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THE MARITIME MEDICAL NEWS

VOL. XX., DECEMBER, 1908, No. 12.

Myotonia Congenita.

Unusual value attaches to the description of a disease given by an intelligent physician who has personally experienced the symptoms of the disorder. Thus when Thomsen, in 1876, made public his observations on congenital myotonia, although he was not first to describe the condition, the description of his own case was recognized to be so complete and accurate that the disorder has since been commonly termed "Thomsen's Disease." The condition is not the less interesting because of its variety, but added interest is given it by another careful study of it by another physician who suffers from it, Arthur Birt, of Halifax. Birt contributes a study of his case to the *Montreal Medical Journal* for November, which must be recognized to be exceptionally important. He experiences the painless stiffness and cramp on first attempting voluntary movement which other writers have described. His case, too, demonstrates the general muscularity commonly noted, with rapid development of fatigue, and "lumpy" contractions of muscles (with slow relaxation) upon sharp mechanical stimulation. All the points required to establish Erb's myotonic reaction" are present in Birt's case. The causation, the influence of the various factors upon the degree and extent of the cramps, the mechanical and electrical reactions, the myographic tracings, and the histology of fragments of muscle excised from his vastus

externus are all discussed in the paper with the thoroughness and attention to detail which characterize all the author's writings. As to the pathology, after reference to the findings and theories of various authorities, he offers his own opinion as follows: "That the disease is primarily a congenital functional defect in the mechanism of inhibition. That, owing to the faulty functioning of the neurones concerned, the muscles at rest are kept in a state of hypertonus; and on attempting suddenly to contract a muscular group, the inhibitory "break," so to speak, cannot be taken off rapidly enough. This delay would represent the prolonged latent period and the moderately slow contraction. On attempted relaxation the disorder of inhibition is more than ever in evidence. The break is taken off with much increased difficulty, and thereby is explained the persistence of the contraction and the remarkably slow relaxation. The more powerful the contraction, the greater the inhibitory difficulty. The hypertrophy of the muscles would thus be a secondary development, dependent (a) on the state of hypertonus (kept up by the over-activity of the inhibitory mechanism) during rest; and (b) on the prolonged contractions and delayed relaxations constantly repeated. It is conceivable that the trouble might be aggravated by the excessive accumulation of the products of muscle waste during the pro-

longed contractions. This view would make the defect in Thomsen's disease comparable to that in stammering, and class it as a neurosis of the whole psycho-motor tract. It accounts lastly for the aggravation caused by depressing mental emotions, cold and fatigue, and the relief under the opposite conditions. The writer acknowledges frankly that there are strong points to be urged against such an explanation; but not one of the numerous views which have from time to time been held seems to him improbable. It still remains for the physiologist to clear up for us the whole subject of "inhibition."

"The wearing off of the spasm on repetition of the movements would be explained by a rapid exhaustion of the excessive inhibitory impulses; and the early fatigue, by the excessive accumulation of the products of muscular waste. The longer the period of rest, the greater the rapidity and renewed power of the inhibitory "break," and, consequently, the greater the tonic spasm on voluntary movement requiring powerful willing to overcome it.

"The evidence of other neuroses (in the family history) is, to say the least suggestive.."



**Arsenic
in
Anæmia.**

It has been generally held that arsenic is distinctly beneficial in the anæmia of malaria, lymphadenoma, leukæmia, and in pernicious anæmia, and the prevalent view is that it exerts some specific action on the parasites which cause these diseases, but that it plays no direct part in blood-formation. Gunn has recently investigated the hæmatinic value of arsenic, and has found that its action is

probably on the formed red corpuscles, protecting them against hæmolytic agencies. He reports his findings in the *British Medical Journal* for July 18. His experiments have so far been concerned with that most common hæmolytic, distilled water. His conclusions are: (1) That arsenious acid is fixed to red blood-corpuscles; (2) that this process takes place very rapidly; and (3) that it protects these corpuscles against the hæmolytic action of distilled water. The protective action of arsenic was still perceptible. The ordinary maximal dose of arsenious acid is 5 milligrammes, and if this were all absorbed it would only represent a strength of one in a million of the blood of the average man. But it is pointed out that arsenic is frequently given in larger doses, and that its slow elimination ensures a stronger concentration than the proportion just mentioned. Arsenic also seems to attach itself so rapidly and firmly to the red cells that during a course of arsenic it is highly probable that the drug is largely taken up by them and does not proceed any further. The suggestion, therefore, is that arsenic is of benefit in pernicious anæmia, because it protects the red corpuscles against destruction. In malaria it acts, not on the parasite, but also on the corpuscles, rendering them less permeable to the plasmodium.



The Diagnosis Dudley Roberts, in a paper contributed to the *Medical Record* for October 17, says that the characteristic picture of gastric ulcer is rare. We must be able to diagnosticate it without the presence of all the symptoms. In the classical picture we have pain sharp or burning, located just below

the ensiform cartilage, appearing regularly from one-half to two hours after each meal, and absent when the stomach is empty. Exquisite tenderness located in the same area is present. Vomiting occurs in only 60 per cent. of cases. Hæmatemeses is not frequent, the blood being more often recognized in the stools by blood tests. Pain may be absent for long periods. Diffuse pain speaks against pure ulcer. Sometimes pain occurs long after the meal and awakens the patient from sleep. Such pain comes from reflex pylorospasm when the last of the meal is passing from the stomach over the ulcer. Constant pain, or pain appearing before breakfast, is rarely due to ulcer. Tenderness is present early, but in later stages of chronic ulcers is often absent. Hyperchlorhydria is contributive evidence of ulcer. Hypersecretion is constant in ulcer. Repeated examinations of the stools for blood should be made.



**Puncture
of the
Brain.**

This subject is dealt with in an article contributed by H. Tillmanns, of Leipzig, to the *British Medical Journal* for October 3. Although puncture of the brain was practiced by Hippocrates, the method has been revived in recent times, especially upon the recommendation of Neisser and Polak. The method is valuable both as a diagnostic and as a therapeutic procedure. As a diagnostic measure it has been found of value in hæmorrhage, abscesses, cysts, tumours and foreign bodies. For therapeutic purposes it is indicated in hydrocephalus, hæmorrhages, cysts and abscesses. The technic of the operation is simple. Under local anæsthesia, a small incision down to the periosteum is made at the site

where the puncture is to be made; the cranium is perforated with a round-headed Dogen or Sudeck drill; in order to avoid puncturing of the dura, a ball pointed Dogen drill is used to perforate the inner table. The aspiration of the brain is then proceeded with. Should the puncture produce no result, the opening may be easily enlarged. If necessary, the puncture may be repeated at a different site. For puncture of the lateral ventricle, for hydrocephalus, the author recommends the method of Kocher, Neisser and Polak. The puncture is made through the frontal bone at a point 2 cm. from the central line and 3 cm. from the precentral fissure. The ventricle is reached at a depth of 5 to 6 cm.



Tuberculosis in Children. W. C. Hollopeter, in the *Journal of the American Medical Association*, November 21, describes the prephysical signs of tuberculosis in children. Much has been written, he says, about the tuberculous physiognomy in the growing child, one class having fine hair, long eye lashes, large eyes, clear conjunctivæ, transparent skin, the nervous temperament, and the other the very antithesis of this, the strumous, or as formerly called, the scrofulous child. Children of this type may be very ill without showing the usual symptoms, because the reflexes are diminished, and in this way, Hollopeter believes, they early acquire unsuspected tuberculosis. In both types of children, adenitis is a frequent sequel of measles and whooping cough, and other glandular involvement may follow until the lungs are finally affected. An early implication of the mediastinum is more frequent than generally suspected, and a recognition of this fact

may give the physician an opportunity to arrest the progress of the disease in time. A neglected symptom, demonstrated to him some years ago, by Eustace Smith, of London, is the signs of pressure on the veins, dullness over the first bone of the sternum extending to a variable distance on each side, and a paroxysmal cough pointing conclusively to caseation of the bronchial glands. The cough closely resembles that of pertussis, but there is no crowing or terminal vomiting. The absence of auscultatory signs is important in the diagnosis, and if there is any interval of the fits of coughing anything like an asthmatic seizure or percussion dullness at the top of the sternum, there can be little doubt left. If there is any doubt, the occurrence of signs of venous pressure at once gives certainty. The swelling of the glands, however, has to be considerable before the pressure symptoms can be marked, and the diagnosis may not be easy. If the child be made to bend back the head and look straight upward, a venous hum, varying in intensity according to the size and condition of the diseased gland, is heard with the stethoscope on the upper bone of the sternum which will confirm previous suspicions. In no case has this characteristic hum been produced except when there was reason from other symptoms to suspect enlarged bronchial glands. The early diagnosis of tuberculous mesenteric glands is often difficult, and Hollopeter calls attention to the importance of examining the rectal mucosa in these cases for the tubercle bacillus. To study the abdominal glands in a child he places him in the knee-chest position or on the back with the knees well flexed and the head well curved on the breast. When the glands are situated in the groin or under the

arm superficially, there has occurred usually a massing of the glands and with it some decided constitutional toxæmia which can no longer be regarded as prephysical signs. He sums up his conclusions as follows: "1. In dealing with tuberculosis in children we must recognize an infectious disease that has no well-defined incubating period. 2. Latent tuberculosis may continue throughout the life of the child. 3. We must never forget the protean types of expression of tuberculosis during childhood. 4. Thorough control of tuberculosis can only come when the public is taught that ill health, from whatever cause, is an open invitation to its infection. 5. Anæmia, loss of weight, with gastrointestinal catarrh are more certain early symptoms."



