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THE MARITIME MEDICAL NEWS

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WORLD OF MEDICINE

Thiosinamine in Otology. Francisco M. Fernandez, of Havana, Cuba, says (*Medical Record*, June 26, 1909), that for the past eight months he has been experimenting with thiosinamine in the treatment of chronic adhesive otitis media. To this remedy has been ascribed the power of softening cicatricial, rectum, and urethra. It gives no beneficial results outside of the adhesive variety, but has had some success in that form. The author has had results far from satisfactory in six cases of the adhesive variety. It caused lancinating pains in the ears, and in some cases it caused suppuration which had ceased to be re-established.

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Pseudomembranous Anginas. W. R. Murray, Minneapolis (*Journal A. M. A.*, July 31), gives case histories or three patients suffering from chronic pesudomembranous faucial inflammation in which repeated microscopic examinations showed the presence of Vincent's spirillum and the *Bacillus fusiformis*. The bacillus has been described "as a spindle-shaped rod with tapering ends, slightly bulging in the center, usually straight, and from 6 to 12 microns in length. The spirilla, usually associated with the bacilli, are delicate spiral-shaped organisms, staining somewhat faintly and varying considerably in length and in the number of curves. Both organisms take the ordinary stains but are Gram negative. They are always found associated with other micro-organisms. Clinically, these acute lesions appear as a grayish pseudomembranous inflammation attended by necrosis: the necrotic area usually sloughs, leaving a penetrating ulcer, the floor of which is covered with pus and which easily bleeds. The duration is from one to three weeks. In one of these cases the general health was good and the patient responded readily to treatment. In another, mild antiseptic spraying caused the disappearance of the exudate, but in the third the membranous deposits did not disappear until after the application of strong silver nitrate solutions locally, together with general tonic treatment. Clinically there was some resemblance to a mycosis in the local manifestations and some leptothrix were found in the smears. Whether or not the organisms as described by Vincent were the causative factor was not absolutely proved, but their continued presence would seem to justify the assumption that they had a causal relation.

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Dermatobia Noxalis Infection. James D. Manget, of Atlanta, Ga., reports a case (*Medical Record*, June 26, 1909), in which the patient became infected by *Dermatobia noxalis* in Mexico while bathing, being bitten by flies while in the water. The symptoms were gen-

eral malaise, slight fever, and small lesions on the back and shoulders, which caused sharp lancinating pains at times. Six weeks after exposure there were no malarial parasites found in his blood. In the five lesions on the shoulder and arm were found motile larvæ, with branched hooklets on the head, which caused the intense pain. Recovery soon followed the removal of these larvæ.

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Lichen Planus Sclerosus J. F. Schamberg and R. Hirschler, Philadelphia (*Journal A. M. A.*, July 31), report a case carefully examined clinically and microscopically, and review the literature of the disease. They consider that the facts of their experience and the literature lead to the conclusion that there are two varieties of atrophic lichen planus. The one represents a terminal degenerative change, while the other would appear to be a primary aberrant variety of lichen planus or some closely allied affection. The term "lichen planus sclerosus" is preferable to the term "lichen planus atrophicus," as the atrophy of the rete mucosum is probably due to the compression and obliteration of the papillary blood vessels by the hypertrophic collagen. As the whiteness is a striking feature the designation "lichen albus sclerosus" would not be inappropriate. Eight of the eleven reported cases have been in females, two males, and the sex of one patient was not stated, this being different from the ordinary distribution between the sexes. The histologic changes observed both by themselves and others are extraordinarily constant and, with the clinical features, serve to distinguish the lichen planus sclerosus very markedly from other varieties. There are some cases of morphea with keratotic plugs imbedded in the patches which may closely resemble lichen sclerosus, but a careful study will usually enable one to differentiate the two affections. In this disease there is a cell infiltration in the middle of the lower part of the cornea with later a sclerosis and condensation of the collagen fibers. The papillæ are effaced and the papillary blood vessels obliterated. There are marked atrophic and degenerative changes in the rete mucosum, while the horny layer is hypertrophied

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Scleroma of Respiratory Tract. J. H. Guntzer, of New York, says (*Medical Record*, July 24, 1909), that scleroma has neither geographical boundary nor ethical limit. It is found especially in Russia, Austria, and Prussia. Climate and sex have no influence on its occurrence. It may be defined as an infectious granuloma, slowly progressive in course, characterized by nodular, compact infiltration of the nasal vestibule, resulting in complete closure of the nostrils, and extending to the pharynx, larynx, trachea, and bronchi. The sense of smell is preserved, which indicates that the superior meatus is not affected. The point of origin is unknown, and the age varies, it being generally seen between twenty and thirty or later, although cases are seen in children. It is a disease confined to the poorer classes. The Frisch bacillus plays an important part in its causation, being found in the exudate and in its tissue proper. The author has shown by its use in one case that a vaccine prepared from this bacillus can produce local immunity. This bacillus is Gram positive, has a lively motility when examined in a hanging drop, and grows smaller and thinner

as the age of the culture increases. No conclusions can be drawn from the agglutination test. In biological experiments not sufficient time has been allowed to pass to get results in so chronic a disease. It is generally accepted as an infectious disease, perhaps contagious, and it may be propagated by some insect by which it is carried from one person to another. It is probably of inflammatory nature, and its three characteristics are the baccilli, Miculicz cells, and hyaline bodies. The examination of a large piece of tissue is necessary for a pathological diagnosis. The general symptoms are few, the manifestations being entirely local, and depending on the amount of pressure and infiltration of the organs attacked. A deformed contour of the nose is found in only a few cases. Metastasis rarely occurs. The diagnosis is not easily made. Two illustrative cases are given. The X-ray treatment is the best weapon against it.

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Interstitial Keratitis. H. Gifford, Omaha, (*Journal A. M. A.*, July 3), says that the more he sees of interstitial keratitis the more convinced he is that Hutchinson is right in attributing practically all of it to inherited syphilis. He refers only to the typical form which occurs almost always between the ages of three and sixteen years, and almost never after twenty-five. The prophylaxis of the condition, therefore, resolves itself for practical purposes into the prevention of syphilis and the cure of syphilis, more particularly of the hereditary form. He does not attempt to cover the whole field, but simply lays stress on certain peculiarities of the teeth as aids to diagnosis, on the treatment of the disease when it has broken out in one eye, and on the prophylactic management of children marked with the disease but without active manifestations. He thinks it highly probable that if all children between the ages of three and sixteen showing the signs of inherited lues could receive a long continuous course of treatment, the number of cases of interstitial keratitis and spyhilitic deafness could be greatly reduced. The ordinary signs are well enough known, but he calls attention to certain peculiarities of the so-called Hutchinson teeth, the bulging of the lateral lines of which he considers as the most permanent feature. As regards the milk teeth Hutchinson in his second paper made some important observations which have practically passed into oblivion. One of these refers to a condition which he illustrates in which the incisors are small and discolored while the canines are healthy looking. This is a common symptom. Other figures show another peculiarity of the milk canines on which Hutchinson lays great stress and which Gifford has seen a number of times. A central discolored blunt peg projects from and is separated by a shallow groove from a base or collar of normal looking tooth tissue. If we imagine the same sort of defect in a molar tooth we shall have a symptom on which great stress has been laid by Darier. Gifford considers such molar teeth and the peg shaped milk canine fully as characteristic as the Hutchinson incisor. Another form of syphilitic tooth on which Darier lays stress, is the tuberculated permanent canine which is also figured by Gifford. He also mentions another form of first permanent molar which he calls the slope molar in which the base is much wider than the crown which is probably due to the same influences of malnutrition. Formerly he placed

little reliance on the use of specific remedies, but of late years he has followed a more vigorous treatment and with better success. He thinks that he has the best results since adding arsenic to the treatment. Summing up he says that he thinks the following points may be made with reference to the prophylaxis of interstitial keratitis: "First, in the text-books which treat of the diagnosis of hereditary syphilis, instead of the single faulty cut of the teeth so commonly used, at least half a dozen figures should be presented to show not only the varieties of the Hutchinson tooth, but the other more important forms of syphilitic teeth mentioned in this paper. Second, all children in public institutions and in private families who show any of the well-marked signs of inherited syphilis should receive a course of antisyphilitic treatment, even if in other respects they seem to be entirely well: the results and indications of this treatment being controlled, if possible, by the serum diagnosis test. Third, when a case of syphilis, inherited or otherwise, appears in a family, all other members of the family should be examined for signs of the disease, and if such are found, should be subjected to specific treatment. Fourth, by an extra vigorous use of specific treatment the disease may be kept out of the second eye in a larger proportion of cases than has hitherto been thought possible."

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Aneurysm of the Thoracic Aorta. Albert Abrams of San Francisco, Cal., finds (*Medical Record*, July 3, 1909), that the manipulation of definite vertebræ corresponds to the elicitation of definite reflexes. Indiscriminate handling may give opposite effects from those desired. Concussion of certain vertebræ by means of a hammer is used as a method of exciting these reflexes. Concussion of the four last dorsal vertebræ in succession by a series of sharp, vigorous blows will cause dilatation of the thoracic aorta in normal persons. Concussion of the spine of the seventh cervical vertebra will cause contraction of the thoracic aorta. Lung dullness varies with position, due to the gravitation of the blood into one part of the lungs. If diminished resonance or dullness over the aorta, elicited by concussion of the vertebræ, exceeds the normal, the vessel either is dilated or is the site of an aneurysm. A dull area in the upper thoracic region or back, if caused by aneurysm of the thoracic aorta, will show a diminished area of dullness when the spine of the seventh vertebræ is concussed. Treatment by concussion of the vertebræ in aneurysm has been found of value by the author, the disagreeable symptoms being much improved. A vibrator giving a percussion stroke is used. Concussion is made over layers of cotton attached by adhesive plaster. Adepts in manual therapy find that manual pressure along the vertebral column will cause vasoconstriction or vasodilation, the former by brief, the latter by continuous pressure. Aortic dilatation is associated with stimulation of vasomotor nerves, the centers being located in the medulla and spinal cord.

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Tympano-mastoid Exenteration. E. A. Crockett, Boston (*Journal A. M. A.*, July 31), speaks of the difficulty of deciding whether or not to do a radical mastoid operation in cases of chronic middle-ear suppuration. The condition is seldom dangerous, and yet when it is dangerous it is almost invariably fatal and the operation even in skilled hands is not

always safe. He gives illustrations from his own experience and concludes that it is contraindicated: "First, unless the operator is experienced in the surgery and anatomy of the temporal bone and well-grounded in the after-treatment of such operations. Second, it should not be performed on patients with double chronic suppurative middle-ear disease except in the presence of symptoms indicating danger of patient's life. Third, it should not be performed on a patient's only hearing ear except under the same circumstances. Fourth, it should not be performed on young children, that is, children under five years, under practically any conditions. Fifth, it should not be performed on a patient with tuberculosis or syphilis except in an emergency. Sixth, it should not be performed on any suppurative middle-ear process, of however long duration, until the ordinary forms of middle-ear treatment have been faithfully carried out for a period of at least six months, except in the presence of symptoms indicating cerebral involvement with danger to life."

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Forms of Cyanosis.

T. Wood Clarke, of New York, states (*Medical Record*, July 24, 1909), that the immediate cause of cyanosis, not due to cardiac or pulmonary disease, may be in the blood condition, hence the first thing to do in making the diagnosis is to make a blood examination. There may be an abnormally high red cell content, or polycythemia, generally associated with an enlarged spleen and chronic constipation. Cyanosis may be due to a change in blood pigment; if this is the presence of methemoglobin, the condition may be due to drug poisoning, or autointoxication by the absorption of nitrites from the intestines in chronic diarrhœa. If the pigment is sulphhemoglobin, it is probably associated with chronic constipation, and is the result of the absorption of sulphuretted hydrogen from the intestine, or of the presence in the blood of an abnormal reducing agent acting on small traces of sulphuretted hydrogen. These cases improve as enteritis gets better, or as the bowel is kept open. The technique of a spectroscopic blood examination is described. In a final note the suggestion is made that the idoiopathic methemoglobin cases may be in reality cases of chronic bismuth subnitrate poisoning, the nitrate being converted into nitrite in the intestines.

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Pemphigus Neonatorum.

O. H. Foerster, Milwaukee, Wis. (*Journal A. M. A.*, July 31), says that the possible identity of pemphigus neonatorum and impetigo contagiosa has not been given due prominence in English dermatologic literature. He goes over the recent literature and says that there "appears to be sufficient evidence at hand to warrant insistence on the proper recognition of pemphigus neonatorum as simply a bullous infantile variant of impetigo contagiosa and elimination of the confusing term 'pemphigus' when this affection is under consideration." Within the past six years he has had occasion to observe a number of instances in which midwives or others have communicated pemiphigus neonatorum to infants or received impetigo from infants affected with pemiphigus neonatorum. Although the disease is generally mild in character, it sometimes has an appalling mortality in infants. It is desirable, therefore, in his opinion, to have midwives report all cases occurring in

their practice, as is now required in Prussia. At present no one bacterial organism can be credited as being the causative agent of the disease, though Almquist has named a special micrococcus as such and it has been isolated from cases in Manila by Clegg and Wherry. The *Staphylococcus pyogenes aureus* seems to be the one organism most generally found in pure culture. The same uncertainty seems to exist in regard to the bacteriology of impetigo contagiosa, and Potter ascribes the clinical differences between the two affections to the variations in the anatomy and physiology of the skin of the new-born and that of older children and adults. The treatment he has found most efficacious is the same in both: drainage of the vesicles or bullæ and exposure of the edges of the lesions, the entire base of which is freely anointed with two per cent. ammoniated mercury ointment, and individual isolation of the lesions with gauze and cotton dressings. For asepsis of the uninvolved surface the child is bathed in a warm permanganate solution and sponged with the same whenever the dressings are changed. External heat and full doses of brandy and strychnin are indicated as supporting measures if the disease is at all extensive.

