. The public hospital will ever remain a monument of his unceasing activity in that direction. He was the promoter of that scheme, and after overcoming many difficulties and considerable opposition he had the proud satisfaction of seeing his efforts crowned with success. The commissioners of the hospital fully testified to this when the other day, in recognition of his services, they presented him with an address and handsome gift. Then as chairman of the board of health he was ever alive to the necessity of sanitary improvements, and the sanitary condition of the city to-day is largely due to his knowledge and judgment. It is not given to every physician to enjoy the affection and esteem of his many patients, as Dr. BAYARD does, as has been proved within the last few days, when, on the occasion of his sexagenary, he was presented with an address accompanied by a handsome gift

from his lady patients. Then his brethren in the profession followed, giving evidence of the general and united good feeling towards him. While this is the sexagenary of the doctor's professional career, it is rather a pleasing feature of the occasion that it should be nearly co-incident with that of our beloved queen, and while on that occasion the loyalty of her many subjects throughout her vast domain found full expression, yet, although our guest does not rule over our empire, in his sphere he celebrates his sexagenary by reigning supreme in the universal respect and esteem, not alone of his fellow-citizens where he has lived so long, but throughout the Dominion as well.

“Truly may it be said of him that he wears ‘the white flower of a blameless life,’ and with equal truth may it be said that he has sustained his family motto—holding high aloft his sense of duty—and performing it ‘without fear and without reproach.’”

THE MARITIME MEDICAL NEWS joins in the general congratulations to one who has had such a long and honorable career and who has done so much to add dignity to the profession, and shown such constant devotion to the public welfare.



Therapeutic Suggestions.

DELIRIUM TREMENS.—Some time ago, says Dr. W. BOURNE GOSSETT, I was called to see Mrs. —, a lewd woman. She had been on a drunk for eight days, and just before I saw her had had the usual reptile hallucinations. I found her very restless, moving incessantly, and by force she was made to stay in bed. At once I sent to a neighboring drug store for a drachm of chloride of ammonium, but before getting it she was beginning to get more excited and seeing "snakes." As soon as I got the ammonium I at once gave her half a drachm in a large quantity of water—four ounces—and had her drink it in one or two gulps. In fifteen minutes she was quieter, and in fifteen minutes more I gave her the other half drachm. In a short time she was asleep and slept for six hours. She awoke feeling much better and had no more trouble. I should not hesitate to give a drachm and repeat the dose in half an hour if the patient was not better.—*New York Medical Journal.*

CONVULSIONS IN INFANTS AND CHILDREN.—Convulsions from whatsoever cause require prompt and efficient treatment. They themselves may produce serious damage, accompanied as they are by hyperæmia of the brain, more or less asphyxia, congestion of the lungs, and of the various internal organs, thus throwing a great strain upon the heart, its valves, and upon the capillary vessels, and profoundly exciting the nerve centers. This tremendous disturbance may go on if unrelieved, and result in death. The general plan of treatment now to be outlined will do no harm, and probably relieve most of the commoner causes which induce the motor excitement. The articles required are a bottle of chloroform, or ether (or the mixtures we use in whooping cough, amyl nitrite 1 dram, chloroform 3 drams, ether 5 drams,) also a bottle containing a solution of chloral 5 grains to the dram, a cylinder of oxygen, a hypodermic syringe, morphine, a soft rubber catheter, a fountain syringe, a clinical thermometer and three or four rolls of cotton wool.

On reaching the scene of action let him direct each of the bystanders to get various objects which may be needed, sending one person after each, and thus clear the room, collecting blankets, sheets, large towels, preferably bath towels, mustard, hot water, a bath, thermometer, etc. The child will usually be found already in a bath, which is often so hot