Brain Decom- "Subtemporal Decom-
pression in pression in a Case of
Uræmia Chronic Nephritis with
 Uræmia; with Especial Consideration of the Neuro-retinal Lesion," forms the title of a paper by Harvey Cushing and J. Bordley, Jr., appearing in the *American Journal of Medical Sciences* for October. The essential feature of this highly interesting case are as follows: A young woman, 22 years of age, was admitted to the hospital with all the classical symptoms of chronic nephritis—headache, vomiting, tension of the pulse, albumen in the urine, and a moderate grade of neuro-retinitis. In the course of the next three months the symptoms and signs grew worse, the tension of the pulse increased and the neuro-retinitis became decidedly more marked. Lumbar puncture and the conventional therapeutic measures were resorted to, but without relief to the condition of uræmia. Acting on the theory of Traube that the symptoms of uræmia are due to pres-

sure from œdema of the cerebral tissue. Cushing decided to perform a decompression operation. This was accordingly done over the temporal area. At the operation the arachnoid and brain were both found wet and soggy and the dura appeared to be under considerable tension. All the symptoms, both subjective and objective, improved markedly after the operation. Especially notable was the improvement in the neuroretinitis. The condition of the urine, however, remained unaltered. The protrusion which followed over the bone defect gradually subsided. At the patient's request, she was discharged from the hospital seven weeks after the operation. She was readmitted two weeks later in a semi-conscious state, and despite medical treatment she died two weeks later. Autopsy showed in addition to the granular contracted kidney and some incidental findings, a hæmorrhage of the brain. A careful microscopical examination of the optic nerve and retina leads the authors to believe that the so-called albuminous retinitis is, in large part at least, a local œdema of mechanical origin.

The authors conclude that the improvement which followed the decompression in this case suggests the propriety of performing this operation in selected cases of renal disease when medical measures or lumbar puncture prove of no avail.

❖ ❖ ❖

Causation of Typhoid Outbreaks "The Differentiation of Outbreaks of Typhoid Fever, due to Infection by Water, Milk, Flies and Contacts," is the title of a paper contributed to the *Medical Record* for November 28, by John F. Anderson, of the Public Health and Marine Hospital Service, Washington, D. C. Anderson says that in the beginning of a typhoid

epidemic the Widal and blood tests should be made to determine that the disease is really typhoid. The characteristics of water-borne typhoid are distribution of cases through a region supplied by water from one source; very young children are less susceptible than others in this kind of epidemic. The outbreak begins in an explosive manner and continues until the supply of water is changed or the source of infection is removed. Seasonal prevalence of typhoid; outbreaks in late winter or spring when the fæcal material is liberated by thawing and flows into the water supply show water-borne typhoid. Persons not using the suspected water are comparatively free from infection. Inspection of the watershed shows sources of infection. Such outbreaks begin on changing the water supply in some instances. Bacteriological and chemical examinations are of value, the presence of bacillus coli being evidence of typhoid, although the typhoid bacillus is seldom found. Exclusion of all other sources is an aid in proof of the water as the source. When the outbreak is due to milk it occurs suddenly along the route of a certain dairy within a few days. Appearance of a number of cases among consumers of one dairy, the unusual incidence of cases among users of milk, especially among women and children, all favour milk infection. More cases among the well-to-do than among the poor form valuable indication of incidence. Outbreaks due to contact are seen especially in institutions and in houses where the patients are cared for by relatives. Those caused by flies are found in camps. Chief characteristics of outbreaks due to flies and contact are their local character, their appearance in unsanitary localities, and their occurrence in fly season.

Choice of Anæsthetics.

The Preliminary Report of the Anæsthesia Commission of the American Medical Association, appears in the *Journal of the American Medical Association* for November 7. As regards the chloroform and ether controversy, they find it still active, each drug having its earnest advocates. In their researches and recommendations the members of the commission will bear in mind the two phases of the problem: the use of these drugs by the expert and the inexpert. They say that spinal anæsthesia is gaining constantly a wider and more favourable recognition. Its just claims are being acknowledged and its limitations are being appreciated. They quote the opinion of an experienced surgeon, who finds it safer and more satisfactory than any general anæsthetic for a large class of cases, his preference being for stovaine over cocaine anæsthesia. Nitrous oxide, the oldest of the general anæsthetics, is coming into more general use for major operations. The field of local anæsthesia is widening in the practice of many surgeons, and rectal anæsthesia by ether, abandoned nearly twenty years ago, has been revived and used to advantage. It is an ideal form of anæsthesia for all head and neck operations, but is valueless and dangerous in unskilled hands. The paper closes with the following three recommendations regarding general anæsthetics: "1. That for the general practitioner, and for all anæsthetists not specially skilled, ether must be the anæsthetic of choice—ether administered by the open or drop method. 2. That the use of chloroform, particularly for the operations of minor surgery, be discouraged, unless it be given by an expert. 3. That the training of skilled anæsthet-

ists be encouraged, and that undergraduate students be more generally instructed in the use of anæsthetics. We believe that the further use of nitrous oxide combined with air or oxygen, in major surgical operations, is promising."



Spinal Anæsthesia.

An article entitled "Notes on 679 Operations Performed Under Spinal Anæsthesia (Cocaine or Stovaine) by Tuffier's Method," by Dr. Sabadini, of Algiers, appears in the *Lancet* for October 24. The author had 11 per cent. failures. He believes that just as with ether and chloroform there is a varied idiosyncrasy among patients. He has found most resistance in nervous and alcoholic patients. Vomiting was noted in twenty-two per cent. of the cases; as a general rule, however, the vomiting does not last more than five minutes. In the past three years, the author has reduced the vomiting by fifty per cent. by allowing the patients to have their breakfast before the injection. In a little over nine per cent. the injection was followed by headache. In recent years the author has been able to reduce even this symptom to a minimum by allowing more cerebro-spinal fluid to escape than the amount of anæsthetic injected. The headache follows stovaine as well as cocaine. He has had no death in his series. The author also reports 108 cases of spinal anæsthesia with stovaine. He believes that constitutional effects are less frequent with this anæsthetic than with cocaine. The author concludes that spinal anæsthesia is a harmless procedure and that its advantages outweigh those of ether or chloroform in cases where it is applicable.

Infantile Paralysis R. W. Lovett and W. P. Lucas, publish (in the *Journal of the American Medical Association* for November 14), an analysis of 635 unselected cases of infantile paralysis seen at the Orthopedic Out-patient Department of the Children's Hospital, Boston, between January 1, 1897, and January 1, 1908. After first describing the nervous anatomy and blood supply of the anterior horns, they discuss the etiology, mentioning the finding by Harbitz and Sheele of a diplococcus, the experimental production of the condition in the laboratory, and the evidence of a selective toxic action of certain poisons in such cases as well as its occasional epidemic and apparently contagious nature. In forty-seven of their cases the history of trauma is given, though in sixteen of these the record was not definite. They do not consider that these establish a traumatic origin, but they think them significant. It would appear that trauma predisposes to infection or produces a very similar disease. In six of the cases the paralysis appeared gradually without febrile attack. In eight cases it followed exposure to cold. The authors summarize the etiologic evidence by saying that, while bacteriologic proof is lacking, the character of the onset, the epidemic occurrence, the apparent contagion and the experimental production of the disease in animals all point to an infectious origin. The seasonal occurrence and the age of the victims suggest a possible intestinal infection, perhaps from some bacillus conveyed by milk which possibly liberates a toxin and then disappears. Of the 635 patients, 334 were boys and 301 girls. The ages ranged from under six months to thirteen years, very few of them over seven

years. Most of the cases occurred in the spring and autumn months. According to their observation, a severe onset was most likely to be followed by a severe paralysis. The internal muscles of the leg are more liable to be affected than the external, and the interior more than the posterior. The involvement of different members and the deformities produced are tabulated. The authors describe what is known as the pathology of this disorder, noting the change of view which has occurred of late years, the modern pathologists now admitting a more or less generalized inflammation of the cerebrospinal axis and an interstitial rather than a parenchymatous involvement with special changes in the anterior cornua of the cord. In some cases the central gray matter may be affected, explaining the occurrence of pain and the interference with subsequent growth. In serious cases the posterior horns and meninges may also be involved. The treatment is discussed at some length. The authors advise quiet in bed and the use of laxatives in the beginning of the attack and supporting the limbs in the proper position. When paralysis has become established the treatment must aim to prevent muscular stretching and muscular disuse and to stimulate muscles which are partly paralyzed or disused to activity. Mechanical or conservative treatment should not consist merely in supporting the paralyzed limb in a brace, but should be directed to the development of muscles apparently paralyzed but really capable of some function. Tendon transference and arthrodesis are discussed at some length, and the following practical conclusions reported in regard to the first-named operation:

1. It is important to remove deformity by a preliminary operation when

it is present to any considerable degree and not to correct the deformity and perform the tendon transference at one operation. 2. The operation should not be performed on very young children. 3. Periosteal implanation yields better results than when tendons are united to tendons. 4. Simple operations are more satisfactory than complicated ones. 5. It is not advisable to turn sharp corners with transferred muscles, but to secure as straight a line as possible of muscular pull from origin to insertion. 6. The substitution of small muscles for large ones is likely to be unsatisfactory, e.g., one of the peroneal muscles is rarely a satisfactory substitute for the gastrocnemius. 7. Tendons must be inserted on the stretch and the foot maintained for some weeks in a position of overcorrection. 8. The use of silk tendons has proved practicable and satisfactory. 9. Finally, the most striking conclusion that has been impressed on us is that the after-treatment is as important as the operation if a successful result is to be obtained. There were 120 cases of tendon transfer in this series and 50 of arthrodesis. They find the latter operation useful in the ankle joint in selected cases. The operation should not be performed on the ankle in children much under the age of puberty. There was but one case of nerve anastomosis in the series, with negative result. The authors think, however, that the operation may have a future, and tabulate the reported cases. In conclusion, they assert that infantile paralysis is a less formidable affection than is generally believed, partial paralysis is common and disused, and apparently paralyzed muscles have often some functional power which can be developed by proper treatment. After tendon transference the development by

muscle training of the transferred tendons is essential to good results, and without this the percentage of failure will be large.