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Phagocytosis. F. M. Pottenger, Monrovia, Cal. (*Journal A. M. A.*, June 19), offers the following conclusions, deduced from experiments with the blood of various patients presenting considerable variation in the number of cells belonging to the different classes of Arneth, in order to determine if the different classes of cells retained a constant relative phagocytic power "1. There is more or less definite phagocytic value for each variety of neutrophile (Arneth's classification) acting on staphylococci. 2. This fact will surely throw light on the varying phagocytic values of neutrophiles obtained from various sources. 3. It may aid in the solution of the question of leucocytosis induced for therapeutic purposes. 4. It is evident that Wright's early assumption, namely, that the leucocyte is a comparatively indifferent factor, is wrong."

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Pellagra. E. J. Wood, Wilmington, N. C. (*Journal A. M. A.*, July 24), after giving a history of the disease, says that pellagra has extended with great rapidity throughout the southern states of the U. S., sixty-five cases having been recognized in his state, North Carolina. He reports a number of cases, personally observed for the most part, and says that the disease appeared in two forms. In one form we have a symmetrical erythema, especially of the exposed parts of the body, appearing usually in the spring associated with stomatitis, diarrhœa, often some gastric disturbances, and followed by cord symptoms of various kinds, and finally by mental disturbances and cahexia. The patient usually gets better as the summer advances only to relapse next spring. With each reappearance the nervous system is more and more affected. The average duration of these cases is five years but may be much longer. The acute or fulminating variety is widely different, running a course from three weeks to three months as a rule, and is invariably fatal. Over 50 per cent. of the cases in the southern states are of this kind. In Italy the disease is confined to the peasantry, but with us the disease affects all classes alike. He has seen several cases in one family, and the question has occurred to him

whether it was contagious or not. The backs of the hands are invariably the first situations of the lesions, which are symmetrical and may be taken for a sunburn, as in one of his cases. The first nervous symptoms are usually paresthesias. Numbness and formication are often complained of and one of the most constant complaints is cold extremities. Vertigo is seldom lacking and mental hebetude is responsible for untidiness and other troublesome symptoms. Toward the close of the disease the patients become delirious. There may be other symptoms, contractures, epileptiform attacks, increase of reflexes or, less frequently, lessening of the same. Sometimes the skin lesions are said to be lacking, but Wood thinks that in many cases there is, or has been, a slight erythema which has escaped notice. The pathologic changes are to be found in the cord, largely in the lateral and dorsal columns, with atrophy of cells in the anterior and posterior horns. The changes in the brain are inconspicuous. All the changes seem to be slow degenerative ones. Diet of corn or maize seems generally attributed as a cause. In studying his own cases, Wood was impressed with the fact that all the corn used by the patients came from Virginia and Ohio where no cases of pellagra have been reported. While not accepting corn as the cause of the disease he thinks that if there is any connection between them it must be that the active factor was developed after the shipping of the corn. Bacteriologic examinations have not thrown much light on the subject, at least not anything positively conclusive. Lombroso's pellagrosine has been said to produce pellagra in animals, but Wood thinks that the toxic symptoms produced are not sufficiently typical. One or two forms of bacilli have been found in corn and one of these has been found by Babes and Sion to produce symptoms resembling pellagra in animals. Tizzoni isolated an organism from the blood of pellagrous subjects which without question produced the disease in rabbits and guinea-pigs. He also isolated the same organism in two samples of suspected corn. Wood has himself isolated from the blood of a patient an organism which he thinks is probably identical with this. The prognosis of pellagra in this country, so far, is grave and the treatment is usually of no avail. Wood says there is reason to suspect that the epizootic meningitis of horses is due to the same cause as pellagra in man. If this is the case, we have some hope that serum theraphy will help us. The blood of a healed pellagrone is said to be curative in experimentally inoculated guinea-pigs. In chronic cases it is possible that the complete withdrawal of corn food and general tonic treatment may be curative. Atoxyl, which is much vaunted just now, has not been so successful in his hands as reported by European writers. The article is illustrated and accompanied by a bibliography.

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Gastric Surgery of the Present Day Robert C. Coffey, of Portland, Ore., says (*Medical Record*, July 17), that for the past two years gastric surgery has been stationary, after a period of rapid advance in methods. Gastric surgeons are achieving results almost as good as those obtained in minor surgery of the abdomen. The mortality of gastrectomy and gastroenterostomy is now from 1 to 20 per cent. Gastrointestinal anastomosis by means of rubber-covered clamps and through and through sutures leaves nothing to be desired. The no-looped gastroenterostomy operation gives al-

most perfect results. Partial gastrectomy is apparently mechanically perfect. Early diagnosis in gastric cancer is necessary, but will only come after education of the public, who must be instructed that stomach trouble beginning after fifty years of age and growing worse must be treated at once, and operated on if need be. Only surgical means give any hope of cure of gastric cancer, and an early operation gives the best chance. The author submits records of twenty-nine cases operated on by him within a year.

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Hyperphoria. According to M. D. Stevenson, Akron, Ohio (*Journal A. M. A.*, July 17), the prescribing of prisms to correct hyperphoria is of great importance and he gives directions in detail as to the conditions and the correction they require. The degree of hyperphoria is often extremely variable, at different examinations and even at the same examination, and sufficient time should be taken to ascertain the exact state of affairs and for the eyes to adjust themselves to the new conditions. If the hyperphoria found is less than two degrees, he usually prescribes the equivalent in degrees by decentering or prisms. When one of more than two degrees is present, he depends on comfort tests of prisms in the trial frames and does not, like many, always undercorrect. There can be no fixed rule, however; each patient must be carefully tested. The differences between hyperphoria for near and distance are also noticed and he has had an instrument specially made to test the hyperphoria for near at various angles. The methods of relieving patients suffering from some of the modifications of hyperphoria as they occur in connection with other defects, such as anisometropia, are also noticed.

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Optic Atrophy in Tabes. E. D. Fisher, New York (*Journal A. M. A.*, July 24), believes the concept, generally maintained, of general paresis is too comprehensive and that the cases continuing over long periods belong to another pathologic state than the type which pursues a briefer course with fulminant active symptoms ending in complete dementia and having also spinal complications involving both lateral and posterior columns. The pathologic findings in the more protracted cases are, he thinks, not distinctive of general paresis, but are also found in other conditions of arterial degeneration. Other points of differential diagnosis may be suggested by the question whether paresis and tabes are the same disorder. Fisher believes, however, that they are distinct diseases, no typical case of tabes ever passing into general paresis. He thinks that in those cases in which the paretic symptoms were preceded by ataxia, the so-called tabic form of paresis, the pathologic spinal cord changes are more diffuse than in typical tabes. The comparative infrequency of pain in paresis and its difference in type when it occurs from that of tabes is one diagnostic point, although there are great variations in individual cases. Added to this point he wishes to call attention to another differentiating symptom, namely the occurrence of optic atrophy in tabes and its infrequency or absence in paresis. He gives the statements from a number of physicians of the New York State hospitals who testify that this symptom is one of the rarest in paresis. He thinks we are including too many diseases under the common name of paresis.

ACUTE TRAUMATIC TETANUS TREATED BY MAGNESIUM SULPHATE.

WITH REPORT OF A CASE IN THE TREATMENT OF WHICH INJECTIONS OF AN AQUEOUS 25 PER CENT. SOLUTION OF MAGNESIUM SULPHATE WERE MADE IN THE SPINAL SUBARACHNOID SPACE; WITH RECOVERY.

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OUR knowledge concerning this acute infectious disease is incomplete. Numerous are the features of this intoxication that call for elucidation. We know that the disease occurs sporadically, endemically (1), and epidemically; that there is no age, sex, or race that is immune. It has occurred in Iceland. It is very prevalent in the tropics. In reference to race incidence, it must be stated that it is considered by most observers to be more frequent in the dark-skinned races than in the white race, even in the same country. The disease has a variable period of incubation; on an average in the acute form, from five to ten days elapse between inoculation and the appearance of the symptom-complex of this condition. A short period of incubation implies intensity and virulency of infection, and is of bad prognostic omen. Though it is not believed that one attack confers immunity against other attacks, cases of second attacks are not known. (7).

Though this disease is comparatively rare, it occurs in such unforeseen (8) conditions, and usually has such a dramatic outbreak and such a fatal termination, that it is of interest to al medical practitioners. It has complicated burns (2). It has complicated frostbites. It has complicated horsebites. It has follwed such insignificant trauma as is associated with the hypodermic injections of quinine (3), with the subcutaneous administration of antiplague serum (4), with the application, for hemostatic purposes, of gelatine to bleeding surfaces, with the subcutaneous employment for hæmostatic or other purposes of this same agent (5), with the operation of vaccination (6), of circumcision, of the removal or adenoids. It has followed the employment in operative procedures of contaminated catgut; it has followed contused wounds of the outer canthus of the eye (9), and other wounds so insignificant that at the time of infection they passed unnoticed, or if noticed, they were completely forgotten at the time of the outbreak of the disease. The disease may occur after childbirth, and may occur after abortion, accidental or induced (10). As a result of fourth of July injuries in 1903, there were 406 deaths from tetanus as compared with 60 from other sources (11).

Since the discovery by Nicolaier, in 1885, of the Bacillus tetani and its growth, in pure cultures, by Kitasato, in 1889, it has been amply demonstrated that all clinical forms of tetanus, cephalic tetanus (12), tetanus neonatorum (13), puerperal tetanus (14), post-operative tetanus (15), traumatic tetanus, are due to the bacillus tetani. The inoculation of the offending germ occurs through an abrasion or wound of a cutaneous or a mucous surface. Tetanus is an implantation infection. In the lower animals, all experimental efforts to produce the disease through either the respiratory

or the alimentary tract have proved unsuccessful. The bacillus, though not a pyogenetic germ, is not hindered in its development by the presence of the germs of suppuration. The latter, in fact, create conditions favourable for its growth (16). As a wound complication, the frequency of tetanus has its growth (16). As a wound complication, the frequency of tetanus has markedly lessened since the generalization of the antiseptic treatment of wounds.

The disease has no characteristic pathological anatomical changes (that is, none have to this date been determined, or rather, demonstrated.) No constant changes have been found either in the peripheral nerves or in the cerebrospinal nervous system.

The diagnosis offers no difficulties. In all forms of the disease, the chronic cephalic form excepted, the mortality is appalling. In an editorial in the *Journal of the American Medical Association* (16a) it is stated that "the usual rate of mortality for traumatic tetanus is probably about 80 per cent.' Stewart (17) says that "the mortality is greatest in the puerperal type, extremely few cases recovering. It is said that recovery is almost unknown in tetanus after abortion." This high mortality is due to the fact that the measures actually employed in the treatment of this disease are ineffective. It is notorious that the drug treatment of this disease has been without efficacy. Many are the medicinal agents that have been employed in tetanus. The indication for their employment has been found chiefly in the controlling or depressing influence which they exert upon muscular action. Opium (18), carbolic acid (19), physostigmine (20), the bromides and chloral hydrate (21) can be mentioned among the drugs that have been, and still are, employed extensively in the treatment of this disease. These drugs meet more or less successfully, isolated symptoms of this disease. Recoveries from tetanus infection are reported in which the medical attendants attribute the happy termination of the disease to the employment of one or more of the aforementioned drugs. Apparently, none of these drugs exercise much influence upon the course of severe cases. In 1894, J. B. Murphy reported a case of tetanus successfully treated by the intraspinal injection of a solution of Eucaine B. and morphine. Very mild cases recover with, perhaps despite, any of the various forms of treatment.