as to injure the skin, producing sometimes quite serious results. Take it out at once. If the bath contain mustard it may be so strong as to require rinsing off, and the application of some emolient, as petrolatum, and to wrap the child up in soft cotton wool, which, in any event, is a useful covering after the bath. If the child has not been overtreated by domestic zeal and remedies, proceed to apply a hot pack at once, to which a little added mustard is useful, a teaspoonful to the quart of tepid water, 75° or 80°, in which dip a large bath towel or sheet and wrap around the child, covering it with a blanket, and leave it thus from ten to twenty minutes. Meanwhile, apply the chloroform or ether to the nose and give a large injection of hot water, 95° to 100°, by the bowel. While the child is thus resting one can proceed to examine into the history of the case and explore the lungs and heart, and, when possible, get specimens of urine and examine for albumin. Look into the nose and ears for foreign bodies, etc. Examine the penis for phimosis. The temperature should be taken. If subnormal use stimulants. The hot injection acts well, helping to relieve the overtaxed heart, to equalize the circulation, dilate the peripheral vessels and also assist in unloading the bowels and intestines or, at any rate, in liquefying the feces. If the temperature be found high, the heat will relieve capillary congestion, relaxing the superficial vessels and expedite heat elimination. The hot injection can be followed later by cold injections, 50° or 55°. Also in hyperpyrexia, and, indeed, in most cases, except shock, it is well to apply cold to the head. If the convulsion be very excessive or unduly prolonged, there need be no hesitation in using a hypodermic of morphine, to a six months old baby $\frac{1}{8}$ grain, to a babe of one year old $\frac{1}{4}$, or two years $\frac{1}{2}$, and these may be repeated in an hour or two if no effect is gained. The second dose may be double the size of the first, for, during convulsions, the tolerance of opium is very great. Where there is asphyxia, oxygen is a valuable agent. Also chloral may be given by the rectum in warm water or milk, four grains to a six months old baby, six grains to one of a year, and repeated in an hour.

Gradually a knowledge can be acquired of what the definite cause may be, whether by shock, fright, chill, heat, exhaustion, sunstroke, congestion of the lungs, toxæmia, overloaded intestines, the beginning of an exanthem, or other fever, or cerebral disease. It is proper also, in most cases, to administer a purgative by the mouth, as calomel, or if the constipation be obstinate, croton oil, half a drop to a drop in glycerin or whiskey. We have seen this save life when the cause was coarse, undi-

gested food partaken of three days previously and the child had been abandoned to die. If the temperature remains excessively high, a cold pack may be used after the hot one, and whatever other remedies the nature of the case may require. A child who has convulsions, especially if these exhibit a tendency to recur, must be kept absolutely quiet and fed in the simplest fashion, altogether by fluids, for several days. When the nature of the case is clearly revealed one proceeds to treat that as required.—*Philadelphia Polyclinic.*

ANTIPYRIN IN LABOUR.—SAVITZKY (*Vratch*, No. 22, 1896), as the result of seventeen years experience, recommends antipyrin enemata as an obstetrical anæsthetic. He administers 1 gramme every two to six hours, occasionally combining the drug with opium (from 15 to 25 drops of Russian tinctura opii simplex, which contains 1 part of opium to every 10 parts.) The pains are always relieved in fifteen to twenty minutes after the first dose. Frequently the patient soon falls asleep, which is especially beneficial in cases of spasmodic uterine pains and tetanic contraction of the os; hæmorrhage also diminishes. No untoward accessory effects were ever observed by the author.—*British Medical Journal.*

POST-ABORTUM PLACENTAL RETENTION.—CHALEIX-VIVIE points out (*Gaz. Hebd. de Méd. et de Chir.*, Dec. 27, 1896) that the chief dangers of incomplete abortion are hæmorrhage, sepsis with a crowd of resulting morbid states, and the formation of deciduoma malignum. He shews how vaginal and uterine injections, the introduction into the uterus of caustic solutions or of sticks of chloride of zinc, the administration of ergot, and the plugging of the vagina, are all inadequate or dangerous means of arresting the hæmorrhage from placental retention. He advises digital or instrumental curettage; but, with regard to the latter, he insists that the performer shall be an expert in uterine surgery; failing this qualification, the physician ought simply to plug the uterus with iodoform gauze until operative interference can be safely undertaken. For septic dangers, also, and even for the risk of a growth of a deciduoma malignum, CHALEIX-VIVIE regards curetting as the treatment of election.—*British Medical Journal.*