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Treatment of Trigeminal Neuralgia. A paper entitled "Injection of Alcohol for Relief of Trigeminal Neuralgia," by J. A. Bodine and F. C. Keller, appears in the *New York Medical Journal* for September 26. The authors report their experience with fifteen cases of injections of alcohol into or near one or all of the three divisions of this nerve at their basal foraminal exits in the skull. This method was introduced by Schlässer. Complete relief from pain was obtained in nearly all of the cases after but one injection. Inasmuch as only six months have elapsed since the first injection was made, the question of recurrence is not brought up. The method, in the authors' hands, is easy of performance, but the recommendation is made that a training on the cadaver is advisable before operations upon the living are attempted. The authors conclude that this method is considered advisable when internal medication has failed, and should, by all means, precede the consideration of surgical attack.

The method recommended is the one advocated by Lévy and Baudouin, which consists of injecting two c.cm of alcohol, more or less diluted, into or near one or all of the three divisions of the fifth nerve at their basal foraminal exits in the skull. Although the hypodermatic needle does not always enter the nerve itself if directions are followed the needle rests within a short distance of the nerve trunk and accomplishes the same result.

The methods cited for reaching the foramina are the following: To

reach the superior maxillary branch, a point is determined on the lower or inferior margin of the zygomatic process precisely vertically under the posterior border of the orbital process of the malar bone. One-half cm. posterior to this line, that is, toward the ear and at the lower edge of the zygomatic arch, the needle is inserted. Its general direction is upward and it is pushed into the pterygomaxillary fossa to the depth of five cm. For injection of the inferior maxillary branch, the descending root of the zygomatic arch is identified and located by the finger in front of the ear. At a point two and one-half cm. anterior, precisely at the lower edge of the zygoma, the needle is inserted and carried to a depth of four cm. For the ophthalmic division, the needle is passed along the outer wall of the orbit, at the line of the inferior extremity of the external angular process of the frontal bone. It passes beneath the lachrymal gland, safely away from the eyeball, hugging the orbital periosteum, and at a depth of three and one-half to four cm. the injection is made.

Two c.cm. of the following solution were injected into each nerve:

Cocaine hydrochloride,	1 grain
Chloroform 10 minims
Alcohol 3 drams
Distilled water	enough to make one half ounce.

Lack of pain and infection are accomplished by preliminary anæsthesia of the skin with a weak cocaine solution, and by making a small incision with a bistoury.

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Medical Aspect of Gastroenterostomy. An interesting paper by E. B. Leech, appearing in the *Lancet* for September 19, bears the title "The Medical Aspect of Gastroenterostomy,

based on 128 Operations at the Manchester Royal Infirmary." In tracing the subsequent histories of the patients, Leech found that of the 79 patients in whom the operation was done for non-malignant disease, 47 per cent. were permanently relieved of all symptoms; in 10 per cent. the relief was nearly complete, 11 per cent. showed limited improvement, 9 per cent. were not improved at all, while 23 per cent. died within two months after the operation. The list of the diseases for which the operation was done included pyloric ulcer causing obstruction, duodenal ulcer, adhesions, ulcers of the lesser curvature and cardiac end, hourglass stomach, and dilatations (paralytic?).

The proportions of benefit in the various groups are about the same, except that the best results were obtained in duodenal ulcer and the worst in the dilatations of presumably paralytic origin. Of the sixteen cases in which little or no improvement resulted, the reason for the failure of the operation was found in the persistence of pain in ten cases and of vomiting in eight. In two, symptoms of locomotor ataxia developed; in one, merycism, and in one œsophageal obstruction. The comparatively large percentage of deaths is ascribed by the author to two causes: 1. Unsuitable cases. 2. Errors in operation.

Of 46 cases in which gastroenterostomy was performed for malignant disease, in only 32 per cent. was there any relief obtained in patients living over two months after operation, while 46 per cent. died within this period.

Technique of Tonsillectomy Writing under the caption "The Technic of Tonsillectomy and Adenoidectomy," in the *Journal of Ophthalmology and Otolaryngology* for August, F. Gurney Stubbs describes the tonsil operation with the snare as follows: With the mouth gag in place so the mouth is open as wide as possible, and the tongue pressed forward and downward onto the hyoid bone, one begins first on the lower tonsil by grasping it firmly with a three-pronged forceps and drawing it toward the median line. Hooking the pillar separator into the mucous membrane just behind the lower edge of the anterior pillar, it is quickly passed upward and around the tonsil and down the front edge of the posterior pillar, and then forward under the tonsil to where it started. By this cut only the mucous membrane has been cut close to the circumference of the tonsil, but at once one sees how it allows the tonsil to be drawn well out into the throat. With the same instrument one then tears or cuts the areolar and posterior attachments back beyond the greatest diameter of the tonsil, paying especial attention to absolutely freeing it from under the junction of the two pillars, for that is the part that should by all means be removed, since the wire will not pass back of and enucleate the tonsil if it is not properly freed here. By freeing the tonsil only to the back of its greatest diameter one does not have to consume so much time, runs less danger of cutting any neighboring structures, and leaves the rest to the snare. The forceps are now withdrawn and inserted through the ring of the snare, and snare and forceps are together applied to the tonsil. The tonsil is caught by the forceps, one blade applied on the upper pole, the other

under the lower pole, thus giving an absolute grip and control of the tonsil. The tonsil is now strongly drawn into the throat and the ring of the snare slipped down the forceps and over the tonsil as far as possible, while the tonsil is drawn as far through the ring without tearing the forceps out of its hold. The wire loop is now drawn into the canula and the wire slipping over the tonsil follows the line of least resistance through the loose areolar tissue and completely shells the tonsil from its bed.

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Treatment of Chronic Sinuses. An editorial in a recent issue of the *American Journal of Surgery*, deals with "Bismuth-Vaselin Injections in the Treatment of Chronic Sinuses." Last January Dr. Emil Beck, of Chicago, announced that a chronic tuberculous sinus had been cured by the injection into it of a bismuth-vaselin paste, done simply to obtain a skiagraphic tracing of the sinus. This accidental discovery led him to try the injection of a sterile mixture of bismuth, vaselin, wax and paraffin as a means of treating chronic sinuses. In April, 1908, he reported, in the *Illinois Medical Journal*, fourteen cases, most of them tuberculous, in which he had used the injection therapeutically, in all of which he had secured healing.

If many surgeons have been stimulated to try Beck's method most of them have thus far withheld the results of their observations from publication. Such experiences as have been noted, however, indicate that the enthusiasm with which Beck reported his procedure was by no means unwarranted. In the *American Journal of Orthopedic Surgery*, August, 1908, Ridlon and Blanchard, of Chicago, report twenty-two cases of tuberculous sinuses treated

by Beck's method. Of these, nine were cured (in from seven days to one and one-half months), seven were improved, one was unimproved because of the presence of a large sequestrum. The remaining five were under treatment but one week. They also reported four cases in which they had drained large tuberculous abscesses and injected bismuth vaselin into the sac, all four being cured in from eighteen to twenty-eight days. The editor has himself secured excellent results with this treat-

ment in tuberculous and non-tuberculous bone-sinuses; and it has seemed of value also in sinuses limited to the soft parts.

The method is closely akin to that devised by Moseitig-Moerhof for the definitive healing of bone cavities. In both, the action of the paste is probably largely or entirely mechanical. It will be of interest to determine what therapeutic rôle, if any, is played by the bismuth in Beck's paste.

EDITORIAL.

MALTA FEVER.

THE story of the conquest of Malta fever as related in the Milroy Lectures delivered before the Royal College of Physicians of London, by Dr. W. H. Eyre (*Lancet*, June 13, 20 and 27, 1908) is another convincing piece of testimony to the value of modern methods of research and a brilliant achievement in the annals of preventive medicine. Though commonly called Malta, the fever is widely distributed in the sub-tropical regions and is a serious disease. The mortality is not over three per cent., but the disease is of long duration, and in some instances may continue for one, or even two years. British nava' and military surgeons attached to the garrison at Malta, have made important contributions to our knowledge of the disease, and one of them, Dr. Bruce, discovered the specific micro-organism about twenty years ago. The disease is very prevalent among the native population of Malta, and statistics for the period prior to 1907.

show that of the 7,000 soldiers forming the garrison at Malta, there were on an average 312 admissions to hospital every year from Malta fever alone, and among the sailors about the same number, so that 624 soldiers and sailors were annually treated in hospital for 120 days each, making a total of 70,000 days of illness per annum. In 1904 the Government impressed by the great wastage caused by the fever, requested the Royal Society to thoroughly investigate the disease. The Society appointed a commission to carry out the request of the Government. In the course of the investigation it was determined that contact infection was unlikely and that air, dust and water were not the vehicles of contagion. The possibility of mosquito infection was excluded. An important discovery was made that monkeys could be easily affected by the addition of cultures of *micrococcus melitensis* to milk. From the results of these experiments it became probable that the micrococcus gained entrance to the human

body by way of the alimentary canal and therefore by some infected food or drink.

The milk supply of Malta is almost solely derived from goats. No suspicion was attached to them as they appeared to be perfectly healthy in every respect. In the course of some experimental work on goats, purposely infected, one of the members of the commission discovered specific agglutinins in the blood serum, and as they increased in amount as time went on, a further systematic examination was made of the blood, the urine and the milk, and it was shown that the specific micro-organism could be isolated from each and all of these fluids. No disturbance of function was observed in connection with these experiments. Next a batch of six presumably healthy goats was obtained for further experiments, but before these were made it was found that specific agglutinins were present in the serum from five of the animals, while the specific coccus was present in the blood of two of them, in the urine of two and in the milk of four.