For prophylactic and for curative purposes, antitetanic serum in liquid or solid form is widely employed. Different routes are employed to introduce the liquid serum into the human organism. The injections of the serum may be subcutaneous, intramuscular (21a), intravenous (22), intraneural (23), intracerebral (24 and 30a, Girard), or intraspinal (25). In the intraspinal method, some clinicians introduce the antitetanine in the epidural space (26); the majority, however, make the injection in the spinal subarachnoid space. In all wounds of a suspicious nature, such as those in which there is much contusion of tissue, such as are soiled with street dirt or garden earth, in all gunshot wounds, in wounds occurring in individuals who work around horses, in horseshoeing establishments or in stables, it is the practice of most surgeons to inject for prophylactic purposes in the wounded individual from 2,000 to 3,000 units of antitetanic serum. The sooner after the injury the serum is injected, the greater is its protective power, the greater is its prophylactic potency. For the last ten years, in all individuals having wounds of the nature described above, I have injected for prophylac-

tic purposes invariably, antitetanic serum. I have never seen a case of tetanus occur after attempted immunization. It must be stated, however, that, lately, the immunizing properties of antitetanic serum have been disputed. Some cases of tetanus have been reported showing that antitetanic serum is not invariably successful in preventing the outbreak of the disease. Jacobson and Pease (21a) were able to collect six cases occurring in the United States and Canada, in which despite the prophylactic use of antitetanic serum tetanus developed. In all but one of these cases, recovery ensued. Reynier (27), was able to collect from the literature thirty-one other cases of tetanus that had developed subsequently to attempt immunization by prophylactic injections of antitetanic serum. To these, he added one personal case. In this series, though the antitetanic serum did not prevent the disease, it, apparently, in most of the cases, attenuated the symptoms and positively lessened the mortality rate. Mauclaire *Gazette des Hôpitaux*, 1903, No. 43, p. 439, reports a case of tetanus consecutive to a fracture of both bones of the forearm due to a horsebite. A prophylactic injection of antitetanic serum was administered, but nevertheless the disease developed. It was an attenuated form of the disease. It lasted twenty-five days. Treatment, antitetanic serum and chloral. Recovery. In the lower animals, the immunizing properties of antitetanic serum have been repeatedly demonstrated. In laboratory experiments, the serum being usually injected either simultaneously with, or immediately after, the injection of the toxin, neutralization is easily effected and tetanus does not develop. Owing to the employment as a preventive of tetanus, of antitetanic serum by veterinarians, this disease as a wound complication after castration of horses has almost completely disappeared. In the human subject, the immunizing properties of antitetanic serum are not as universally acknowledged.

As in immunizing doses, antitetanic serum is perfectly innocuous, we urge, until more light be thrown on the subject, that it be employed as a prophylactic agent against tetanus. Schwartz (30a) in 300 injections noticed no other accident but an occasional erythema (5 cases). In the opinion of many clinicians, its value as a preventive of the disease is established (30). Delbet, Demoulin (27), and Kummer (28), and innumerable other observers, have never seen tetanus develop in a patient to whom, shortly after the infliction of his injury, an immunizing dose of antitetanic serum had been administered. It must be stated, however, that the value of antitetanic serum, as a prophylactic agent, is based on belief on clinical observation, and not on scientifically demonstrated facts. In the Paris hospitals (27) prophylactic injections of antitetanic serum were not employed between the years 1886-1890, inclusive. During this period there were in the city of Paris, 135 deaths from tetanus. During the years 1901-1905, inclusive, the prophylactic injections were employed in nearly all, if not all, the Parisian hospitals. The serum during this same period was also extensively employed as a curative agent. During the years 1901-1905, inclusive, there occurred in Paris, 153 deaths from tetanus.

In the prophylactic treatment of tetanus, in addition to the administration of antitetanic serum, all suspicious (suspicious from the standpoint of tetanus development) wounds should be subjected to vigorous and thorough antiseptic treatment. Lowering of vitality by bruising, and incorporation of foreign material, favor

but are not essential for the development of tetanus. Like all sporulated microbes, the bacillus of Nicolaier offers great resistance to the action of antiseptics.

The following table is taken from an article by Scherck (29). It constitutes quite a forcible plea for the prophylactic employment of antitetanic serum.

Cases of Fourth of July injuries treated in the city dispensaries of St. Louis:

Years	No. Case	Antitetanic Serum	Death from Tetanus
1903	56	no	16
1904	37	yes	none
1905	84	yes	none
1906	170	yes	none

In the treatment of numerous cases of tetanus occurring in the human subject, antitetanic serum has been employed. In many cases thus treated, recovery ensued. It is conceded, however, that in the great majority of cases in which this agent has been used, whatever may have been the route of introduction of the serum into the human system, the results have been disappointing. The cases have terminated fatally, not on account of the administration of antitetanic serum, but because of the inefficacy of the latter as a curative agent in tetanus. So extremely unsatisfactory have been the results attending its use, that though still extensively employed, it is regarded as inefficacious by all, being emplayed for want of a better agent. The serum exerts but little influence on the course of the malady, and despite its use, the large majority of cases result in death.

Jacobson and Pease (21a) say, "It is apparent that after tetanus is fully established, serum therapy, however administered, promises but little as a curative agent." In a discussion before the Société de Chirurgie de Paris (27), in which most of those present participated, the opinion was general that, as a curative agent for tetanus, antitetanic serum in the human subject is of doubtful efficacy. Calmette, himself, expresses the opinion that antitetanic serum has no curative power, but that in chronic tetanus, it markedly shortens the duration of the illness. The report of a case, in which a comparatively new mode of treatment has been employed with success, finds its justification in the fact that in the present state of our knowledge all forms of treatment, in this disease, are extremely unsatisfactory.

Mr. Otto Copeck, 17 years of age, Bohemian by birth, was admitted to the West Side Hospital on October 22, 1908. Eight days previous to admission he had stepped upon an old rusty horseshoe nail, thereby sustaining a punctured wound of the left foot. Though no attempt at disinfection had been made, this punctured wound, about an inch in depth, had by the time of admission, healed by first intention. Two days before admission patient suffered from general malaise. On October 21st, neck began to feel stiff and sore, and patient began to experience some difficulty in opening his mouth. On the morning of October 22nd, Dr. Vasumpaur was called, examined the patient, and made a diagnosis of acute traumatic tetanus. He gave a subcutaneous inection of 2,500 units of antitetanic serum, and ordered that an ambulance be called, and that the patient be conveyed to the hospital and placed under my care. When I first saw the case, the manifestations of the disease were so classical that the diagnosis of tetanus was self-evident. There were present trismus, retraction of the head, marked rigidity of the cervical, thoracic, and abdominal muscles, opisthotonos, etc. The angles of the mouth were drawn outward and down-

ward, the upper lip firmly pressed against the teeth, producing the facial expression which is almost invariably present in this disease. The voice was feeble. Slight disturbance of the patient, as by loud talking, opening and closure of the door, etc., would excite convulsive seizures of about 10 seconds' duration. The patient remained in the hospital 28 days. The period of convalescence began on the 10th day after admission to the hospital and was uneventful. His treatment after the first ten days consisted merely of careful nursing. During the first eight days of the active stage of the disease, patient suffered from retention of the urine. The application of fomentations to the hypogastrium having failed to relieve the condition, he was catheterized three times daily from October 22nd to November 2nd. No vesical disturbance resulted. During this same period patient was obstinately constipated. Cathartics per mouth and rectal enemata being without influence, resort was had to the subcutaneous administration of physostigmine in doses of gr. 1-100, and relief was thereby obtained. In the acute stage of the disease, two such doses were taken. In the first few days, attempts to give enemata would provoke convulsive seizures.

From October 22nd to November 2nd, inclusive, patient's diet was wholly liquid. On the evening of November 6th, he was started on semi-solid food. On the 19th of November he was discharged. During the active stage of his illness, our patient received, to combat insomnia, an occasional dose of morphine. On admission into the hospital, 4,500 units of antitetanic serum were injected in the spinal subarachnoid space, 1,500 units subcutaneously around the left sciatic nerve, just beneath the gluteal fold, 1,500 units in the region of the anterior crural nerve, about an inch below Poupart's ligament. On October 23rd 7,500 units of serum were injected subcutaneously. On October 24th, spinal subarachnoid space. On October 25th, 6,000 units were injected in the subarachnoid space, 1,500 units in the left foot, in the region of the wound of inoculation, and the same amount around the left sciatic nerve. On October 26th, 6,000 units were injected in the subarachnoid space, and 1,500 units subcutaneously around the left sciatic nerve. On October 28th, 4,500 units were given subarachnoidally, 1,500 units in the left sciatic nerve, and 1,500 units in the left foot. On October 30th, again 6,000 units were injected into the spinal subarachnoid space, and 3,000 units subcutaneously.

All the injections in the subarachnoid space were made either through the interspace between the spinous processes of the 3rd and 4th lumbar vertebræ, or through that between the 4th and 5th lumbar vertebræ. For these injections, as well as for those of the aqueous solution of magnesium sulphate, anesthesia was not used. Anesthesia is not necessary. General anesthesia is decidedly harmful in these cases. It has determined deaths. Five injections, each of 5 c.c. of an aqueous 25 per cent. solution of magnesium sulphate, were introduced into the spinal subarachnoid space. The path of injection was the interspace between the spinous processes of the 4th and 5th lumbar vertebræ. The needle was inserted about 2 cm. to the side of the median line, on a level with an imaginary line extending between the highest point of each iliac crest. None of the solution was ininjected until a few drops of clear non blood-stained cerebrospinal fluid had escaped.

The magnesium sulphate injections were made on the 23rd, 25th, 26th, 28th, and 30th of October. Each in-

jection was followed by marked lessening of muscular rigidity and noticeable improvement in the patient's general condition. Upon reappearance of the symptoms to an extreme degree the injections would be repeated. After the first injection, the rigidity of the lower limbs never returned to any but a slight degree. I cannot but be of the opinion that the magnesium sulphate was a contributory factor to the patient's recovery.

Previous to our employment of magnesium sulphate, it had been used by other clinicians. Their cases follow. In some of these cases, death occurred; in others, recovery followed. The cases as yet are too few in number for any definite opinion to be expressed as to its value. A more exact dosage must be determined. Greater proficiency in administering must be obtained. The results, however, have been sufficiently encouraging to warant, in fact, to demand, further study of the subject. The experimental work on this subject has been done chiefly, almost wholly, by Meltzer and Auer (31). They determined that intraspinal injections of magnesium salts are capable of abolishing completely in monkeys, at least temporarily, both tonic and clonic tetanic contractions. Clinically, experiments seem to partially bear out the further statement of these investigators that intraspinal injections of magnesium sulphate in doses which do not affect the respiratory centre or other vital functions, are capable of abolishing completely all clonic convulsions and tonic contractions in cases of tetanus, occurring in the human subject. The relaxing effects of the injections may last twenty-four hours longer. In the case which I report, none of the vital functions were influenced by the intraspinal injections of magnesium sulphate. In some parts of the body, such as in the lower extremities, the muscular relaxation following upon the injections was complete. In other portions such as the mandibular, facial or cervical muscles, the rigidity was very much lessened, but it was not completely overcome. Was it due to insufficient dosage, I am unable to state. Appended to the article is a temperature, pulse and respiratory chart, in the perusal of which it will be seen that the injections at times were followed by an elevation of temperature. This has been noted by other observers. In Miller's (33) case, the injections determined a profuse secretion of mucus, bronchorrea, at times severe enough to embarrass respiration, but easily controlled by atropine. Was there a relation of cause and effect between the injections and elevation of temperature? This must also be decided by further study of the subject. Metzler and Auer (32) have determined that when administered by the intravenous route, the magnesium salts are very toxic, and that even small doses completely inhibit the respiration. Therefore, for the administration of these salts, this route, the intravenous route, should never be employed. We employed the agent only in the shape of injections in the spinal subarachnoid space.

In all of the tabulated cases, the magnesium sulphate was injected in the subarachnoid space. The solution has also been used subcutaneously in the following three cases:

Lyon (35) reports the following case. Male, 7 years, stepped on a nail which entered left foot after perforating sole of his shoe. It barely penetrated the skin. Wound scarcely noticeable. Eight days later complained of stiffness of foot and of leg. Convulsions on the 9th day. On the 11th day, the jaws were set and almost

all of his muscles were rigid. The wound was opened and treated with peroxide of hydrogen and tincture of iodine. Morphine, chloral, and bromides partially controlled the convulsions. On the 12th day 2 drachms of magnesium sulphate in 4 oz. of distilled water, were injected under the skin of the abdomen. At end of two hours, jaws could be opened 2 cm. Muscles were markedly relaxed. On the 13th, 14th, 17th and 19th days, the magnesium sulphate injected was repeated. The convulsions had become infrequent and mild. Twice, there was bronchorrhea. A vesicular eruption covering the whole body appeared on the 14th day. The vesicles were pin-head size and were filled with a clear fluid. In a week, these dried up and disappeared with exfoliation of the epidermis. Digitalis necesary to improve heart action after first week. During the patient's convalescence, tonics were given for the anemia. Able to sit up on the 30th day. Walked as usual in about 10 days more.

Greely (36) employed wuth success, magnesium sulphate in aqueous solution in two cases of tetanus. As his mode of administration was the subcutaneous we will briefly mention and not discuss them. The first case occurred in a boy, 2 years old. The child had stepped on an old garden rake and lacerated the web between the great and adjoining toe of the left foot. After an incubation period of ten days, the symptoms appeared. Greely administered 7,500 units of antitetanic serum. In addition every two hours, 5 grains each of chloral hydrate and of potassium bromide were administered. By hypodermoclysis, one pint of distilled water containing 2 drachms of magnesium sulphate were introduced into the organism. This was repeated on the next day. Recovery followed.

Greeley's other case was one of chronic tetanus. Four weeks elapsed betwen the inoculation and the outbreak of the symptoms. By hypodermoclysis, 3 drachms of magnesium sulphate dissolved in a pint of distilled water were introduced into the organism. Recovery ensued.

Wm. Hessert (34) a few weeks ago showed to the Chicago Medical Society a case of acute tetanus successfully treated with subarachnoidean injections of an aqueous 25 per cent. solution of magnesium sulphate.