QUININE AS AN OXYTOXIC.—Sulphate of quinine (SCHWAB, *L'Obstétrique*, February, 1897,) is considered by many authorities to have a distinct effect in increasing the contraction of the uterus during labour. SCHWAB states that in every case in which he has given it for uterine

inertia, contractions have rapidly come on. He records two cases in detail. In his opinion the drug is a powerful stimulant to the uterine muscle. It is only efficacious, however, during labour, and whilst contractions of the uterus are going on. It will not bring on labour or abortion. The contractions set up by quinine are intermittent, thus preserving their physiological character, and hence there is no additional risk to the mother or child attending its administration. The amount should not be less than 15 grains, given in two doses, at ten minutes interval. The effect on the pain is produced in 20-30 minutes. It may be prescribed with benefit during the weak pains of the first stage of labour, and more especially in cases of premature rupture of the membranes. M. SCHWAB has also given quinine in cases of retention of the placenta after labour or abortion. In three cases quoted the placenta was expelled a short time after the administration of quinine.—*Medical Chronicle*.

SULPHATE OF SODIUM AS A HÆMOSTATIC.—In the *Revue Medicale de la Suisse Romande* of January 20, 1897, REVERDIN contributes an interesting article upon this subject, experimental and otherwise, and concludes that small doses of sulphate of sodium (two grains every hour) are of great value in certain cases of capillary hæmorrhage for the purpose of arresting the flow of blood. He has also found this method of treatment of value for the control of graver hæmorrhages. His experiments upon animals seem to show, however, that the remedy is only of value if given by the stomach or injected into the veins. Under these circumstances it distinctly increases the coagulability of the blood. On the other hand, it is a noteworthy fact that its administration subcutaneously does not produce the same result.—*Therapeutic Gazette*.

TUBERCULOSIS TREATED BY THE SALTS OF THE BLOOD.—STADELMANN has suggested in the *Therapeutic Gazette* that in a certain number of cases of tuberculosis there is a decrease in the normal saline constituents of the body, and he therefore suggests that it will be of advantage to give to patients suffering from this disease an increased quantity of saline material. Thus, he recommends that the phosphate of sodium shall be given in the dose of thirty grains three times a day, and that subcutaneous injections of six to seven grains of chloride of sodium be used. He asserts that after the treatment there is decrease in expectoration and the objective signs of disease.

Matters Medical.

CASES OF FOLLICULAR TONSILLITIS DUE TO MILK INFECTION.—Drs. C. GREY-EDWARDS and WALTER D. SEVERN reported from England that they observed a house epidemic of infectious angina. In the house where it first made its appearance, ten persons were afflicted. Other cases originated in a neighboring house, supplied with milk from this farm. The bacteriological investigation of the milk of each of the cows on this farm gave staphylococcus pyogenes aureus and albus. The same bacteria were found in the tonsillar secretion of those affected.

An examination of the cows shewed no demonstrable disease. A bacteriological examination of the milk of each of the cows, however, discovered an abundance of the above mentioned bacteria. To all appearance the cows seemed perfectly healthy.

After removal of these cows, the epidemic in the locality came to an end.—Translated by Dr. G. R. J. CRAWFORD, St. John, from *Münchener Medicinische Wochenschrift*, July 13, 1897.

OPERATIVE TREATMENT OF EXOPHTHALMIC GOITRE.—SCHULZ (*Berl Klinik*, June, 1897) reports 14 cases of Basedow's disease under the care of KUMMELL, which were treated by partial removal of the enlarged thyroid body. In most of these cases the symptoms of this disease were very severe, and rendered life almost intolerable. Twelve of these patients, it is stated, were completely cured and enabled to resume their occupations. In the two remaining cases the operation was followed by much improvement, and there is every probability of the exophthalmos, the sole persisting symptom of the disease, disappearing in a short time. There could be no doubt, the author asserts, that each of these 14 patients presented well-marked and very decided symptoms of Basedow's disease. Frequent observation of the patients after operation during intervals varying in the different cases from two to seven years have convinced the author that objections to partial strumectomy on the ground of probable relapse, do not hold good. In one case only was there observed any renewed enlargement of the thyroid. In all the others the remaining portion of the gland showed a tendency to shrink rather than to increase in size.—*Med. Times and Register*.