In view of these facts, the commission hereupon engaged in an extended series of observations as to the evidences of infection in the Maltese goat, and as a result of their inquiries applied in round numbers to 2,000 animals—one-tenth of the goat population of the island—found that 40 per cent. yielded positive agglutination reaction pointing to present or

past infection, and that 10 per cent. secreted milk containing the specific micro-organism. Monkeys fed on milk from an affected goat, even for one day, almost invariably took the disease. At this time, curiously enough, an important experiment on the drinking of goat's milk by man occurred accidentally. This is the case of the S.S. "Joshua Nicholson." In 1905 this steamer shipped 65 goats at Malta for export to the United States. The milk was drunk by the captain and many of the crew, with the result that an epidemic of Malta fever broke out on board the vessel, almost everyone who drank the milk being infected. Even after the goats reached America and were placed in quarantine, a woman who drank some of the milk had the fever.

The fact that the infection was conveyed by goats milk explained many special features of Malta fever, and the removal of infective milk from the dietary of the soldiers and sailors has been followed by the almost complete disappearance of the fever from the two services at Malta. The civil population of the island did not at first fully appreciate the significance of these researches, consequently the incidence of the fever continues unchanged among them.

Colonel Bruce, the chairman of the Commission, has been awarded the Stewart prize, and the honour of Knighthood has been conferred upon him by the King.



HOSPITAL ORGANIZATION.

By N. E. MACKAY, M.D., M.R.C.S.

Senior Surgeon Victoria General Hospital.

(Read before the Colchester-Hants Medical Society, Nov. 17th, 1908)

In every department of human knowledge, and more especially in the field of science, great progress has been made during the past twenty or thirty years. We find those entrusted with higher education doing their part to aid in further advances by establishing and re-organizing institutions of learning along lines of progress. Our Provincial Government, for instance, has established an Agricultural College to teach farmers' sons how to farm scientifically and so make the best use of their farms; a Horticultural College, to teach gardeners how best to look after their gardens and orchards, and a Technical College is under construction which will have its effect on the mining and engineering of the province. So far this is very good and we commend them for it.

The science of medicine and surgery has also made great strides during the same period. Hospital organization has progressed simultaneously with the advances made in surgery and medicine. The one is a natural and necessary sequence of the other, and the medical world agrees that no proper clinical and scientific research can be carried on with bad hospital organization, no matter how efficient the medical staff may be. Have those who are responsible for the organization and management of the Victoria General Hospital taken advantage of the advances made in this direction elsewhere? Every one who has gone into the subject at all must say, they have not. Furthermore, I shall

show later that from a clinical and scientific research view-point (which means the best possible treatment of patients) it is the worst system of organization known to the profession. It has nothing to commend it from whatever point it is viewed.

Let us look for a moment at the various systems of organizations which are in vogue in the Medical Management of General Hospitals. The chief ones are (1) The interrupted, (2) The continuous, (3) The continental.

The "*interrupted system*" is the one which obtains in the Victoria General Hospital. Under it each surgeon and physician is on duty for a definite time. The treatment of patients therefore is interrupted. Any system of organization which does not permit a surgeon or physician to carry out any definite line of treatment which he has planned and begun is bad, and not in the best interest of the patient. The *interrupted service* is the only one which does not allow it. *It is therefore bad.* According to our regulations, two surgeons and two physicians must be on duty at the same time for a period not less than three months. But to lessen the frequency of the interruptions and make the treatment as continuous as possible they are on duty for six months.

What now do we find in those cities and countries whose hospital service stands for all that is best in the science and practice of medicine?

In the London hospitals and, for that matter, in all the leading British hospitals the "*continuous system*"

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ting up general septic peritonitis. Then, again, how many members of the Board, seriously speaking are fit to give an expert opinion on any serious surgical case? To say therefore, that a majority of a Medical Board, not composed of well-trained and experienced operators are to decide whether or not an operation should be performed is enough in itself to speak absolutely for re-organization and a drawing up of new regulations.

I have been accused of being a persistent transgressor of hospital regulations. This accusation was made by two medical gentlemen in speeches delivered by them in the House of Assembly, on the 13th day of April last on hospital matters, and by others. I confess I have, during the past ten years, ignored section 12, and intend to ignore it in future. I have done so because it was in the best interests of my patients. No medical man would summon twenty persons to a consultation on a private patient, and I see no reason why a public patient should be treated differently. This by-law is surely a disgrace to the institution, as are by-laws 5 and 8, already referred to, as well as by-law 85, which reads as follows:

"No child under six years of age, except in cases where the greater operations are to be performed, shall be admitted into the hospital."

Why should a child, because he is under six years of age, be denied the advantages that a hospital might give him in sickness, any more than an adult? Do not these sections, I have referred to, point unmistakably to the need of re-organization and revision of rules?

What have the Government and Medical Board done to re-organize

the Victoria General Hospital since 1887? In that year, the six months service with two surgeons and two physicians on duty was adopted. Previous to that date, a three months' service with one surgeon and one physician on duty prevailed.

In 1902, the then Commissioner of Charities, Hon. Mr. Drysdale, virtually decided to re-organize the institution on the Continental plan, but Premier Murray's absence at the Coronation delayed matters. In the meantime, the Commissioner's intention in this regard became known and the hospital staff with their political friends in the city, protested against the proposed re-organization and succeeded in defeating the scheme, and recommended instead the appointment of Assistant Surgeons. I stood alone for re-organization, and in opposition to the appointment of Assistants under existing conditions. There is no work for these unless they were given what properly belongs to the House Surgeons, and to do this would be suicidal to the best interests of the institution. The Government accepted the Board's recommendations and appointed two Assistant Surgeons, and asked the Board to define their duties. The answer given by the Staff was that they had nothing for Assistants to do. The Government although chagrined at the turn matters had taken, accepted the situation.

Matters drifted along in this way till January 1906, when Drs. Chisholm and Murphy took on as their Assistants, Drs. Mader and Foster, Dr. Chisholm giving his Assistant, Dr. Mader, absolute control of half his beds. The outcome of this arrangement was the famous MacKenzie case, with which you are all familiar. The whole affair, however,

ended in the Assistant's services being dispensed with and the latter issuing a writ in the Supreme Court against his Chief, Dr. Chisholm, for assault and breach of contract. This shows clearly the foolishness of appointing Assistants to a small hospital, with limited service and without an out-patient department. To huddle up Chiefs and Assistants together in a small ward is wrong, because their interests are bound to clash, and friction is sure to ensue; and besides, it would destroy the discipline of the institution as well as of the ward. In every well regulated hospital no Assistant is allowed the use of a bed except by the courtesy of his Chief. This is as it ought to be.

Since July 1906 things have drifted along unchanged, and in the meantime the institution was losing in public confidence, until last April its medical management including the method of filling up vacancies on the staff, received an airing in the House of Assembly. Two of my conferees took part in this discussion. In stating that the same plan of organization exists in the London hospitals and the Royal Victoria hospital, Montreal, as obtains in the Victoria General Hospital they were wholly in error. As I have already pointed out, we have an interrupted six months system, while in the hospitals referred to, a continuous plan of one kind or another prevails.

The Government realising that the Victoria General Hospital did not command public confidence and that something had to be done to improve matters, had an interview with the Medical Staff shortly after prorogation of parliament last spring. I was not present at the meeting, but I have since learned that the chief

question under consideration was the reason for the loss of public confidence in the institution and the remedy. Various reasons were given and remedies proposed, but nothing definite was done. At last the Government however, asked the Staff to retire and make a report later, on the situation, and to recommend something for the betterment of matters. Accordingly on or about the 10th of July last they made the following report and recommendations:

“RECOMMENDATIONS OF THE MEDICAL BOARD OF THE VICTORIA GENERAL HOSPITAL *re* ASSISTANTS TO THE VISITING STAFF:

“Your committee beg to recommend as follows:—

“(1) There shall be Assistant Physicians and Surgeons.

“(2) Number:—One assistant to each chief.

“(3) *Mode of appointment.* Each chief shall nominate three qualified men, one of whom shall be appointed by the Government as Assistant to the chief nominating him.

“(4) *Tenure of office.*—3 years: Eligible for reappointment for further term of 5 years, on recommendation of his chief.

“(5) *Duties:*—The Assistant Physicians and Surgeons:

“(a) Shall supervise the preparation of the clinical records.

“(b) Shall assist in the instruction of students and nurses.

“(c) The chief shall perform all major operations and the assistant surgeon shall attend to the same in the capacity of first assistant. At such operations the colleague of a chief shall have precedence over the assistant, and the assistant over the house surgeon.

“(d) Each assistant physician or surgeon shall perform such other

duties as may be assigned to him by his chief, or by a colleague who is acting for the chief in his absence.

"(e) In the absence of a chief his duties shall be performed by one of his colleagues.

"(f) Assistant physicians and surgeons shall not be members of the Medical Board, nor shall they receive any remuneration for their services."

PATHOLOGIST.

"The Board recommend that a competent resident Pathologist be appointed to take charge of the pathological laboratory, and perform such duties as may be assigned by the Board."

This report is a puzzle. All that can be said of it is that it is an endorsement of the policy of assistantship with which the hospital has already had an unsatisfactory experience. The Government again accepted the recommendations of the Board, in part, and appointed five more Assistant Physicians and Surgeons, but did not define their duties. This they left with the Medical Board. At present we have six Assistant Physicians and Surgeons on the staff with no work for them to do. They all seem to want to be surgeons—a laudable ambition—but I have not yet heard that it is the intention of any of the surgeons who recommend their appointment to share their work with them. The appointment of Assistants with nothing to do is certainly an innovation which no well regulated institution would care to experiment with.

In the name of re-organization the Board secured the approval of the Commissioner in April last to an amendment to section 86 of the hospital by-laws, with respect to the allotment of patients by request. Ac-

ording to the amended section, two patients are charged, in the general allotment, against every one allotted by request. In the original section allotments by request were not counted in the general allotment. This is certainly a retrograde step and the Commissioner could not have understood the full scope of the amendment or he would not have approved of it.

In foreign hospitals patients are allotted to the surgeon or physician to whom the medical men who send cases in may desire. In this way the management respect the wishes of the profession generally, which is clearly as it should be.

This brief account will give you an insight into the way in which the authorities and the Medical Board deal with the serious problem of hospital organization and management.