We cannot, and we are unwilling to, make any statement as to the value of magnesium sulphate as a therapeutic agent in the treatment of tetanus. The cases in which this agent has been used are, as yet, too few in number to allow the expression of an authoritative opinion. Further laboratory experiments and numerous clinical reports are needed. The animal experiments conducted by Cruveilhier (37) are too few to be conclusive. His findings are contradicted by clinical observers. We would refer the reader to the tables. The faith which Cruveilhier reposes in antitetanic serus as a curative agent is not warranted by the results that this agent has yielded.

We used magnesium sulphate, in the method stated above, in our case, and the results were so surprising and so satisfactory that we feel justified in urging its use in tetanus. It is important that the utility and the value of this drug as an agent to control the tonic and clonic muscular contractions so characteristic of this disease be exactly determined. Its value must be decided by the combined experience of clinicians the world over.

HEINECK: ACUTE TRAUMATIC TETANUS.

Cases of Tetanus in the Treatment of which Subarachnoid Injections of an Aqueous Solution of Magnesium Sulphate have been Employed.

	Sex. Age. Weight.	Period of Incubation. Previous Immunization. Nature of Wound.	Other Treatment.	Magnesium Sulphate Treatment.	Result.	Comments.
1. Blake, Jos. A. The use of magnesia production of anæsthesia and in the treatment of tetanus. Surgery, Gynecol. and Obst., Chicago, 1906, vol. ii, p. 541.	Male, 15 years, 115 lbs.	7 days. None. Crushed first three fingers of left hand.	Antiseptic disinfection of wound. On 3rd day of disease (10th of injury) 40 cm. of anti-tetanic serum injected in spinal cord between 4th and 5th cervical vertebrae. 20 c. c. injected in median cephalic vein. On night of same day 20 c. c. injected in median basilic vein. On 11th day after injury, 35 c. c. of antitetanine serum injected in spinal canal by lumbar puncture. Chloral hydrate and morphine given when patient not under the effect of magnesium sulphate.	On 12th day after injury intraspinal injection of 4.5 c. c. of magnesium sulphate (25 in 100 of water). 33 hours later repeated injection. 37½ hours later intraspinal injection 8 c. c. of a 12½ per cent. of solution of magnesium sulphate. 27 hours later repeated above injection. Six days after repeated same injection.	Recovery.	Injections have a marked effect in restraining the convulsions and relieving pain, thereby conserving strength and preventing excessive metabolism and heat production.
2. Markoe, F. H. Reference same as case 1, p. 549.	Male, 4 years, 40 lbs.	7 days. None. Sloughing wound of skin and subcutaneous tissue of the right leg.	Four injections each of five c. c. of antitetanine serum were injected into buttock, the external jugular vein, the spinal canal, and back respectively. Occasional doses of morphine and chloral.	1.5 c. c. of a 25 per cent. solution of magnesium sulphate were slowly injected into the subarachnoid space.	Died 28 hours after first symptom of disease	Death cannot be attributed in the slightest degree to the magnesium sulphate. On autopsy cultures of tetanus bacillus were obtained from the wound, spleen, and heart blood, showing a marked tetanus bacteriæmia.

3. Logan, Samuel. The treatment of tetanus by intraspinal injections of magnesium sulphate for the control of convulsions. Jour. A. M. A., 1906, vol. xlvi, p. 1502.	Male, 11 years, 80 lbs.	8 days. None. Gunshot wound of hand with old toy pistol loaded with blank cartridge.	Simple cleansing of wound after development of the disease. On day of admission 50 c. c. of antitetanic serum injected intraspinally. Chloral hydrate, gr. 15, sodium bromide, gr. 30, every 4 hours. On 3rd day after admission 10 c. c. antetanic serum injected in each barchial plexus, in each sciatic nerve, and into the tissues around wound, in all 50 c. c.	On 3rd day after admission general anæsthesia. 4 c. c. of a 25 per cent. solution of magnesium sulphate injectedin spinal canal by lumbar puncture. On 4th day again gave patient general anæsthesia and injected in subarachnoid space by lumbar puncture 50 minims of 25 p. c. sol. magnesium sulphate.	Death 40 hours and 50 minutes after first inj. of mgs. 40. Heart failed before respirations affected.	Temp. post-mortem 108.2 F. per rectum. Complete cessation of muscular convulsions following introduction of magnesium sulphate.
4. Logan, Samuel. Reference same as above.	Female, 24 years.	17 days. None. Vaccination	100 c. c. of antitetanic serum injected subcutaneously thirty hours after appearance of rst symptom wide excision of vaccination wound, and dusting surface with dried antitetanine serum.	30 hours after first symptoms were noticed 4 c. c. of a sterile 25 per cent. solution of magnesium sulphate were injected into spinal subarachnoid space by lumbar puncture. Local anæsthetic employed. 12½ hours later injection was repeated.	Death 50 hours after appearance of first symptoms.	No good resulted from the use of the magnesium sulphate solution. Patient was moribund when 2d. injection of magnesium sulphate was made.
5. Franke, Margan. Ein Fall von tetanus behandelt mit intra duralem injectionen von magnesium sulphuricum. Zentral fuer Innere Medicin, 1907, vol. xxviii, p. 344.	Male, 32 years.	12 days. None. Wound of the middle finger.	Energetic antiseptic handling of wound is recommended by this author. Amputation of finger. Chloral hydrate, gr. 30 per rectum daily.	19 days after infliction of injury intradural injection of 1 c. c. of sterilized 25 per cent. solution of magnesium sulphate. Five days after above intradural injection of 2 c. c. of same solution. Four days later repeated same injection. Injecting needle brokein tissues. Removed by operation.	Recovery.	Franke noticed after each injection of magnesium sulphate that there was a lessening of contracture, also noticed that the injections exerted a beneficial action on the muscular convulsions. Sleep was better. Nourishment possible.

HEINECK: ACUTE TRAUMATIC TETANUS—*(Continued)*

Cases of Tetanus in the Treatment of which Subarachnoid Injections of an Aqueous Solution of Magnesium Sulphate have been Employed.

	Sex. Age. Weight.	Period of Incubation. Previous Immunization. Nature of Wound.	Other Treatment.	Magnesium Sulphate Treatment.	Result.	Comments.
6. Robinson, G. Canby. Treatment of tetanus by intraspinal injections of magnesium sulphate. Jour. Am. Med. Assn., 1907, vol. xlix, p. 493.	Male. 11 years, 67½ lbs.	Contusion of scalp. None. Played considerable around stable.	Excised supposed wound of entrance Chloral hydrate, gr. 30, Sodium bromide, gr. 60, every 24 hours for the first two weeks.	On the 11th day of the disease patient was anæsthetized. Ethyl chloride used as a general anæsthetic. Three c. c. of a 25 per cent. solution of magnesium sulphate injected in subarachnoid space. On the next day repeated injection using 3½ c. c. On 15th day of disease injected in same locality 4 c. c. of same solution.	Recovery.	Author states that the intraspinal injections of magnesium sulphate produced marked lessening of the very severe symptoms for a number of hours. The muscular rigidity was never so severe after each injection as it had been before.
7. Metzler, S. J., and Auer, Jno. The Journal of Experimental Medicine, 1906, vol. vii, p. 705.	35 years. Male,	4 days. Insignifican wound of foot which healed rapidly.	Large doses of antitoxine and sedatives gave no relief Two hours before death, an intravenous injection of antitoxine serum was injected.	One intraspinal injection of magnesium sulphate 1 c. c. to every 18 lbs. of body weight.	Death 5 hours after injection of mag. sulph. solution in subarachnoid space.	Anæsthetizing and relaxing effect complete. Respiration good to end.
8. Miller, Robert T. Treatment of tetanus with subarachnoid injections of magnesium	Male, 7 years, 60 lbs.	7 days. None. Lacerated wound	Antitoxin daily for 14 doses varying from 1,500 to 7,000 units. Sedatives for a short	11 lumbar punctures made within 13 days. Approximately 2.5 c. c. of a 25 per cent. solu-	Recovery.	"Of the value of the treatment by magnesium sulphate no one who witnessed this

sulphate. The Am. Jour. of the Med. Sciences, 1908, vol. cxxxvi, p. 781.		of left hand.	time. Copious saline enemas and infusion.	tion of magnesium sulphate being injected into the meninges at each puncture.		case has any doubt." The muscular paralysis following each injection lasted from 18 to 29 hours. It involved all muscles, except those of head, neck, and diaphragm. The injections were followed several times by respiratory collapse lasting 11 to 14 hours and the pulse dropped though not to a dangerous degree.
9. Henry, Jno. Norman. International Clinics, 1908, Series 18, vol. iv, p. 1. Case I.	Male, 9 years.	6 weeks. None. Abrasion of skin of back by kick of horse.		Lumbar puncture 3 c. c. of 25 per cent. solution of magnesium sulphate injected in subarachnoid space. Five days later subarachnoid injection repeated.	Recovery.	The case was a severe one. Made an excellent recovery. Each injection was followed by a relaxation of the rigidity.
Case II.	Male, 19 years. 123½ lbs.	7 days None. Stepped on a nail. At time of admission the wound was healed.	Wound of foot excise	Lumbar puncture 6 c. c. of sterile solution of magnesium sulphate injected into spinal canal. Ethyl chloride used as anaesthetic.	Death. Admitted July 30th, died August 2nd.	One hour after injection patient was entirely relaxed. A rise of temperature followed the intraspinal injection.
Case III.	Male, Colored, 9 years, 55 lbs.	6 days. None. Stepped on nails with both feet and inflicted punctured wounds.		Lumbar puncture 4 c. c. of clear spinal fluid withdrawn. 2½ c. c. of 25 per cent. solution magnesium sulphate injected into spinal canal. Two days later repeated injection only gave 2 c. c. at second injection.	Death.	A rise of temperature followed each injection.

HEINECK: ACUTE TRAUMATIC TETANUS—(*Continued*).

Cases of Tetanus in the Treatment of which Subarachnoid Injections of an Aqueous Solution of Magnesium Sulphate have been Employed.

	Sex. Age. Weight.	Period of Incubation. Previous Immunization. Nature of Wound.	*Other Treatment.*	Magnesium Sulphate Treatment.	Result.	Comments.
Case IV.	Male, 45 years.	3 weeks. None. Stepped on nail.	On same day as second subarachnoid injection, 18 c. c. of antitetanus serum were given subcutaneously. On the morrow, 30 c. c. of antitetanic serum were injected into the left buttock.	Six c. c. of 25 per cent. solution of magnesium sulphate injected into subarachnoid space by lumbar puncture. Three days after above, performed lumbar puncture, removed 35 c. c. of clear spinal fluid, and injected 6 c. c. of solution of magnesium sulphate.	Death on evening of second day following second injection.	"It is very much a question whether the magnesium sulphate did not contribute to the patient's death."

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THE MARITIME MEDICAL ASSOCIATION.

PROCEEDINGS OF THE 18TH ANNUAL CONVENTION.

(Held at Charlottetown, P. E. I., July 7th and 8th, 1909)

THE eighteenth annual meeting of the Association convened at Charlottetown, P. E. I., at 10 a. m., Wednesday, 14th July, 1909, the President, Dr. P. C. Murphy in the chair. The minutes of the last preceding meeting at Halifax were read by the Secretary and adopted.

The President read letters of regret at enforced absence from Drs. Lund, of Boston; Webster, of Chicago; and MacLaren, of St. John.

The freedom of the Charlottetown Club and the Charlottetown Golf Club was tendered to the members of the Association while in the city.

The Treasurer, Dr. McLaughlin, presented his report, which was afterwards referred to an audit committee and passed. Various bills were ordered paid.

The president named the following Nominating Committee:—

For New Brunswick: Drs. Atherton, Botsford and Ferguson.

For Nova Scotia: Drs. Yorston, McDonald and Chisholm.

For Prince Edward Island: Drs. Jenkins, McIntyre and McNeil.

The president introduced Mayor Prowse of Charlottetown. The mayor said he came before the Association with some trepidation and reluctance as he was not very sure that he could say anything that would interest or profit the members. He adverted to the healthfulness of Prince Edward Island, its strudy manhood and its loyalty to home. Any Prince Edward Island man would rather remain there than go either to heaven or hades. He wished the Association a pleasurable and profitable meeting and heartily welcomed them to Charlottetown.

On motion of Drs. Chisholm and Atherton a vote of thanks was tendered him for his kind address.

It was ordered that the secretary send a telegram to Dr. Lund, of Boston, expressing regret at his absence and the sympathy of the Association upon the severe illness of his daughter. (The secretary, at a later date, was in receipt of a reply by post from Dr. Lund, cordially thanking the Association for its kind remembrance and sympathy.)

The president brought up the matter of reciprocity in medical registration with the Western Provinces of Canada and appointed the following committee to draft a resolution upon the subject to present to the present meeting. Committee: Drs. Chisholm, Atherton and McLaughlin.

At this juncture the mayor retired from the session.

Dr. Miller, of Saranac Lake, N. Y., presented his paper on "The Diagnostic Value of Tuberculin in Pulmonary Tuberculosis." He said tuberculin was in disrepute because of too great dosage. The subcutaneous test was always safe when properly given. It will never cause tuberculosis. There had been no ill results in 10,000 cases. There were often, however, unsuitable cases. The temperature should be recorded every two hours for ten days. He used Koch's old tuberculin, mixed with salt solution, which was always to be boiled.