CARCINOMA OF THE BREAST IN A CHILD.—Dr. BLODGETT (*Boston Med. and Surg. Jour.*) has reported the case of a youth, born of healthy

parents free from all suspicion of malignant heredity. The father had been at times grossly intemperate. Up to the age of 12 years the boy presented no appearance of glandular disease, but soon after this time a swelling was noticed in the left breast, beneath and attached to the nipple, which was slightly reddened and harder than its fellow. The swelling and induration gradually increased in size during the succeeding months, and the skin became more extensively adherent. Surgical removal of the breast was advised, assented to and effected. The growth presented on microscopical examination the typical structure of carcinoma, and had invaded all visible glandular tissue of the breast. The wound healed by first intention, and there had been no recurrence or metastasia at the end of five years.

HÆMOPTYSIS.—According to COTTON, the following are the chief causes of hæmoptysis: 1. Hæmorrhage from the pulmonary artery or its radicles. (a.) Rupture or wound of lung from external violence. (b.) Active hyperæmia of the lungs—inflammatory, vicarious or induced by violent effort or excitement. The active hyperæmia may be primary as regards the lungs, or may supervene or be attendant upon disease already present in them. (c.) Mechanical hyperæmia of the lungs, secondary to heart disease or embolism of one of the pulmonary branches, or to pressure from tumors, such as enlarged bronchial glands. (d.) Neurotic division of vessels in the course of softening or tuberculous or other consolidations in destructive lung diseases—phthisis, cancer. (e.) Aneurismal dilatation or simple erosion of branches of the pulmonary artery, exposed in the course of excavation of the lung or ulceration of the bronchial mucous membrane. (f.) Primary atheroma of the pulmonary artery within the lung. 2. Hæmorrhage from the bronchial capillaries. Capillary hæmorrhage from the bronchial mucous membrane. 3. Hæmorrhage from the aorta or one of its great branches. Aneurism rupturing through the lung or into a bronchus. This classification of the causes of hæmoptysis is drawn by Dr. COTTON from his own clinical experience and observations in the dead house.—*Med. Times and Hospital Gazette*.

ANEURISMS OF THE AORTA.—Prof. B. GERHARDT remarks that the last few years have established two very important facts in regard to this affection. The first is the comparative frequency of latent aneurisms of the aorta, which occasion little if any disturbance and only a few slight vague objective symptoms, until they burst suddenly into a

neighboring organ. The first indication of their existence is the paralysis of the left vocal chord, signaled by TRAUBE. Auscultation will also sometimes reveal an arterio-diastolic sound, not perceptible at the emergence of the aorta, produced by contraction or dilatation of the aorta. The pulsation is also a valuable indication in such cases; also heart-systolic coarse rale. The second point is the connection between aneurisms of the aorta and syphilis. M. SCHMIDT has cured aneurisms of the aorta with anti-syphilitic treatment, and GERHARDT suggests that in certain cases we may be justified in combining mercury with the usual potassium iodide treatment. The large canals that carry air into the lungs, blood into the arteries and food into the stomach cross before the third and fourth dorsal vertebræ, and they are here exposed to numerous mechanical influences and movements. Each can compress the other at times, and this region is a chosen location for carcinoma, as well as for aneurisms, which are frequently accompanied by syphilitic tracheo-broncho-stenosis. In tabes, also, aortic insufficiency is the usual heart defect. In 25 cases of aneurisms of the aorta in his clinic, 17 were men and 8 were women. In 13 cases the diagnosis was confirmed by the necropsy. Nine of the men had had syphilis (53 per cent.). Other causes were trauma, 5; potus, 2; over-exertion, 3; anxiety, 1; and anger, 1. In 8 cases there had been rheumatic antecedents.—*Deutsche Med. Woch.*