Let us see now how another hospital which was in just such throes as those through which the Victoria General is passing, grappled with the question. I have reference to the Toronto General Hospital. The medical staff of this institution recognizing that hospital organization should keep pace with the advances made in surgery and medicine, resolved to recommend to the Board of Management (Trustees) the re-organization of their institution on the most modern and up-to-date lines, and in order that the Trustees might have a free hand in the work of re-organization and in the selection of a most efficient staff they tendered their resignations in a body.

Accordingly, the Medical Staff held a meeting on the 4th of January, 1906, and appointed a committee of themselves to obtain the opinions of disinterested persons whose experience enabled them to advise on hos-

pital organization. They desired to formulate a broad plan for the establishment of a great hospital in a university centre. With this end in view the committee submitted a series of questions to leading authorities on hospital organization in Great Britain, Germany, the United States and Canada. Furthermore, anxious to profit by the experience of institutions which stand in the forefront of medical progress, they also submitted a list of questions, to leading hospitals in order to ascertain the details of their organization.

At an adjourned meeting of the Staff held on the 3rd of March, 1906, the committee submitted a tabulated statement of the answers received. The matter was referred back to them to make a report based upon the information thus obtained, and to make recommendations for the consideration of the Medical Board, in connection with the proposed re-organization of the hospital.

In their report the committee said, among other things, that in re-organizing a hospital along advanced scientific lines, three chief objects must be kept in view:—

1. The best possible treatment of patients.
2. The most approved training of medical students.
3. The fullest development, consistent with the primary object, of scientific and clinical research by the members of the staff as a contribution of the sum total of medical knowledge.

The report goes on to say that "Effects are not obtained without causes, and only by securing the conditions that have made the prosecution of scientific work successful in other places can corres-

pondingly satisfactory results be hoped for here.

"Your committee therefore, begs leave respectfully, but in the most emphatic way, to urge that a poor organization will paralyze the efforts of the most efficient staff, and if the objects mentioned are to be realized, the proper conditions must obtain. No amount of individual enthusiasm or effort can compensate for a bad system or secure good results from it."

The committee made the following recommendations, among others:—

"1. That the Board consider all positions on the Medical Staff vacant, and proceed to the organization of the various services on as ideal lines as possible, having regard only to the efficiency of the hospital and the attainments of the objects before mentioned.

"2. That the present Medical Staff, submerging all personal interests, assure the Board of their fullest co-operation and active assistance in establishing the hospital on the most approved scientific basis.

"3. That a Medical Board consisting of the chiefs and assistants of all the departments, be appointed, and that this body be held responsible for the advising of the Board upon all matters relating to appointments, and to the more purely professional matters of the hospital.

"4. That vacancies and positions on the staff be thrown open to the whole medical profession and all applications be considered on equal terms.

"5. That applicants may submit their credentials to the Board, and that appointments be made purely

“on a basis of merit, and of fitness
“for the position sought.

“6. That in making appointments the Board regard especially
“the previous training and record of
“the applicant, his scientific attainments, his teaching capacity, and
“the promise he gives of future
“work.

“7. That each physician-in-chief
“have attached to his service an
“assistant physician, whose duty it
“shall be to render such assistance to
“his superior as is necessary for the
“proper management and control of
“the interne service and to take
“charge of the service in the absence
“of the physician-in-chief.

“8. That the physicians-in-chief
“be required to devote their time entirely to teaching and consultation
“work and the care of the wards.

“9. That members of the staff
“shall make their visits to the hospital at stated hours and devote
“such time to the duties connected
“with their positions as is necessary
“for the proper study, management
“and records of the patients.

“10. That the heads of the various services be held responsible
“for the accuracy and completeness
“of the clinical records.

“11. That a sufficient amount of
“clinical assistance be furnished the
“clinicians to enable them to keep
“the records in proper condition and
“that for this purpose at least one
“stenographer be employed for the
“medical service.

“12. That a fully equipped and
“efficient X-rays and Electro-Therapeutic Department under expert
“management is essential.”

For some reason or other the staff of the Toronto General Hospital, did not adhere to the ideal plan of hospital organization as is exemplified

by the Johns Hopkins and Continental hospitals. They divided the institution up into three distinct services, with as many chiefs, each service of which is independent of the other. The result is that they have practically three hospitals under one roof. Such an organization seems to me to be too cumbersome ever to amount to very much.

When Lord Strathcona and Lord Mount Stephen built and equipped the Royal Victoria Hospital, Montreal, twenty or twenty-five years ago, the Board of Management of that institution after making careful enquiry into the various systems of hospital organization, decided in favor of the 'continenta' form. Subsequently this plan was departed from by giving the assistant surgeon and assistant physician each control of one-third of the beds. They are not, therefore, subordinate to their chiefs, and yet the chiefs are held responsible. This modification, I understand, has not worked satisfactorily. The departure from the ideal plan (the Continental) has hindered the progress of the institution. The same will probably be the experience of the Toronto General Hospital.

The members of the medical staff of the Johns Hopkins hospital, realizing that to make their hospital a great institution, it had to be organized on modern lines, resigned in a body. This allowed the trustees to organize and select a staff which in a few years placed the institution in the front rank in every sense, of every hospital in America. They adopted the Continental plan of organization with one chief for each department. To-day it is the hospital par-excellence in the United States. What modern organization has done for Johns Hopkins Hospital it ought to

do proportionately for the Victoria General Hospital, and reflexly for the Medical School.

It may be urged that in Toronto, Montreal and Baltimore, the conditions are different to what they are in Halifax: that these are centres of Great Teaching Universities and that therefore, the facilities for clinical and scientific research work must be up-to-date and the very best possible, consistent with the primary object of every hospital,—the best possible treatment of patients. Halifax is a university city too. It is the home of Dalhousie University, with its Arts, Law, Science and Engineering departments. It will soon have a Technical College—the first of its kind in the Dominion. It has a Medical School which receives from the Government a grant equal to one-fifth its (school) revenue. It will be thus seen that the conditions in these cities and in Halifax are very much alike.

It will be admitted that the Government should see to it that the country shall get the best possible return for any money grant that it may give to public institutions. The Halifax Medical College therefore, needs re-organization and proper supervision as well as the Victoria General Hospital. Neither of them does superior work.

Recently I have visited Amsterdam, Berlin, Vienna, Brussels, Paris, London, Liverpool and Edinburgh, and wherever I went I endeavored to acquaint myself with every phase of hospital work and organization, and I can honestly say that no good clinical and scientific work is being performed in the Victoria General Hospital nor can be performed under existing organization. This is a sweeping statement to

make, but unfortunately it is only too true.

To come more particularly to the organization and requirements of the Victoria General hospital.

It has no out-patient department: in this respect it differs from most hospitals in a university centre. It contains about 150 beds. The population of Halifax is between 45,000 and 50,000. As matters are at present, a city of this size is too small for surgeons to restrict their professional work to surgical practice. They are therefore, general practitioners, and must continue as such for years to come, and it is impossible for them to devote the time and attention necessary to perform the work of a general hospital as it should be done now-a-day. And neither have they the time necessary to keep themselves as well versed in the science and art of surgery as a hospital surgeon ought to be in an up-to-date institution, and besides they are unable to visit foreign institutions to see great surgeons work and learn from their methods. All these drawbacks are incidental to bad organization and to the surroundings. Then again the hospital, not having an out-patient department and being comparatively small, has no work for assistants, and hence there is no person in course of training to fill up vacancies as they arise. Positions, as a result of this, are filled by raw and inexperienced recruits. This should not be tolerated. The surgery of to-day is not the surgery of twenty or twenty-five years ago. Those who are entrusted with the care of the sick should bear this in mind. It is a serious matter, and I must confess I am unable to see how these difficulties can be overcome under existing organization and surroundings. The

questions which arise here are: Are matters good enough in the hospital as they now exist? No person can honestly say, Yes. Can any other method of organization remedy existing evils? Certainly. Good organization is the only remedy.

The hospital is a Government institution, maintained by the revenue of the province. It therefore should be as perfect and modern in its organization, management and equipment as any hospital of its size in America. To say that it is not worse than hospitals in other small Canadian cities will not do. It is no defence. There is enough money spent upon it annually to make it an ideal institution. What it wants to make it what it ought to be, is proper organization with a responsible head to each department to direct the work. Each chief should be required to limit his professional work to the subject of which he is head. In other words he should be a specialist and be appointed on his experience and record. Furthermore, each head should visit the hospital at stated hours and stay certain hours, and be held responsible for the way in which the clinical records of his department are kept.

Then again, each chief should be given one or two assistants chosen for merit and the promise they give of future good work, and be subordinate to him. It would be his duty to train them in the work of his department so that when he is retired the first assistant would be qualified to take his place. Under this plan no service of the institution would ever be left under the control of an inexperienced person, as it must be at present when a vacancy on the staff is filled. By this arrangement the profession and the public would

be assured of having always an able and experienced person in charge of the various services. This, I repeat, is the method of organization par excellence, more especially for our hospital with the conditions I have above mentioned. It would restore public confidence in the institution.

I wish now to briefly direct your attention to the opinions of Mr. J. Ross Robertson, of Toronto, on the "Continental System of Hospital Organization." The extracts I am quoting are taken from a paper he read entitled "A Layman's View of Hospital Work," before the American Hospital Association, on 29th September last.

THE WAY TO GAIN INFORMATION.

"During the past thirty years I have every year visited Great Britain and the Continent of Europe, and nearly every state of the American Union. During these visits, interested as I am in hospital work in this city of my birth, I naturally felt interested in this work in other cities.

"My visits were not inspired by curiosity. My idea was to gather knowledge, so that the particular class of work which I had at heart might be benefited.

When I tell you that these visits covered not only close inspection of the work, but heart to heart talks with the superintendents, lady superintendents and matrons, of all the principal hospitals for adults in large cities in Europe, Great Britain and Ireland and the United States, and in every hospital for children in the same area, I think you will admit that my mileage ought to have been given me. An experience in the line of information-getting that should have availed to advantage to the situation that I am connected with, and so it did.