Delayed reaction shows latent lesion; immediate, the active, recent lesion. He thought the skin-test the best of the three that had been devised.

Dr. Chisholm would like to have heard more of the therapeutic value of tuberculin.

Dr. Ferguson, of Dalhousie, N. B., said his locality was almost free from original tuberculosis. Detailed case cured by serum which the patient, afterwards, indiscriminately recommended to his friends.

Dr. Botsford thought the family physician often guilty of permitting spread of the disease, by his failure to recognize it early enough. The tuberculin test was the only one to rely upon in the incipient stages.

In closing, Dr. Miller thought it was too broad a subject to include the therapeutic uses of tuberculin. Such would require a paper in itself. In reply to Dr. Murray, he said sputum should be examined five or six times, as bacilli were frequently absent. Even then, a continuous negative result does not absolutely prove that tuberculosis is not present. He also adverted to the supreme importance of physical examination. Rales at apex show positive tuberculosis: those at base are suspicious.

Dr. McIntyre followed with "Report of Two Cases of Cerebral Lesions." (1) Unmarried woman, 32. Was supposed to have been suffering from Jacksonian epilepsy. Had had first fit eight years previously. Vomiting at times, and double vision. Convulsions usually at menstrual periods. Treated at hospital and endometritis cured. Fits there diagnosed as true epilepsy. Headache, vomiting and fits upon return from hospital, but mental faculties intact through all the seizures. Optic neuritis blinded her a year before death. There was, also, some aphasia. The post-mortem revealed a silver-dollar sized lesion on right side of brain, with contiguous membranes obliterated.

(2) M., 55. Great muscular development. Heavy drinker. Five years previously, had fits. Drinking supposed to have been the cause. Had frequent attacks of delirium tremens. Two years ago had aphasia hemipelgia, disturbed tendon reflex. No vomiting or eye-trouble. He was finally, in an epilepsy for 24 hours, and died in a week. Post-mortem showed brain of 52 ozs., with arteriosclerosis in circle of Willis.

These two cases, he said, were both similar and different. The first was a brain tumour and had the typical signs of such. The second was that of minute hæmorrhages caused by alcohol, and the convulsions were general, not local, as in the first. Both were caused, or induced, by irritation, the first from the vaginal discharge, the second by drinking-bouts.

Dr. Chisholm said cerebral diseases were hard to diagnose and manage. The first case was easy to recognize; the second, not so easy. Detailed case of his own. Consultant thought it was tubercular, but patient still living.

Dr. McDonald asked with reference to syphilis, whether present or absent, and if there had been an examination of the spinal cord. Dr. McIntyre answered in the negative as regarded both.

Dr. J. C. McDonald, President P. E. I. Medical Society, was then introduced. He explained that his intended address was to have been one of purely local interest. They had formed in P. E. I. an anti-tuberculosis society, and had had two meetings in the year. He deplored the difficulty of getting a good attendance at these functions. He, himself, had written over one hundred letters, and

the secretary had done as much. The country doctors were not enthusiastic enough. Fully one-half of them should, and could, by arrangement with colleagues, attend each meeting. Post-card notices are generally useless unless supplemented by a two weeks in advance programme to each member. He thought special attention should be given the junior members of the Association. He thought that the responsibility for prescribing for alcohol should be taken from the profession. It was a great stain on the honour of the profession to have members fined for prescribing.

2.30 to 4.00 p. m.

(At the Provincial Hospital for the Insane.)

Dr. Victor F. Connor: (1) Notes on Basal Fracture of Skull: (2) Suture in Radical cure of Hernia. (Read by secretary.) (1) Detailed accident of falling down stairs, resulting in basal fracture, which, at first though apparently fatal, was not so, ultimate recovery being good. (2) Sutured radical cures in such manner as to bring but one pair of wire-points, instead of three, opposite, in the wound.

Dr. Atherton discussed the paper. Thought the use of wire in this operation nearly obsolete.

Dr. Chisholm recited case somewhat similar to that of Dr. Connor, with rupture of middle meningeal artery, without any immediate alarming symptoms, though ultimately fatal.

Dr. McLaughlin thought kangaroo tendon as a suture had pretty well replaced silk or wire. Many cases of hernia were complicated by the use of trusses. Modern methods often result in recovery in two weeks.

Dr. Atherton informed Dr. McIntyre that he used in general chromicised gut in three cases.

Dr. McDonald thought period of absorption of gut depends upon method of chromicizing. Had some doubts as to the correctness of diagnosis of fracture in case detailed in paper.

"Acute Intususception." Dr. Atherton. Four varieties: (1) Colon, (2) ilio-cæcal, (3) ilio-colic, (4) enteric. Detailed each. Age an important factor. Vomiting not so common as in other forms of bowel obstruction. Apt to be taken for dysentery. Pain is more acute. Often almost impossible to differentiate from acute obstruction. Detailed case very like intususception. Post-mortem revealed true cause—gangrene due to thrombus. In infants there was often collapse. Enemata of hot water were much in vogue until recently. Now fashion is to go on, at once, to operation. He hardly agreed with this. Favours early injections. Considerable pressure is necessary to fill bowel and prevent regurgitation of fluid. If water be ineffective, proceed to operate. The tendency to recover could generally be obviated by an occasional suture. In gangrene, excise. These cases, however, are often hopeless. Cases: (1) Female, 11 months, 1883. Diarrhœa and vomiting. Gave tr. opii which temporarily relieved. Grew worse: pulse, 160; temp., 100°. Tumour found. Oblong. Not much distention. Injected 30 ozs. warm water, or until fluid escaped from mouth. Tumour at once disappeared. Recovery. (2) Boy, 3. Same symptoms. Like result. (3) B. P., 25. Pain and diarrhœa followed calomel given for lagrippe. Pulse and temperature normal; no tumour perceptible. Three quarts fluid injected, until, as in other cases, there was a discharge from mouth. Then ease came. Some fæcal motions followed next day, with recovery. (4) Boy, 4, 1899. Cramps and

vomiting. Senna tea. Enema and calomel useless, even after repeating. Saw him following day. Obstruction complete, not even gas escaping per rectum. No tumour. Thought it simple obstruction. Sent him to hospital, and found ilio-cæcal variety of intususception. Punctured distended coils and evacuated gas and fluids. Shock followed which proved fatal in 24 hours. (5) Child, 1. Abdominal distention. Fatal a few hours after.

Dr. Miller asked regarding multiple intususception. Recited such case in miner, following broken leg.

Dr. McDonald rather thought injections going out.

Dr. McIntyre reported case of his own, a short time before. Fatal. Almost impossible to reduce. He thought it was well not to attempt to pull out, but pinch out, the bowel.

Dr. Chisholm thought the accident rather common. Had had several. Reduced some simply by enemeta. Quantity of fluid used depends upon amount possible to inject. Be sure, as may be, of diagnosis, and that it is in large bowel, before using injections. Latter were of no use, also, in torsion or knots of bowels. Main diagnostic features were vomiting and escape of mucus and blood per rectum. The higher up the greater the vomiting and less the blood. In 50 per cent. of cases tumour can be felt. This is a pretty sure diagnostic sign. Detailed cases mistaken for appendicitis. Often so, in elderly people. Should not rush into surgery too soon in such instances.

Dr. Atherton, in closing, said multiple instances of intususception were, usually, the product of immediate ante-mortem contractions. Was not quite prepared to explain the *modus operandi* of the fluid from mouth during injection. Probably because of pressure by distended colon upon stomach.

DR. GOODWILL ON INSANITY.

He welcomed the Association to the hospital. Insanity appeals more and more to general practitioner. The disease involved not the mind alone, but the entire body. Attitude, even of medical men, is often antagonistic to insanity as if it were a disgrace.

Four great methods, or periods, in treatment of insane: (1) Demoniacal exorcism. (2) the chained dungeon. (3) insane asylums. (4) the modern hospital. He referred to the horrible treatment of these unfortunates in early ages. Although gradual improvement was discernable as centuries passed, yet barbarity in treatment subsisted to very recent times. Even in middle of last (19th) century, asylum attendants were brutal and low. Harshness, however, generally resulted from ignorance, not cruelty. It is only about 20 years since physical restraining apparatus has begun to disappear as means of treatment. Trained nursing is the modern method, and that insanity is a disease is the present theory. Much misconception, even yet exists. Many prefer death to their friends rather than commitment to insane hospitals.

Early relief is everything if a cure be possible. Many exhaust energy nowadays, and one is often regarded as merely nervous, when really insane. The propagation of species should be discouraged among the degenerate. Alcohol and intemperance in general are frequent causes.

On motion, Dr. Goodwill was thanked for his excellent address.

Dr. Corbett dwelt upon the importance of early diagnosis. Detailed two cases. Both slight, and both recovered.

Dr. Atherton seemed to favour the sterilization of the presumably de-

generate. He mentioned an easy and practicable method.

8 to 11 p. m.

Address by Lieut.-Gov. McKinnon.

His Honour referred to the eminent positions both in professional and public life to which medical men of P. E. I. and the Maritime Provinces, generally, had attained. At present, the great advance in medical science seemed along the way of prevention of disease. There seemed, at times, and perhaps in P. E. I., to be a plethora of doctors. One way to remedy this was to obtain an increased population. "Intermaritime marriage" would be a good thing. Maritime union was once discussed in the very building in which he was then speaking. Progress had not been so great in population as it should have been since then. Only one-quarter were now alive who had been contemporary with that famous meeting. Of these over one-third are overy sixty-five. Boys and girls should be induced to remain in their native province. We were progressing in wealth and industry, but even now only two million out of thirty million acres in these provinces were under field crops. Of these over one million were in hay and forage. In agriculture, P. E. I. was advancing even faster than her sister provinces. She had doubled her root production in eight years. One man had made a few acres yield $3000 yearly in strawberries, and another had obtained $1000 yearly from an acre of onions. He welcomed the Association to the province.

On motion, a vote of thanks was given His Honour for his inspiring address. His Honour briefly replied.

The president read a communication from the private secretary of the Lieutenant-Governor, inviting the Association to a garden party at Government House the following afternoon at 4.30.

The president appointed Drs. Miller, Warburton and Ferguson a Committee on Deceased Members.

President's Address.

"Educational Responsibilities of the Modern Family Physician."

He referred to the work of death in the ranks of the Maritime profession during the past year. We should appreciate the efforts of these men who had lived, not for their own advantage and pleasure mainly, but for the health and happiness of the people. The profession was, and had always been, one of philanthropy. It always kept in advance of civilization. At present there was great progress in laboratory work. Our teachings of the people should really begin in the pre-natal stage. He vividly referred to the lamentable effects of specific disease, the dangers of child-birth, the diseases of childhood, the passions and habits of youth, and the ravages of tuberculosis. Gonorrhœa, especially, is peculiarly prevalent and young people should be adequately warned. No false modesty should be here allowed to interefere. Mothers and clergymen should be fully enlightened upon this subject. Prevention is better than cure. Heredity and environment make us what we are. Natural selection, the stout to the slight, the tall to the short, the blonde to the brunette will do much to eradicate tuberculosis, and other evils. Wright's opsonic theory seemed the first break in the clouds of inexactitude in medicine.

A vote of thanks for his very practical address was heartily given the president, to which he briefly and fittingly responded.

Dr. Corbett: "Demonstrations of Skiagrams." (1) Fracture of Astragulus and tarsal bones. Easy to mistake for Potts. No hospital should be without an X-ray machine. (2) Ruptured plantur ligament from accident at first seemed obvious, but fracture of metatarsal bones was really the case. Reduced under chloroform. A rare instance of the condition. (3) "Bruised foot," appently, from railroad accident. Skiagram disclosed fractured metatarsal bone. Plates of the foregoing were shown and also of fracture of the ext. condyle of elbow, and a typical instance of Coley's fracture.

Dr. Miller enquired regarding treatment of the condyle injury. Dr. Corbett replied that the fragments were replaced under chloroform, with good recovery.

"Compound, comminuted depressed fracture of skull." (Patient shown.) Dr. Ledwell. Boy: Two months ago kicked by horse, with resultant fracture, as above, of parietal and temporal bones. Was for seven weeks quite unconscious. Then became able to write and read, but not to speak. Latter, he did not accomplish till end of tenth week. Operated fourth day after accident. Fed per rectum for five weeks. No convulsions, but some facial paralysis. Even yet, he "can't call the dog as well" as before he was hurt.

Dr. Chisholm thought some injury had been done to the seventh nerve.

Dr. Ferguson recited case in Indian boy from explosion of toy gun. Fracture of skull, with brain matter oosing out. Recovery nevertheless. Afterwards fractured clavicle by falling out of window.

Dr. H. K. McDonald: "Pyelonephritis in Pregnancy."