SAVING OF SICKNESS AND LIFE IN MICHIGAN.—The Secretary of the State Board of Health has just published (in Reprint No. 472) official statistics on the results of the life-saving work of that Board, which show that through compliance with the recommendations of that Board during the five years, 1890-94, there were probably saved to the people of Michigan, 112,843 cases of sickness and about 5,261 deaths, from the four diseases, diphtheria, scarlet fever, typhoid fever and measles. At a very low estimate the money value thereby saved the State during these five years is \$5,097,800, or over \$1,000,000 per year, from these four diseases. If all the dangerous diseases were considered, the saving would undoubtedly be much more.

The State Board of Health exists for the purpose of guarding the highest interests of every man, woman and child in Michigan; and, if it had the co-operation of all, and its advice was fully complied with, the results of the work would be still more effective. As it is, the money values saved to the people of the State greatly exceed the cost of the

public health work, being in fact, nearly half as much as the entire amounts required to sustain the State government and all the State institutions. From an unhealthy State, Michigan is fast becoming one of the most healthful.—*State Republican*, Nov. 25, 1896.

The basis on which this estimate is made is as follows: For medical attendance and other necessary expenses in each case of sickness, \$20; for each funeral prevented, \$40; value of each life saved, \$500. (Before the late war a slave was worth about \$800, for what he would earn over and above the cost of his maintenance, and now the courts count an average person's life worth about \$5,000—ten times the amount used in this estimate.)

CEREBRAL ABSCESSES IN CHILDREN.—At a recent meeting of the American Pediatric Society, Dr. HOLT gave an account of four cases of this condition which had come under his notice. Details were published in *Pediatrics* of June 1. The first case was that of a child, aged six weeks, and this has the peculiar interest of being the earliest age at which an intracranial abscess has been described. The child was born easily and naturally, and there was no history of injury or disease. It was a fat, healthy-looking infant, with nothing abnormal until four days before death, when swelling of the left thigh commenced. On admission to the hospital the child was found to be almost moribund, with a feeble, almost imperceptible pulse, and a temperature of 99.5 degrees Fahrenheit, but without coma. The thigh was incised, but no pus was found, only disorganized blood. The patient died, and examination of the brain revealed an abscess in the parietal lobe, with some recent local meningitis on the inner surface of the dura mater. The abscess cavity was 7 cm. long and 5 cm. deep, and contained two ounces of pus. The only likely source of infection was from the external ears, each of which had been punctured, and the punctures were found covered with dirty fluid encrusted with pus. The second child was three months old. The symptoms developed acutely—viz., irregular shallow respiration, retracted abdomen and fever. There was also opisthotonos in the last few days and convulsions on the last of all. There was found to be a large abscess of the right parietal lobe, which communicated with the ventricles, and pus was found in the left petrous bone, although there was no discharge from the ear during life. The third patient was also three months old and was said to have been well and strong until seven weeks before, when it fell from the bed on to the floor. Three days later the patient

cried out sharply and vomited. On admission to hospital there was emaciation, occasional vomiting and discharge of blood from the left ear. Death took place suddenly, and there was found to be meningitis of the inferior surface of the cerebellum and an abscess as big as a hazel nut. The fourth case was that of a child nine months old. On admission the patient was found to be in excellent condition as regards nutrition, but there were internal strabismus, dilatation and inactivity of pupils to light, and increased knee jerks; there was no fever. Vomiting occurred occasionally, and symptoms of irritation alternated with drowsiness. Gradually rigidity developed in the lower extremities and hands, and there was slight paralysis of the left side of the face and discharge of pus from the ear. The child died in the eighth week of the illness, and at the necropsy two abscesses of considerable size were found in the right lateral lobe of the cerebellum. These did not communicate, and no pus was found in the auditory canal. In conclusion Dr. HOLT gives a short account of the different conditions in which cerebral abscess occurs in children. It is rare in the first four years of life, not common later, and the first case referred to is the youngest case recorded.—*Med. Times and Register*.

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