HOSPITAL SERVICE.

The desirability of reducing the number of the medical and surgical services in hospitals "prevails to-day to a greater extent than ever before. It promises to result in the concentration of responsibility and unity of effort.

Of course it is a difficult matter in some hospitals to reach that point, but the day may come when a single service in each department with a head and competent subordinates may be attained.

The German hospitals that I have visited follow closely on these lines, and so do some in Great Britain, and a few on our side of the Atlantic.

Distinguished professional men, such as Dr. Mayo, of Rochester, and Ochener, of Chicago, advocate this principle, and it is their opinion as a result of their experience in examining the systems and workings of the principal hospitals of the world.

Boards of Management composed of laymen favour to-day more than ever, the adoption of this principle to a greater or less extent.

The institution with which I am connected introduced this system in Canada, and it has been adopted with success in other hospitals of the Dominion."

I desire especially to draw your attention to the foregoing extracts taken from Mr. Robertson's paper. They are worthy of careful perusal. Mr. Robertson, layman as he is, undertook to acquaint himself with every phase of hospital work and organization by visiting the leading European and American hospitals and interviewing the heads of each institution visited. Then he returned home and introduced into the hospital in which he was personally interested, the best system of organization

known to competent authorities. Our hospital and others could not do better than follow in his footsteps.

I wish also to bring briefly to your notice what Dr. Hurd, Medical Superintendent Johns Hopkins Hospital, has to say on hospital organization. The extract I am about to quote is taken from a paper read by him in September, 1906, before the Association of Hospital Superintendents in Buffalo. He said among other things that, "In a few instances in America, in imitation of German clinics, general hospitals have been organized with a skilled head to each department, and a continuous term of service throughout the year. Such an organization, in my judgment, has many advantages. To have a single skilled head for every department promotes a uniformity and efficiency of work. The records are more uniform and a steady pressure on the part of the responsible head is exerted upon all members of the subordinate staff. If in addition to this continuous service, an adequate salary be paid to the head of a department, the managers of a hospital are able to enforce a stricter performance of the contract and to insist that the head of the department be compelled to give regular and efficient service.

"There are also advantages in connection with the ordering of medical and surgical supplies and a constant diminution of the general expenses of the hospital. Where the service is divided and there are many heads to a department, it is but natural that views should differ, and there is danger of much duplication of apparatus, increased consumption of medical supplies, and lessened responsibility for good medical work, and hence

“the advantages of a single responsible head seem to me evident.”

I agree entirely with what Dr. Hurd says concerning the advantages possessed by concentrated over divided responsibility, even in the purchase of medical and surgical supplies.

In conclusion, I wish to point out some of the special needs of the hospital:

(a) To-day every well regulated hospital has a fully equipped X-rays and Electro-Therapeutic Department under expert management. We should have one too. At present in our hospital it is a department in name only, and it is under the control of a layman who has not even an elementary knowledge of the subject. This should not be permitted to exist any longer.

(b) The Victoria General Hospital has no resident pathologist and bacteriologist. We should have a pathologist of unquestionable ability and considerable experience. The institution has no pathological museum, although it has had a medical school attached to it for over thirty-seven years. This certainly does not speak much for our medical school. A medical school to-day, without a pathological museum is a curiosity. The hospital should of course, have one of its own.

(c) The hospital should have a skilled anaesthetist, whose duty it should be to conduct the administration of anaesthetics at all regular operations. He should also teach others how to administer it. I believe lives have been lost in our hospital because of the want of a skilled anaesthetist.

(d) We also need an admitting officer. He should be a medical man of merit and of at least two years standing, and no patient should be

admitted except through him or on his recommendation.

(e) There should be an out-patient department in connection with the hospital. At least one-eighth of the patients annually admitted do not require hospital treatment. These could be treated well enough in an out-patient department. In this way we could get rid of loafers and boarders and minor affections, and the beds now occupied by them would be available for needy and deserving patients.

(f) The hospital should have a paid Medical Registrar, who would keep the clinical records of the institution under the immediate supervision of the heads of the departments. Professor Osler says that “The state of the hospital records is an index to the intelligence of the staff, and the care with which the patients’ maladies are studied.” “I feel that the hospital records properly made out and properly filed are amongst the most useful possessions of the profession and especially of the municipality, and I believe that most hospital records are abortive for the reason that a proper organization is lacking.” (Prof. Geo. Dock) The clinical records of our hospitals are no credit to us. They are absolutely no good. There should be associated with the Registrar a stenographer and typist.

Thus, gentlemen, I have tried to put the matter straight and direct to you. You know, the Government know, seemingly everybody in the province knows the conditions into which the institution has fallen. What are you going to do about it? Let matters go along in the old rut, or band together and demand of the Government the only thing that will effect a lasting cure—*thorough and complete re-organization.*

SOME REMARKS ON AFTER-TREATMENT IN ABDOMINAL SECTION.

By H. K. MACDONALD, M. D.,
Halifax, N. S.

(Read before the Maritime Medical Association, Halifax, N. S., July, 1908.)

THE after-treatment in abdominal section, with the varied conditions we may meet, is of such importance that to attempt in a paper of this kind to do more than simply enumerate the more common conditions usually met with, and indicate very briefly the line of treatment, would be unwise.

I will draw your attention first to those cases with a "clean periton-
eum."

The posture of the patient is important. Until all evidence of shock and the nausea from the anæsthetic has passed off, the head should be low without a pillow. Some authorities recommend placing patient on right side, thus forcing passage of mucus, etc., from stomach into duodenum and lessening liability to vomiting. After eighteen to twenty-four hours the above symptoms usually pass off. Then the head should be high and, in elderly people, the shoulders as well; as this position allows more free movements of diaphragm and lessens the liability to hypostatic pneumonia.

Drainage.—The question of the removal of the drainage is to-day, in this class, not an important one, as there are so few cases where drainage is indicated. Still where marked oozing exists, or where sloughing areas exist, we may have to consider this question. The rule is to remove it just as soon as the need of it is over. This is usually eighteen to twenty-four hours after the operation.

If upon attempting to remove the gauze, we still find evidences of oozing, then remove only a portion and eighteen to twenty-four hours later remove the balance. Apart from the liability of infection taking place, and the production of hernias, no great harm is done if gauze is left in for four or five days, and after that period of time has elapsed it is much more easily removed.

Relief of Thirst.—This is a condition in this class of cases not usually very difficult to treat. The degree of thirst is largely dependent upon the amount of shock produced, and, save in exceptional cases, shock is not an important factor. Hence the condition is usually easily relieved. A good rule is to give nothing by mouth when the patient's stomach ejects it soon after. After the nausea of the anæsthetic is over, give teaspoonful sups of very hot water every fifteen minutes, increasing the amount as it is tolerated. Nothing but water should be given for first twenty-four hours. Where the stomach is very irritable, particularly where ether has been used, it is a good plan sometimes to give patient a large draught of tepid water. This, though quickly ejected, has a good effect. Where thirst is very pronounced a saline enema works splendidly. If tongue is very dry, a few drops of lemon juice in a teaspoonful of glycerin, painted on the tongue, gives relief. Ice, on account of hyperæmia of the mouth which it produces, is always contra-indicated.

Pain.—Perhaps the condition most common to all in this class is pain, not only abdominal pain, but pain of an aching character in the back and limbs. Aspirin in ten grain doses and repeated every four hours very often has a most happy effect. As to the use of morphine, surgeons are not unanimous, some recommending, others condemning it. A good safe rule is that for pain itself, unless excessive, morphine is not to be given. There are many exceptions to this rule, however, as to the old or debilitated who are suffering from shock, or in the very young who are restless.

Nourishment.—When to give nourishment. A safe rule is that no patient should have any nourishment for at least fourteen to eighteen hours after the operation. After that period has elapsed, for the next forty-eight hours give liquid nourishment in increasing doses; then soft foods until, at the end of a week or ten days, unless especially contra-indicated, the patient is taking any thing that suits her.

Bowels.—When should we first attempt to move the bowels? As a rule there is more or less tympanites, dependent upon the severity and length of the operation. As a result of the section we get a derangement of the circulation in the intestines, and this derangement is in proportion to the amount of irritation of the splanchnic nerves and early and free movement of the bowels is the most important factor in reproducing the normal condition. Hence the rule to move the bowels early is a good one. A s.s. enema with turpentine or thirty grains quinine bisulphate added, is good. A Montreal General Hospital surgeon uses, in obstinate cases, twelve ounces of equal parts of milk and molasses, and claims excellent

results. The enema should be given twelve hours after operation, and repeated every twelve hours thereafter until the bowels move spontaneously. After forty-eight hours give calomel gr. 1-10, soda bicarb. gr. every hour for twenty-four hours; then give a saline. After this any laxative p.r.n.

Let me now draw your attention to a second class of cases—those with a more or less general septic peritonitis.

In order to impress upon you the benefits which occur from the modern treatment of this condition, let me repeat the words of an authority at the recent meeting of the American Surgical Association, who said "There is probably no disease, not excepting diphtheria since antitoxin was discovered, in which changes in treatment have reduced the mortality percentage so noticeably as the modern treatment of general septic peritonitis."

Drainage.—The modern treatment demands that drainage be employed, in a large percentage of cases, and again the rule is to remove drainage just as soon as need of it is over. As the best drainage of the peritoneal cavity is secured by early and free purgation, the washing out of the stomach before patient comes out of anæsthetic, and the introduction of two ounces of saturated solution of sulphate of magnesia, followed four to six hours afterwards by a s.s. enema which is frequently repeated until bowels move spontaneously, are often followed by most happy results.