Pulse, 84; resp., 24. Marked constipation, urine, s. g., 10.26; albumin; sugar negative; amt., 41 oz. Microscope showed pus, casts and columnar epithelum. Pain in lumbar region and difficult breathing. Unable to palpate kidney. Fullness, next day, in loin. Pains resembled those of labour. Pus, on segregation of bladder, found from right side. Patient refused operation. On twelfth day, patient improved in every way. On following day, pain in right lumbar region, with marked hæmaturia, blood gradually diminishing. For five days remained very ill. Had sighing, hiccough, etc., as is so often seen in hæmorrhage. On 22nd day temperature was normal, and some time after labour came to an end with some difficulty. A chill or two followed with fair recovery. Pus disappeared from urine in four weeks. Treatment: Urotropin and boracic acid aa grs. v. every four hours. Rest, bland diet and free purgation. On occurrence of hæmaturia discontinued urotropin for a while. (Remarks by author.) Sole case in his practice. Two cases in *British Medical Journal* helped much. Followed treatment there laid down.

It was not secondary to cystitis. Inflammation extends to cortex of kidney. Hence, the name, "pyelonephritis." Generally right kidney affected. In this instance left kidney was first involved. Developed at six months. Bacteria reach kidney by blood, bladder or lymphatic.

Prognosis in early diagnosis is very good. No reason for death of child and convulsions are not to be looked for in labour. No eye or stomach symptoms. Only severe cases require surgical interference. Vaccine treatment is to be thought of.

Dr. Curry had never met with the disease. Agreed with treatment as detailed. In extreme cases, open and drain. Explained cause of relative frequency of right kidney attack.

Thought various remedies good, among the methylene blue (grs. ii-iii.)

Dr. Chisholm detailed case of cyst, which he had thought hydronephrosis.

Dr. Corbett discontinued urotropin every six days, and combines it with salol, rather than boracic acid. Recited pus cases in pregnancy, seen with Dr. Bentley in two successive pregnancies.

"Interstitial Keratitis," Dr. McGrath: Girl, 14; 1903. Well nourished. Slightly degenerate. Absolute blindness. Opacity of cornea. Iris involved, likely. Disease progressive for one year. Suspected syphilitic history, but negative. No miscarriage of mother. Pot. iodid., and inunction of ungt. hydrarg. Some improvement. Then elicited history of syphilis from father some five years before birth of child. Changed treatment to hydrarg. protoiodide with result of cure. Exhibited same drug to father, also, with cure.

Dr. Avard asked relative to stage of disease when first seen. Thought little of iodides in those cases. Had never seen both eyes simultaneously involved.

Dr. McGrath, closing, said disease was three years old when first noted by him.

15TH JULY—10 a. m. to 1 p. m.

President in the chair.

The following officers were duly nominated and elected for the ensuing year:—

President—Dr. W. A. Ferguson, Moncton, N. B.

Vice-President for Nova Scotia—Dr. J. G. McDougall, Amherst, N. S.

Vice-President for New Brunswick—Dr. A. G. Ferguson, Dalhousie, N. B.

Vice-President for P. E. Island—Dr. A. A. McLellan, Summerside, P. E. I.

Treasurer—Dr. G. G. Corbett, St. John, N. B.

Secretary—Dr. Geo. G. Melvin, St. John, N. B.

Committee of Local Arrangements—Dr. T. D. Walker (chairman), St. John, N. B.; Dr. J. V. Anglin, Fairville, N. B.; Dr. A. F. Emery, St. John, N. B.; Dr. M. McLaren, St. John, N. B.; Dr. A. Skinner, St. John, N. B.; Dr. J. H. Gray, Fairville, N. B.; Dr. John C. Mott, St. John, N. B.; Dr. T. E. Bishop (secretary), St. John, N. B.

Dr. A. G. Ferguson gave notice that at the next annual meeting of this Association he would move that the Constitution and By-laws as regard places of meeting be amended as follows:—

That there be alternate meetings in New Brunswick and Nova Scotia for four years, and in Charlottetown every fifth year.

Dr. Jardine: "Acute Rheumatism in Infancy." (Read by Secretary.)

Dr. McNeill: "My Experience with Anti-Toxins."

In the conflict between germs and their host we can often render aid. He instanced small-pox as an example of acquired and perfect artificial immunity, as a rule. Detailed five cases in all of which fever had been reduced or eliminated, the pulse regulated and convalescence and health brought about by the judicious use of these agents. He dwelt upon the importance of the study and practice of bacteriology in every hospital and emphasized the absence of bad results from the use of this form of therapeutics.

Dr. Curry thought that with pus-poisoning from abscesses, anti-toxins would have but little more than temporary effect.

Dr. Chisholm said the use of serums was quite new. Cited case of acne cured by injection of serum obtained by culture from lesions. Had obtained good results once in erysipelas. More times only fair. Serums were often very improperly stored in the shops.

Dr. Jenkins had used sera with good results in septic cellulitis. Recently 10 c.c. in lymphangitis of arm.

Dr. H. K. McDonald had treated gonorrhœal arthritis with vaccines with good success. Thought they would apply in all forms of this disease.

Dr. Ferguson recited case of boy. Scarlet fever. Oedema of tongue. Sloughing of throat. Temp., 105°; pulse, 140. Gave 2.50 c.c. anti-streptococci serum with repeated dose, with success.

Dr. Johnson knew 15 c.c. antitetanic serum to work well in post-vaccination case.

Dr. McManus had had little experience in serums in scarlet fever. Fancied he had had injury from their use in one case of erysipelas.

Dr. Montizambert spoke briefly upon "Tuberculosis." Believed infant can contract disease from milk of cows. Hence, importance of rigid and periodical inspection of milk-animals. The control of human sputum is next in importance. Too great a tendency to sanatoriums. Better to spend money in prevention. The sanatoria are apt to fill up with hopeless cases through sympathy. The chief centres of the disease were in large cities among the poorer people. Domiciliary visits and dispensaries are best. Trained and skilled women can often do more in these visits than men. Emphasize importance of convalescents' "rest" homes after severe and acute sickness in young men and women. They work well in Montreal. They often prevent, apparently, contraction of tuberculosis through returning too soon to work while yet weak.

The thanks of the Association were accorded to Dr. Montizambert for his instructive address.

Dr. Black, continuing the discussion, referred to the growing importance of prevention in late years. He thought all sera, etc., should be manufactured under government control and supervision.

Col. G. Carleton Jones adverted to Dr. Black's services to medicine in the Commons of Canada. The laity should be educated along preventive lines, but tuberculosis patients should not be "hounded" as is so often the case. He thought the movement for prevention should be largely kept in the hands of the profession, and that the public, however well-meaning, should not be "turned loose" in this direction. Referred to pollution of rivers and lakes. St. Lawrence was a sewer from Kingston to Montreal. Latter city had bad water supply. Had doubts about the value of a Bureau of Public Health. Was about establishing a laboratory in Ottawa to supply sera in Canada generally.

On motion of Dr. Curry the president appointed the following committee to draft a resolution respecting the formation of a Canadian Bureau of Public Health: Drs. Curry, McLellan, and Corbett.

Dr. Chisholm on "Three Cases of Cæsarian Section": The origin of the operation was lost in obscurity. Instances adduced of the accidental disembowelling by bulls, with recovery of mother and child. Others, of intentional section by patients themselves. Other instances of its practise as early as 1500 in Switzerland, and of its performance by the natives of Uganda, Africa. The indications

are (1) Absolute, (2) Relative. An absolute indication is impossible delivery by the natural way.

A relative indication: Possible delivery by craniotomy. But the latter is not, generally, justifiable. Other relative indications would be: Part cases of infantile death, difficult transverse presentations, and in case of death of mother (absolute.)

The mortality has been reduced from 79 to 5 per cent. His own mortality, nil, to both mother and child. It largely depends upon state of patient; non-exhaustion and non-rupture of membranes.

Case 1. Mrs. M., 27. Married six years. Two children. One born alive, but soon dead. Two years after confined by turning. Dead child. Short, thick, stout woman. Vaginal examination difficult. Patient in great dread. Chose cæsarian section because of her desire to have living child.

Made incision of five to six inches with umbilicus midway; three inches above pubis, to avoid bladder. Enlarged primary opening through uterus by scissors. Extracted child by knees. After third stage uterus failed to contract. Gave ergot, hypodermatically. Inserted eighteen sutures, deep and superficial, each. Ergot and morphia. Recovery.

II. Mrs. M. Contracted pelvis. Second operation; first, 15 months previously. Impregnation in spite of tying tubes. Operated. Recovery.

III. 23. In labour 24 hours. Forceps ineffectual. T. up to 102.8°. Good recovery in five weeks. Child living and well.

Dr. Atherton had had no experience in Cæsarian section. Dwelt upon importance of estimating size of child's head as well as that of maternal pelvic outlet. Had done symphysiotomy with good results. Placenta prævia and eclampsia, might, he supposed, at times, be legitimate indications for Cæsarian section.

Dr. H. K. McDonald, who assisted Dr. Chisholm at first case cited, said baby did well, but that there was some little difficulty in resuscitation.

Dr. Black recalled the first Cæsarian section in P. E. I., by Dr. Horner, in 1866.

Dr. McManus inquired with regard to the justifiability of tying tubes with view to prevention of impregnation.

Dr. Chisholm replied that he did so on request of wife or husband.

2.30 to 4.00 p. m.

"The Art of Prognosis," Dr. Ross. Importance of the art in enhancing physician in patient's estimation. Prognosis was based upon many factors. Practitioner must be keen diagnostician and student of human nature. One often had an intuition of the result in fatal cases. Intuition really based upon attention to a multitude of little signs. Prognosis important to patient. A bad one helps to bring about its own forecast. Often made worse by manner of telling. Great diplomacy needed to tell a bad story rightly. Better to say "his chances are equal," than "It's a turn-up for it." Hardly ever tells a man he is going to die. To lie to patient is no harm, if it do patient good.

Types.—In dealing with ignorant, he exacts authority. Asks "whiners" if they expect the Almighty to show them special favours.

To the "know-it-alls" he deals in two ways: (1) ask *him* questions; (2) "Ball him up" with big terms.

To the really kind hearts, grapple them to your souls, for they are the salt of the earth. The art of prognosis is often neglected in the colleges.

Dr. Conroy said prognosis was often difficult, especially in typhoid and pneumonia. It requires an immense amount of tact. A mistake to give an adverse one.

"A Brain Case," Dr. N. A. McLellan. Young man, 24. Gonorrhœa. Many of family died of tuberculosis. Had had discharge for ten days. Severe headache, occipital pain, vomiting; temp. 102°; pulse. 64°. Patient gradually grew dull and delirious, muttering, but with dropping temperature. In fourth week recovered from fever, but still had pain in head with indistinct drawl. Was not able to study for many months. Finally, made a good recovery.

Dr. Chisholm thought gonococcus had infected brain. Instanced case of ascending myelitis which was fatal in a few days, from, presumably, this cause.

"A Specialty for the General Practitioner," Dr. E. H. Bennet. The amount of knowledge is so constantly growing that "specialty" is essential. No fear, however, that the general practitioner will ever be driven from the field. All should try to be specialists in classification. Osler says, "Diagnosis, not drugging, is our chief weapon." Gave many instances of a correct diagnosis being made too late. A small percentage, only, of tuberculosis detected early enough. Lack of skill often accountable for no diagnosis, or a wrong one. Physicians often too credulous of patients' statements. Others do not suspect true disease, or neglect symptoms, or are insufficiently trained in physical examination. Cited appendicitis as long giving rise to various diagnoses until finally differentiated by Reginald Fitz, of Boston, in 1886. Touched upon early recognition of cancer, especially of uterus. Family physician should be early informed of vaginal discharges by patients. Placentia prævia mortality should be reduced from 40% to 1% if early taken in hand. Dyspepsia should only be looked upon as a symptom, not as an integral disease.

In fine, general practitioner should be a "specialist" in diagnosis.

Dr. Curry was greatly interested in paper. Agreed that much greater interest should be paid the subject.

"Diagnosis of Gall Stone Disease." —Dr. W. A. Ferguson. (Read by title.)

Dr. Chisholm, for Committee on Interprovincial Registration, submitted the following report:

Your committee beg to report (1) In favour of reciprocity between all the provinces of the Dominion in medical registration. (2) Failing in obtaining the reciprocity between all the provinces, we would urge such an arrangement between such provinces as might be willing to entertain it. In pursuance of this object, your committee would beg to recommend the following resolution:

Resolved, That this Maritime Medical Association puts itself on record as being in favour of an interprovincial registration of all the provinces as outlined by Dr. Roddick in the House of Commons;

Also Resolved, That a copy of this resolution be sent to the Canadian Medical Association and to all the provincial societies.

Dr. Curry, for Committee on Public Health Bureau, reported as follows:

Your committee beg to report the following resolution:

The Maritime Medical Association, embracing the provinces of Nova Scotia, New Brunswick and Prince Edward Island, desire to place themselves on record as being in accord with the formation of a federal Bur-

eau of Health. And viewing, with gratification, the spread amongst the profession and laity at large of the opinion of the necessity for the prevention of preventable disease;

Therefore Resolved, That we respectfully ask the Federal Government to establish such a Bureau under one of the ministers of the existing departments;

Further Resolved, That a copy of this resolution be forwarded to the Prime Minister of Canada.

Signed, M. A. Curry, Geo. G. Corbett, A. A. McLellan.

Ross Miller, for Committee on Deceased Members, submitted the following:

Your Committee on Condolences, beg leave to report that the following members of the profession have gone to their eternal reward during the year which has just passed:

Drs. Middlemas, Goodwin and Peppard, of Nova Scotia.