Posture.—As regards posture, it is now recognized by all surgeons as of utmost importance, and the Fowler position, or some modification, is mainly recommended. It is recognized as a fact that the lower and pelvic portion of abdominal cavity does not

absorb so rapidly as the upper abdominal portion, hence when the patient is placed in the Fowler position, the toxic laden fluids in the peritoneal cavity will tend to gravitate towards the pelvis, and in addition the action of the diaphragm during respiration will help move the fluids in that direction, making drainage of lowest portion of the pelvis important. Another advantage of this position is that it tends to keep fluids collected into a smaller space, and when we remember that it is not the quantity of fluid present which is harmful, but the extent of peritoneal surface which comes in contact with the fluids, the maintenance of the position is recognized to be of great importance. By keeping the upper part of the abdominal cavity empty, as in this position, we lessen the dangers of many of the more serious complications, as sub-diaphragmatic abscess, pneumonia, empyema, etc., etc.

Thirst.—The treatment in this class is of the utmost importance. Water is urgently needed to meet many drains, to dilute the toxins, to increase the excretion of urine which is scanty, to fill the blood vessels, and to maintain—and in many cases help raise the blood pressure. The thirst in this class is no doubt due to loss of fluids by vomiting, and by an escape of lymph into the peritoneal cavity and the collection of fluids in splanchnic area. The most effectual way to control this condition, is by the absorption of large quantities of water through the rectum. The retention and absorption of fluids in the rectum depends entirely upon the method of administration, close attention to details being essential.

Murphy of Chicago, inserts the nozzle of syringe into the rectum with tap and fountain elevated but a few

inches above plane of the rectum, so that the water will enter the rectum at about same rate as it is absorbed. By this method he claims that large quantities will be absorbed within the first few hours after an operation. He claims that the absorption of large quantities reverses the current of the lymph in the peritoneal lymphatics, so that instead of absorption taking place, the mouths of the lymphatics pour out fluid bathing the peritoneal surfaces with this free discharge and the posture and action of the diaphragm directs this exudate to the pelvic cavity, there to be drained away. And again the free absorption of water stimulates the heart and kidneys, eliminating through the kidneys the septic material which has gained entrance to the circulation, and largely increasing the amount of urine excreted for the first twenty-four hours.

Re Pain.—The treatment of pain, leaves much to be desired. As to the use of morphine, few surgeons today advise its early use, unless in exceptional cases. At the discussion on Dr. Murphy's paper on "Acute Suppurative Peritonitis" at the recent meeting of the American Surgical Association, no less an authority than Deaver, of Philadelphia, said that he did not know what a hypodermic syringe looked like for giving morphine in this condition; while at the same discussion Mr. G. B. A. Moynihan, of Leeds, England, said "that the giving of a small dose of morphine before patient leaves the operating table is almost routine, but never to be repeated by any person but himself, or subject to his order." Between these two extremes there are various opinions held. The great majority, however, agree that morphia is contraindicated, at any rate until after bowels have moved freely. Then

it may be given in minute doses if really necessary.

Nourishment. — The giving of nourishment is another thing to be considered. Stopping all food and liquid by mouth will check peristalsis, and help prevent the dissemination of septic material by peristaltic movements, especially in perforative cases. The absorption of large quantities of fluid by the rectum is quite sufficient nourishment for first twenty-four hours. If necessary after that, nutrient substances may be added to enemas. After first twenty-four hours, if stomach is tolerant, water can be given, and water for the next forty-eight hours is more important than food. After the third day, if case is progressing favorably, liquid foods can be given and the diet very gradually increased.

There are certain special conditions to which the surgeon's attention is frequently called in this class of cases, and perhaps the one most often met with is *Continued and Persistent Vomiting*. Vomiting persisting after the first twenty-four hours should always arouse suspicion. In many cases it is still due to the anæsthetic, but in this class of cases we should be on the alert for other complications, such as uræmia, pneumonia, ileus, etc. Or again persistent vomiting may be caused by too tight construction of pedicle, the pressure of a glass drainage tube, when used, against the rectum, and cases are reported where iodoform gauze in the cul-de-sac was responsible. The removal of any of these causes has always a good effect. Ewald says that the stomach is the centre of the nervous plexus, whose branches have wide connections and directly or indirectly involves nearly every organ in the body. Hence irritation at any point in the pelvis will

reach the stomach and produce vomiting. When vomiting is persistent in character the surgeon should personally inspect the vomited matter, as information as to the probable cause may be discovered.

Many therapeutic agents have been recommended and tried. Inhalation of vinegar fumes by soothing respiratory mucous membrane and lessening irritability of pneumogastric has given excellent results in some hands. Heat and cold to epigastrium, cracked ice, cold champagne, drop doses of dilute hydrocyanic acid, 5 per cent. solution of cocaine, carbolic acid in minim doses frequently repeated, and many others. Keep head low and feet raised, and give no nourishment by mouth. If all these measures fail systematic lavage of stomach should be made.

Hematemesis is a rather unusual symptom. The blood is sometimes black in colour. This is a bad prognostic sign. Wash stomach with a solution containing a drachm of bicarbonate of soda to the pint of water. Adrenalin chloride in increasing doses if necessary.

The treatment of hiccough is about the same as for persistent vomiting. Pressure on the pneumogastric over carotid tubercle is recommended; also traction on tongue, or depressing base of tongue and holding it in that position for some time.

Tympanites and Ileus are special conditions we sometimes meet, and demand most urgent treatment. For the tympanites all those measures suggested for the early movement of the bowels should be adopted unless complicated with ileus, *reopening of abdomen does no good for paralysis of intestines*. When mechanical obstruction is present, however, this is indicated. Flushing the whole of the intestinal canal with salines through

multiple enterotomy openings, has recently been advocated in severe and desperate cases. For the carrying out of this in detail, conclusions, etc., I would refer you to the June number of *Annals of Surgery*, to a paper by Monk, of Boston, read before the American Surgical Association in May, 1908.

Let me close these remarks by referring to another condition which, when present, demands special treatment, viz.: *Shock*. Before the days of aseptic and antiseptic surgery, shock and sepsis were the two conditions which surgeons dreaded most when contemplating an abdominal section. Thanks to aseptic and antiseptic methods and the development of modern technique, the latter, sepsis, can be eliminated. We are not so fortunate with shock. In order to treat the condition successfully, it is necessary to have some knowledge of the physiology of shock. It may be defined as the condition which results from exhaustion of the vaso-motor centres, and the main feature in the production of the condition is a fall in general blood pressure.

Crille's experiments and conclusions are interesting, because they point out the important factors in the production of shock in this class, and also indicate the lines of treatment. He showed by experiments on animals, when the abdomen was opened and the intestines freely exposed that this procedure was soon followed by a marked fall in general blood pressure, and vascular dilatation of the whole of the splanchnic area, and further, that manipulation and injury to the intestines markedly increased this fall in blood pressure. The effect of manipulations and injuries to the omentum was the cause of the above, and therefore he concluded that the function of the omentum was

to protect the rest of the peritoneal cavity. He further demonstrated that the severity of the shock produced was in proportion to the distance of the part operated upon, from the pelvis; that shock was much more pronounced in operation upon liver and stomach, the organs furthest from the pelvis than upon those in the pelvis. When we remember these things, the adage "prevention is better than cure" seems particularly applicable in this condition. Where time permits much can be done to prevent the development of shock. The elimination of secondary pathological conditions apart from the ones we are actually treating, particularly diabetes and acetonuria; one or more blood examination, including a differential leucocyte count; the estimation of the percentage of hæmoglobin; are all important. And in the case of nervous or hysterical patients, whose reflexes are active, and their impulses quickly conveyed, thus tending to produce vaso-motor exhaustion; a good night's sleep and an early morning operation are all-important.

Another important point is to see that our patients get plenty of easily digested liquid nourishment, except where especially contra-indicated,—right up to within a few hours of operating. Liquid peptenoids is one of the best as it contains sufficient alcohol to have a stimulating effect. Have patient take plenty of fluids. The depletion of the fluids of the body by the too free use of salines before operating is contra-indicated. Crille's experiments with cocaine on nerve trunks, producing a physiological "block" to afferent impulses, have led some people to think that it may be a great factor in lessening liability to shock. The care of the patient on the operating table; prevention of chilling of the surface of body; the

conserving of every drop of blood both arterial and serous; the services of a good anæsthetist who can recognize early symptoms of shock; and a well-planned technique, so as to avoid delays in operating and thus lessening the time required to perform the operation, are all of the utmost importance.

The treatment of the condition when established, requires much care and careful judgment. The patient should be kept warm with blankets and hot bottles. Profuse perspiration is contra-indicated, as it tends to lower blood pressure. The foot of bed should be raised until the abdomen is on a higher level than thorax and head, as this prevents blood accumulating in abdominal and pelvic organs. A tight abdominal binder compresses the abdominal walls and also lessens the quantity of blood in splanchnic area. Bandaging the extremities has a good effect, and in extreme cases is always indicated.

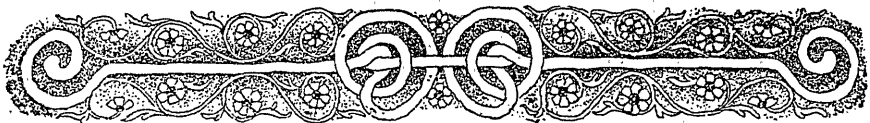
The value of stimulants is usually overestimated, and much harm can be done by too free use of them. Stimulating the heart when blood pressure is low and the right side of heart not properly filled will only exhaust the action of the heart. The too free use of stimulants is also contra-indicated on account of the cumulative action which they possess.

Use of strychnine is claimed by some authorities to be distinctly contra-indicated on account of the vasomotor exhaustion which it tends to produce. Alcohol on account of its toxic action, its fleeting effect, and its tendency to produce vaso-dilatation, is not as much used as formerly.

Ammonia, combined with alcohol is recommended. Howard Kelly recommends twenty grains carbonate of Ammonia, two ounces of brandy, with enough water or beef tea to make eight ounces, administered as an enema.