Drs. Sutherland and Henderson, of P. E. Island.

Drs. Scammel, Smith, Benson, and Doherty, of New Brunswick.

These men left an enduring mark on the professional, civil and social life of the provinces, and have set an example by their devotion to their professional duties which it behooves us, their survivors, to admire and emulate. We would respectfully recommend that the secretary of the Association be instructed to convey to the relatives of the deceased the appreciation in which they were held by their confreres, and sincere sympathy and condolences with them in what has been to each of us a mutual loss. Signed. Ross Miller, A. G. Ferguson, James Warburton.

The thanks of the Association were accorded the City Club, the Golf Club and the Local Government for courtesies and privileges.

The sum of five dollars was voted the janitor of the legislative building.

On motion, the Association adjourned to meet in St. John, N. B., in July, 1910, upon a day to be fixed.

P. C. Murphy, *President.*

Geo. G. Melvin, *Secretary.*

The writer cannot dismiss these minutes without expressing, on behalf of the visiting members and himself, an appreciation of the many courtesies and charming privileges extended to them and him by the resident members of Charlottetown and other citizens. The visit to the Provincial Hospital for the Insane by way of the beautiful Hillsboro River, the delightful garden party by His Honour Lieutenant-Governor McKinnon, on grounds surely not surpassed for picturesqueness and charm anywhere, and the comfortable, entertaining and most sociable smoking concert on Thursday evening, will stamp upon the memory the P. E. I. meeting of 1909, as one of the most profitable and pleasureable in the history of the Association. G. G. M.

Medical Society of Nova Scotia—(*Continued*)

July 8th, 1909—Morning Session. Report of Nominating Committee was read by the secretary and adopted. The following were the officers and committees elected:

President—Dr. G. W. T. Farish, Yarmouth.

1st Vice-President—Dr. James Ross, Halifax.

2nd Vice-President—Dr. E. Kennedy, New Glasgow.

Secretary-Treasurer—Dr. J. R. Corston, Halifax.

Executive—Drs. C. P. Bissett, J. A. McIver, C. E. MacMillan, John MacKenzie, T. C. Lockwood, W. G. Putnam, E. J. Elderkin, W. F. MacKinnon.

Sanitation—Drs. A. P. Reid, W. B. Moore, Daniel Murray, D. McDonald, A. I. Mader, S. N. Miller.

Legislation—Drs. A. S. Kendall, H. A. March, C. P. Bissett, E. A. Kirkpatrick, H. V. Kent.

Medicine—Drs. S. W. Williamson, H. H. MacKay, P. N. Balcom, M. E. Armstrong, D. A. Campbell.

Obstetrics—Drs. S. N. Miller, M. A. Curry, D. Mackintosh, H. R. Munro, E. D. McLean.

Therapeutics—Drs. W. B. Moore, K. A. MacKenzie, W. F. Read, J. C. MacDonald, J. S. Morton.

Surgery—E. Kennedy, C. A. Webster, H. K. MacDonald, R. A. H. MacKeen, J. G. MacDougall.

Dr. Curry suggested that the by-laws be printed, and made a motion to that effect.

Dr. Corston said that a similar motion had been passed at a previous meeting and when there were enough funds it would be carried out.

A letter from Dr. March for the committee re change of by-laws and date of annual meeting, was then read by the secretary.

Dr. Ross moved that same committee report at next annual meeting. This was seconded and passed.

Dr. Ross referred to the expenses incurred by the secretary, who attends every meeting, and considered the Society should pay his expenses.

Dr. Kennedy moved and Dr. Miller seconded a motion to the effect that the expenses of the secretary at each annual meeting be paid by the Society. This was carried.

Dr. G. H. Murphy then read an interesting paper on "Retroversion and Descent of the Uterus."

Dr. Curry said he had listened with much pleasure to the paper. The pelvic floor did not support the uterus, but the other organs connected with it. The great cause for trouble is getting up too soon after labour. The uterus is heavy and the supports are weakened at this time.

Dr. C. P. Bissett commended Dr. Murphy's paper. In some cases where there is no laceration and patient gets up too soon, falling takes place. Under certain circumstances, where there is no hospital, one can deplete and often restore size of uerus by hot douching, tampons of glycerine and then hot antiseptic douches.

Dr. M. Chisholm referred to the want of unanimity re cause of prolapse, there being many theories as to cause and treatment. In doing a vaginal hysterectomy, it seems as if the ligaments kept the uterus in anteflexion and the levators were the support. The war against pessaries is not justifiable in many cases. Inserting a pessary requires mechanical skill. It is always best to use simplest measures first.

Dr. E. Kennedy had discarded all pessaries except the ring variety, this accomplishing all that is necessary. Many cases of course require operation.

Dr. M. A. B. Smith said that Kelly states that the prejudice against pessaries had gone too far, and he describes in his book a number of suitable ones.

Dr. J. G. McDougall stated that each line of treatment is good in suitable cases. In some patients retroversion is present to the third degree, and yet no symptom present. In these, simple methods do. In many cases a neurosis is present and no

benefit is obtained no matter what treatment. Sometimes in virgins the condition is present where there is no weak pelvic floor. The uterus is small and ill-developed. Sometimes there is a constitutional tendency either in the tissues or trophic nerves; for example, in some virgins a marked retroversion present. On the other hand some working women after labour remain in bed only three to five days, and yet no retroversion or prolapse.

Dr. Murphy, in closing, said that pessary treatment in his experience was unsatisfactory. In hard-working women operation gives the best results. In a few sterile women he found retroversion present and after operation pregnancy resulted. He did not contend that tearing of pelvic floor produced prolapse but a production of a new force or rectocele.

Dr. Chisholm then read Dr. H. K. MacDonald's case report on "Chronic Cystitis."

This paper was discussed by Drs. Mader, D. MacDonald, and Ross.

The discussion on "The Indications for Operation in Gastro-Intestinal Affections," was opened by Dr. M. Chisholm, who gave a case report on "Rupture of Stomach. Operation. Recovery."

Dr. J. G. McDougall followed with case reports on (a) "Traumatic Rupture of Stomach; (b) Traumatic Rupture of Liver, Operation, Recovery."

Dr. J. Stewart first congratulated the readers of the papers and their success in their operations.

There are three main indications for surgical interference in gastric conditions: (1) Gastric ulcer resisting treatment or recurring after supposed cure. (2) Stasis of stomach. (3) Tumors.

Duodenal ulcers were more urgent and diagnosis more difficult. He referred to a case in whom acute appendicitis was also present.

Indications for operation were: (1) Persistent tender spot. (2) Rigidity of right rectus. (3) Pain hours after eating. (4) Hunger pain—pain relieved generally after taking food.

Reference was here made to a case of perforated duodenal ulcer he recently operated on with good results.

General conditions. Abdominal tuberculosis frequently requires operation and sometimes the disease is cured or arrested.

Simple spasm of the small intestine frequently requires operation.

Cancer. In the intestine it is frequently a slow process. Often obstruction is the first indication. Earliest indications are disturbances of digestion. One examination of stomach contents is no good. Absence of hydrochloric acid is no proof in the early stage. When you have painful indigestion, much vomiting and stasis of food you expect lactic acid present. Diminution or absence of hydrochloric acid may mean cancer in other parts and not the stomach.

Dr. Elder was sorry to have missed Dr. Chisholm's paper, but he was pleased in hearing Dr. McDougall's, who was once his pupil. He wished to ask Dr. McDougall why he did not suture the liver in the case mentioned. He (Dr. E.) always sutures the liver with a blunt needle and does not hesitate in removing pieces of the liver. In one case where he thought cancer present he found syphilitic nodules which recovered after treatment. He mentioned a case where a bullet entered the left side and into the liver, with severe hæmorrhage; liver was sutured with large mattress sutures, and a good recovery followed. Suturing the spleen he had not found so successful.

In perforating ulcer counter opening in pelvis should be done as stomach contents go down quickly. When you have marked board-like rigidity, always suspect rupture of a viscus. He mentioned a case of ruptured gall-bladder, who did well for two days in Fowler's position, then large quantities of coffee-colored vomit ensued, due to pressure on mesenteric artery; the position was reversed, stomach washed out and patient recovered. He agreed with Dr. Stewart that it is often difficult to tell a perforating ulcer from appendicitis. He related a case he saw operated upon by Watson Cheyne, who found appendix healthy; then examined further up in the abdomen and gas came out. Then he said that is a perforating gastric ulcer. You never get free gas in appendicitis.

Hour-glass contraction must be thought of as it cannot be diagnosed from pyloric obstruction.

Foreign bodies in the stomach. He referred to a case of hour-glass obstruction in hair (a case of Dr. Bell's). Another case (Dr. Armstrong's), the patient, a lunatic, who swallowed pieces of clay pipes, nails, etc., perforation took place followed by general peritonitis.

Dr. Elder's case was a freak in a circus who had had his stomach opened three times. He was examined by X-ray at different times which showed nails, tacks and screws present. When Dr. Elder operated he removed 26 nails and 15 large tacks. The stomach was found very healthy. Hernia of the stomach was also present which was remedied. The patient threatened action against Dr. Elder as afterwards he could not throw out his stomach. Formerly he used to swallow a frog, then push out his stomach and people could feel the frog. He was also a morphine fiend.

Dr. M. A. B. Smith said he had observed that when there is complete absence of hydrochloric acid and a high acidity from lactic acid, that it is a pretty sure indication of cancer of the stomach.

The president referred to a case in Sydney where the spleen was sutured successfully.

Dr. E. Johnstone referred to the same case—a man injured by being jammed between cars.

Dr. M. T. McLean then read a case report on "Puerperal Eclampsia."

Afternoon Session:—Dr. C. P. Bisset was given permission to read from Turner's book on Surgery, published in 1732, a case of foreign bodies in the stomach, such as nails, etc., which we hope to publish later.

The discussion on Dr. MacLean's paper was then begun.

Dr. W. B. Moore said the subject was much thrashed out. At the last session of the Kings-Annapolis Society, 21 were present and all took part in a similar discussion. There is the sthenic and the asthenic types. In the former, veratrone (P. D. & Co.) hypodermically has given him wonderful results together with eliminative treatment. In the asthenic type, saline subcutaneously and by the bowel, with morphia and atropia. Has seen better results from H. M. C. tablets than from morphia alone.

Dr. R. A. H. MacKeen was sorry he did not hear Dr. MacLean's paper. Some cases were nearly hopeless. Often good results are obtained by salines, intravenous or subcutaneous, and bleeding.

Dr. A. P. Reid advocated the use of the lancet with free bleeding in sthenic cases.

Dr. C. P. Bissett quoted cases where free bleeding proved satisfactory.

Dr. Stewart then read the report of the committee on the president's address.

Dr. MacKeen moved the adoption of the report, and also vote of thanks to the president, who at all times did what was good for the profession.

Dr. Reid seconded the motion, which was carried by a standing vote, the members singing, "For he's a jolly good fellow."

Vice-President H. V. Kent then extended the vote of thanks to Dr. Kendall, who responded with thanks.

Dr. MacKeen then followed with a paper on "Chronic Suppuration by Beck's Method." In all fistulous openings, except intracranial and biliary, Beck's bismuth paste is used. A few cases of poisoning have occurred when used in large cavities—one being an old empyema. If any symptoms of poisoning occur, inject hot oil and draw out. Fine results have been obtained in sinuses in the neck from broken down glands. Radiographs should be taken before and after the use of the bismuth paste. Several were shown by Dr. MacKeen.

The formula is as follows:

Bismuth subnitrate	30
Vaseline	60

Mix while boiling, melt in water bath and put in syringe

Final injection:

Bismuth subnitrate	30
White wax	5
Soft paraffin	5
Vaseline	60

Dr. Elder said he had followed the treatment for some time, though his results were not always so good as Beck's. Skiograms are very helpful and often save a large operation. A counter opening at the other end of the track of bismuth is advisable.

Some of the tuberculosis cases heal, while in others, an abscess forms around the paste. If the opsonic index is high in such cases they would get well, otherwise not.

Dr. Moore asked Dr. McKeen the results in fistula in ano.

Dr. McKeen said he had not tried it yet in these cases.

Dr. M. A. B. Smith then read report of committee re affiliation with the Canadian Medical Association.

The report was moved, seconded and adopted.

Drs. Stewart and G. M. Campbell were appointed a committee to present the report at the ensuing meeing of the Canadian Medical Association.

Dr. Elder, of Montreal, then read his paper on "The Open Treatment of Fractures."

Dr. A. P. Reid said the Society was much indebted to Dr. Elder for his paper and his common sense ideas given. A button-head screw does not tend to screw into bone, while a flat head does. An artificial dove-tail would be advisable where the bones are broken right across.

Dr. MacKeen could understand Dr. Elder's good results as he had seen them, while those of his colleagues were not so good. Dr. Elder is a good mechanic. Dr. MacKeen agreed with the idea of tenotomy in fracture of the tibia, as the patient gets more comfort and less pain. He moved a vote of thanks to Dr. Elder.

Dr. Reid seconded the vote of thanks.

Dr. Stewart had seldom listened to a more practical paper and so well put. One thing occurred to him and that was how much we owed to Lister. One case of Lister's mentioned, a fracture of the clavicle in two places which was wired and a good result followed. That was thirty years ago. In fractured patella in some cases he was inclined to operate even where crepitus was present. Wiring shortens time. He mentioned a case where fracture of patella occurred

two years after the other patella was fractured. It was wired and patient was walking with help in five days.

The vote of thanks was tendered Dr. Elder by a standing vote.

The meeting then adjourned and a visit was paid to the Steel Works. Although the day was very stormy a large number availed themselves of the oportunity, special cars being available for the members. The harbour excursion was postponed on account of the storm, a very enjoyable smoking concert taking its place.

NEW BRUNSWICK MEDICAL SOCIETY.

THE annual meeting of the New Brunswick Medical Society met in the Council Chambers, St. John. Dr. J. R. McIntosh, president, in the chair.

The president, in a very able and eloquent address, referred to formation of public opinion regarding the prevention of tuberculosis, the formation of provincial societies whose duties are to be chiefly advisory, subsiduary societies to be formed in each county that will look after the practical work among the afflicted.

His Worship, Mayor Bullock, in a very pleasing address, welcomed the members of this Society to the City of St. John.

Dr. Pearson asked the position of this Society as to the fee for life insurance, whether it was $4 or $5 last year. This matter of a fee was decided on at $5, but many members have accepted $4. This matter was finally deferred to the meeting next year.

Dr. Atherton, of Fredericton, reported two cases of appendicitis complicating pregnancy, describing the cases prior to the operation, the operation and after treatment; recovery.

A very instructive paper on Public Health was read by Dr. S. Skinner, which gave rise to a lengthy discussion and finally referred to a committee.

ELECTION OF OFFICERS.

President—Dr. A. J. Murray, Fredericton Junction.

1st Vice-President—Dr. C. T. Purdy, Moncton.

2nd Vice-President—Dr. G. G. Melvin, St. John

Treasurer—Dr. D. E. Berryman, St. John.

Corresponding Secretary—Dr. J. S. Bentley, St. John.

Recording Secretary—Dr. G. G. Corbett, St. John.

Trustees—Drs. T. H. Lunney, P. E. Butler, Johnston.

Dr. Charles Ogilvy, of New York, presented a very interesting and instructive paper on "Excision of the Knee Joint," describing the modified Fenwick's operation.

Dr. A. P. Crockett read a paper, "When to Operate on Middle-ear Disease," and Dr. J. W. Daniel, M.P., gave an instructive paper on "Insects as Propagators of Disease," casting reflection on our summer visitors, the common house-fly. After presenting his case against the fly, he declared the fly criminally guilty of most of our contagious diseases and passed sentence of death.

The subject of tuberculosis was taken up in papers by Drs. P. E. Butler and W. B. McVey, who dwelt exhaustively with the subject. This was followed by an able and eloquent ad-

dress by one of our foremost fighters against the terrible white plague, Dr. Thomas Walker, who advocated all the latest improved methods of prevention.

Dr. G. G. Melvin, in a paper on "Psoriosis," gave us a practical address, drawing altogether on his own experiences in treating psoriosis. He is very optimistic regarding its cure, and quoted cases supporting his belief.

The Society will meet in St. John in 1910.

GEO. G. CORBETT, *Rec. Sec.*

The following is a translation of a letter recently sent out by the members of the profession in Roumania:

Bucharest, June, 1909.

THE ROUMANIAN COMMITTEE INTERNATIONAL CONGRESS OF MEDICINE:

Sir and Very Honored Confrere,—The medical profession of Roumania having decided not to take part in the International Congress of Medicine at Buda--Pesth, feel obliged to explain to their confreres of every country, who are about to repair to this congress, the powerful reasons which have brought them to this decision.

Together with all their foreign colleagues, the medical men of Roumania are convinced that science is International, in the highest sense of the word; that it creates, among those who serve it, a particularly fraternal feeling; that it specially contributes towards the maintenance of peace and the establishment of strong ties between different peoples.

But, on the other hand, these International Congresses are always accompanied with festivities, on which occasions, the members of the congress are guests of the country where the congress meets. It would be very painful, now, to the members of the profession in Roumania to take part in the rejoicings in Buda-pesth wherein a Hungarian tribunal condemned to prison a Roumanian woman—Madame Anna Vlad, wife of a deputy to the Hungarian Parliament, under a charge without precedent in the history of nations, viz.: for having said to Roumanian children, in a Roumanian school, that it was their right and their duty to study their Mother tongue.

Madame Vlad, it is true, has not undergone this punishment, having been recently pardoned by His Majesty The Emperor-King. But it is evident that this act of great clemency of the Sovereign, does not change in any way the plain fact of the condemnation, on the contrary it serves to emphasize its offensive character and to clearly demonstrate that in Hungary, justice denies to the Roumanians of that land the right which every human being possesses, of cultivating his native language.

Under this state of affairs, in absenting themselves from the festivities in Buda Pesth, the medical men of Roumania are only obeying the dictates of their consciences as civilized men and enlightened patriots.

They deplore the unfortunate circumstances which prevent them clasping hands with their foreign confreres and meeting them at the approaching congress, which should be held elsewhere than in a country where the simple and touching act of a woman in advising children to speak their Mother tongue, is interpreted as an attack against the safety of the State.

President:

PROF. DR. THOMAS JONNESCO,
Pres. of the Faculty of Medicine, Bucharest.

Members:

ANGELESCO, BABES, BALESCO,
And twenty-three others.

NOVA SCOTIA HOSPITAL.

We have received from Dr. W. H. Hattie, Superintendent of the Nova Scotia Hospital, the following circular letter calling attention to certain amendments to the statute dealing with the admission of patients to the hospital. In his covering letter Dr. Hattie says: "I have thought that possibly it might not be amiss to call the attention of the profession to these changes in the pages of the NEWS. I feel that the abolition of the warrant makes the commitment of patients to our institution a more purely medical matter than it formerly was. It at any rate eliminates the necessity for a legal document in the majority of instances, and also does away with the need of having a constable accompany patients to the hospital, and thus far is surely an advance."

Section 9 of Chapter 44, Revised Statutes, 1900, has been amended by the addition of a clause which limits the time during which the statement of particulars (i.e. the usual "application") continues to be valid, to thirty days from the date of its preparation.

Sub-section 2 of Section 10 of said Chapter 44 has been amended by reducing the time in which a medical certificate is valid, from thirty days to *fourteen* days.

Sub-section 3 of Section 10 of said Chapter 44 has been amended by striking out the words "no warrant shall be issued," and substituting therefor the words "No patient shall be admitted."

Said Section 10 of said Chapter 44 is also amended by adding thereto the following sub-section:

"(5.) The certificates shall be sufficient authority to any person to convey the patient to the Hospital, and to the Medical Superintendent to detain him therein for treatment until discharged under the provisions of this act.'

This clause does away with the necessity for the Warrant formerly required, except in such cases as are provided for in Sections 15 and16.

The Chapter is further amended by the addition of the following Section:

42. It shall be the duty of the King's Printer to supply to the Town and Municipal Clerks the necessary number of printed forms required by this Act and the Town and Municipal Clerks shall carefully keep such forms, so that the same may be promptly available when required."

Physicians and others interested will therefore note that hereafter application for blank forms will be made to the appropriate Town or Municipal Clerk instead of the Medical Superintendent of this Hospital.

The aim of these alterations is to facilitate the admission of patients to the Hospital, and reduce, as far as possible, the time necessary to complete arrangements. It is further intended to assist the Municipal Authorities by informing them of the intention of committing a patient to the Hospital at an early stage of the proceedings.

Yours very sincerely,

W. H. HATTIE,

Medical Superintendent.

NOTES ON SPECIALTIES.

THE AFTER CARE OF SUMMER AILMENTS.

It is probably the exception, rather than the rule, that a baby passes through its first two summers without at least one sharp attack of gastro-enteric disturbance. In severity, such attacks vary from a slight bowel "looseness" and occasional eructation of nourishment, to a true choleraic diarrhœa, in which sudden and unexpected vomiting, rice water discharges, marked prostration and sunken fontanelles are the symptoms that precede dissolution. In all except the fulminant cases referred to, recovery ensues, if intelligent dietetic and medicinal treatment is instituted. In many instances, however, the considerable drain on systemic vitality, from the frequent discharges and the enforced cutting down of the child's nourishment, brings about a more or less anemic condition, and unless restorative measures are adopted, convalescence is apt to be slow and protracted. Ordinary hematinics, in such cases, are apt to do more harm than good, because of their irritant effect upon the stomach. Pepto-Mangan (Gude), however, is so palatable, readily tolerable and generally acceptable, that the infant can and will take it readily and without demur. Constipation does not result from its administration and the beneficial effects are noted promptly and decidedly, in the form of increased vitality, better color, a return of spirits and a better assimilation of nourishment.

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THE EARLIEST SYMPTOM OF ENLARGED PROSTATE.

Increased uninary frequency, chiefly nocturnal in character, is the earliest and most frequently encountered symptom of enlarged prostate. Many cases of hypertrophied prostate might never develop beyond this point if sanmetto were administered as a prophylactic, and the discomfort of rising two or three times at night to urinate, to say nothing of entering upon a catheter life, might be avoided.

It is especially in the chronic prostatic hyperplasia which we find in old men, always associated with chronic

vesical catarrh, that sanmetto gives the most brilliant results. Numbers of cases can be recited in which the use of sanmetto alone has not only relieved the vesical irritability, but has seemingly reduced the hypertrophy of the prostate and enabled the patient to dispense with catheterization and micturate unassisted for the first time in years.

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GOOD RESULTS IN STUBBORN CASES.

Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies has a peculiarly happy effect. Particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination, and the painful stiffness of the joints which remains after a rheumatic attack are also relieved by "Antikamnia and Salol Tablets," containing 2½ grs. each of

antikamnia and salol and the dose of which is one or two every two or three hours. Salol neutralizes the uric acid and clears up the urine. The pain and burning of cystitis is relieved to a marked degree by the administration of these tablets. This remedy is also reliable in the treatment of diarrhœa, entero colitis, dysentery, etc. In dysentery where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two antikamnia and salol tablets every three hours will give results that are gratifying.

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THE MODERN TREATMENT OF HAY FEVER.

Whatever be the accepted views as to the pathology and etiology of hay fever, there is little difference of opinion concerning its importance and the severity of its symptoms. An agent that is capable of controlling the catarrhal inflammation, allaying the violent paroxysms of sneezing and the abundant lacrimation, cutting short the asthmatic attack when it becomes a part of the clinical ensemble, and, finally, sustaining the heart and thus preventing the great depression that usually accompanies or follows the attack—in short, an agent that is capable of meeting the principal indications—must prove invaluable in the treatment of this by no means tractable disease.

In the opinion of many physicians, the most serviceable agent is Adrenalin. While not a specific in the strict meaning of the word, Adrenalin meets the condition very effectually and secures for the patient a positive degree

of comfort. It controls catarrhal inflammations as perhaps no other astringent can. It allays violent paroxysms of sneezing and profuse lacrimation by blanching the turbinal tissues and soothing the irritation of the nasal mucosa which gives rise to those symptoms. It reduces the severity of the asthmatic seizure, in many instances affording complete and lasting relief.

There are four forms in which Adrenalin is very successfully used in the treatment of hay fever: Solution Adrenalin Chloride, Adrenalin Inhalent, Adrenalin Ointment, and Adrenalin and Chloretone Ointment. The solution, first mentioned, should be diluted with four to ten times its volume of physiological salt solution and sprayed into the nares and pharynx. The inhalent is used in the same manner, except that it requires no dilution. The ointments are supplied in collapsible tubes with elongated nozzles, which render administration very simple and easy.

It is, perhaps, pertinent to mention in this connection that Messrs. Parke, Davis & Co. have issued a very useful booklet on the subject of hay fever, containing practical chapters on the disease, indications for treatment, preventive measures, etc. Physicians will do well to write for this pamphlet, addressing the company at Walkerville, Ont., or branch No. 378 St. Paul St., Montreal, Que.

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The answer lies in the appended statement, made in the course of a short lecture before a body of medical practitioners:

The reputation of the physician (and, in equal measure, his income) is in the keeping of his pharmaceutical purveyor. Diagnostic skill avails nothing unless it be supported by trustworthy remedial agents.

The man who writes the prescription seldom sees the medicine dispensed. And of physicians who do their own dispensing, how many have the time, the training, the equipment, for assaying and testing their medicaments? **The practitioner must rely upon the skill and honesty of the manufacturing pharmacist.**

It behooves the physician, then, to consider well the source of his supplies. Let him select a house of proved reliability—a house with a reputation to sustain—a house backed by a record of performance—and let him specify the products of that house.

Is ours such a house? Let us see.

Since the establishment of our business (in 1866) we have discovered and introduced to the medical profession a long line of valuable drugs that are recognized as standard medicinal agents in every civilized country. We isolated the active principle of the suprarenal gland, giving adrenalin to the world. We were among the earliest producers of serums and vaccines, as we are now the largest. **We were the pioneers in drug standardization by chemical assay,** putting forth the first standardized fluid extract in 1879. **We were the first to introduce physiologically tested galenicals. Today our entire line of pharmaceutical and biological preparations (fluid extracts, tinctures, elixirs, solid and powdered extracts, pills, tablets, serums, vaccines) is accurately standardized.**

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