Supra-renal gland extract in the form of adrenalin chloride is indicated in all cases of commencing shock. ten minims hypodermically or a larger dose per rectum has a splendid effect. It acts very quickly, has to be repeated frequently, and on account of its action being directly upon the walls of blood vessels, it thus raises the blood pressure independent of exhausted vasomotor centre.

Hypodermoclysis of saline solution is always indicated. Salines given by sub-mammary injection, or leaving saline in abdominal cavity all help. Intravenous injections are not practiced now as much as formerly; atropine and morphine is indicated in some cases.



SOCIETY MEETINGS.

THE CANADIAN MEDICAL ASSOCIATION.

THE forty-second annual meeting of the Canadian Medical Association will be held in Winnipeg, Manitoba, on the 23rd, 24th and 25th of August, 1909. The Chairman of the Local Committee of Arrangements is Dr. H. H. Chown, Winnipeg, and the Secretary of same Dr. Harvey Smith, Canada Life Building, Winnipeg. President, Dr. R. J. Blanchard, Winnipeg; General Secretary, Dr. George Elliott, 203 Beverley St., Toronto.

Dr. Blanchard, the President, has appointed the following Committees: the first two names in each Committee are Chairman and Secretary respectively:

Executive:—Drs. Chown, Smith, Blanchard, Devine, Milroy. McLean, J. R. Jones, Halpenny, Vincent and Hughes.

Medicine:—Drs. J. R. Jones, Hunter, McDonnell, Bjornsen, E. W. Montgomery, Chestnut and McCalman.

Surgery:—Drs. Nichols, McLean, Blanchard, Todd, Lehmann, Galoway, D. S. McKay and McKentie.

Ophthalmology and Otology:—Drs.

Prowse, Turnbull, Harvey-Smith, Good, Raymond, Brown and Williams.

Pathology:—Drs. Gordon Bell, Pierce, Vrooman, Webster and Leeming.

Credentials:—Drs. Campbell, Kenney and Mitchell.

Finance:—Drs. Patterson, Simpson, Pope, Brandson, Popham, Moody and Douglas.

Entertainment:—Drs. Rogers, Field, Devine, Milroy, Young and Fletcher.

Transportation:—Drs. Blanchard, Vrooman, Chas. Mackenzie, Moorhead, Rogers and Leney.

Exhibit and Accommodation:—Drs. Munroe, Coulter, Davidson, W. G. Campbell, A. M. Campbell, Hiebert, DeBuc and Burrige.

Advertising and Publication Committee:—Drs. Hugh MacKay, Hughes, D. Stewart and D. MacDonald.

Those requiring hotel accommodation should apply early, as the British Society Conference is to be held in Winnipeg at the same time as the meeting of the Canadian Medical Association.

COLCHESTER-HANTS MEDICAL SOCIETY.

THE regular meeting of the Society was held in the parlor of the Y. M. C. A. Hall, Truro, on November 19th, 1908.

Dr. J. W. Margeson, the President, occupied the chair. Two ex-

cellent papers were presented and fully discussed.

1. "Hospital Organization," by Dr. N. E. McKay, of Halifax. An interesting and lively discussion followed this paper, and the matter as

referring to the Victoria General hospital will be fully discussed at the next regular meeting in February; but as regards the paper the following resolution was passed unanimously:

"WHEREAS, it is evident that some means should be adopted to place the Victoria General hospital in a better position in the estimation of the Profession:

AND WHEREAS, the paper read by Dr. N. E. McKay before the Society is worthy of careful consideration in view of this need:

Therefore Resolved, that the MARITIME MEDICAL NEWS is hereby requested to publish said paper for the general information of the profession.

2. "Puerperal Fever," by Dr. J. W. Reid, of Windsor, emphasizing the small chance of attending physicians being responsible for the infection.

The following letter, sent to the widow of the late Dr. Charles Bent, was, upon motion, ordered to be sent to the NEWS for publication:

Truro, N. S.

Nov. 17th, 1908

Mrs. Charles Bent,

Truro, N. S.

Dear Madam:—

At a recent meeting of the Colchester-Hants Medical Society, the following resolution was presented and passed unanimously:

"WHEREAS, since our last meeting the death has occurred of a valued member of this Society, Dr. Charles Bent, of Truro, after a lengthy and honourable career as a general practitioner of medicine.

Therefore Resolved, that the Secretary be instructed to convey to the widow and family of the late Dr. Charles Bent, our sincere sympathy."

On behalf of the members of our Society, I beg to assure you of the sincere sympathy of all physicians who knew the late Dr. Charles Bent.

His relations with the Medical Profession in this Province and County were always creditable and honorable. He did his work quietly and intelligently, and for very many years was very actively concerned in all that related to the best interests of this town and county. He combined to an unusual degree the arduous work of his profession with the duties of a practical patriotic citizen.

After many more than the average number of years of service he has been called to the Rest he most surely merited. Our appreciation of Dr. Bent's life and work ensure the sincerity of our sympathy for yourself and family.

On behalf of the Society,

I remain

Yours truly,

(Sgd.) H. V. KENT,
Secretary.

ST. JOHN MEDICAL SOCIETY.

OCTOBER 7.—The first meeting of the year was opened with an address by the President, Dr. Pratt, entitled, "The Objects of a Medical Society." The

many advantages a Medical Society conferred upon its members might be considered under three heads: (1) Instruction, (2) The directing of hygienic and sanitary efforts, and (3)

the promotion of sociability amongst the members of the profession. These various points were well elaborated with examples and references.

The President advocated placing the Medical Library in the Public Library with proper regulations governing the issue of the books.

Later in the evening, the members were handsomely entertained by the President, at White's Restaurant.

OCTOBER 21.—The Vice-President, Dr. J. S. Bentley, in the chair.

A discussion of the New Brunswick Medical Act was opened by Dr. S. Skinner, who suggested the advisability of several changes. Many members took part in the discussion, and various changes were advocated. Finally a committee was appointed to take the subject into consideration, to report at a subsequent meeting.

NOVEMBER 4.—The President, Dr. Pratt, in the chair.

Dr. Bentley read a paper on Itching, its causes and treatment. He spoke of this symptom as being fre-

quently met with, and often a difficult one to treat. Itching is a subjective sensation in the skin, causing the individual to seek relief by scratching. Its scab is usually in the epidermis. It is common to many diseases, and it may be a general or a local symptom. The following classification was given according to causes:—1. External causes (a) Mechanical, (b) Toxic, (c) Climatic, (d) Parasitic. 2.—Idiopathic causes (a) Neurotic, (b) Senile. 3.—Constitutional causes (a) Autotoxic (b) Pathological Processes of the Skin.

NOVEMBER 13.—Dr. A. P. Crockett read a paper entitled "Remarks on the treatment of Eye Affections." The importance of care in the use of atropine, cocaine and other drugs was considered, and common errors in the dispensing of eye medicine pointed out.

A paper on "Arterio-Sclerosis" was then read by Dr. Wm. Warwick, and in connection with this subject several pathological specimens were shown.

HALIFAX AND N. S. BRANCH BRITISH MEDICAL ASSOCIATION.

THE annual meeting of this Society was held on the 14th October last, when the various reports were submitted and approved. All tended to show that the Branch is in a satisfactory condition generally, and that the outlook for the future is bright. The election of office-bearers for the ensuing year took place and after a lively competition resulted as follows:—

President:—Dr. Jos. J. Doyle
Vice-Pres.:—Dr. Jas. R. Corston
Secy.:—Dr. D. T. C. Watson.
Treas.:—Dr. G. M. Campbell.

Executive Council:—Drs. Jas. Ross, H. K. MacDonald, E. B. Roach, P. A. MacDonald, F. V. Woodbury, R. E. Mathers, and G. M. Campbell.

OCTOBER 28:—A clinical meeting was held on this date at the Victoria General hospital, and was well attended.

A communication from the President-elect of the Association was read inviting representation of the Branch at the annual meeting at Belfast in July next. Action in this regard was deferred to a later date.

Dr. E. A. Kirkpatrick presented two cases—one of pure albinism in a boy of twelve. The hair was pure white, complexion very fair with pink eyes. The condition, on examination with the ophthalmoscope, could be seen to be present in the deeper structures of the eye. A history of another case in the same family. Case II. was that of a man showing abnormal protrusion of the right eye, with complete absence of any symptoms to assist to a diagnosis. No history, such as injury etc., or anything else, to account for cause. Eye was noticed only five or six weeks ago to be bulging, and has since then been getting rapidly worse until the present condition of extreme exophthalmos. Careful examination revealed nothing wrong with the eye itself and nothing of account in ears, nose or throat. The Doctor recounted the more common conditions which may so affect the orbital region as to cause protrusion of the eye. They are: the acute inflammations, tumours and new growths, aneurism of the ophthalmic artery, and injuries. The condition was a puzzling one, inasmuch as the cause was not apparent.

DISCUSSION:—Dr. Birt thought the two most likely causes to be aneurism of the ophthalmic artery, and a rapidly growing sarcoma. The probability also of specific disease must not be overlooked—the use of the iodides would probably exclude this; he would suggest a trial of the mixed treatment for a time on the case.

Dr. Chisholm:—The case reminded him of a similar one he had seen diagnosed as sarcoma, in which there was almost as much protrusion, but few symptoms: it had turned out to

be an abscess; he did not think this could be one—rather favoured sarcoma. Thought it would do no harm to insert a needle at the roof of the orbit, following the bone inwards—if there were no evidence of bony growth or pus, the presumption of sarcoma would be strong.

Dr. Hogan exhibited a pathological specimen of a growth removed from a woman thirty-five years of age, who had come to hospital complaining of gastro-intestinal symptoms, with constipation and tarry stools. Examination had revealed a marked swelling in left iliac region. Provisional diagnosis of malignant disease of the sigmoid had upon operation, been proven correct; the growth was resected and patient had done well.

Interesting discussion followed, during which Dr. Chisholm emphasized the significance, in cases of chronic constipation, of tarry stools and attacks of colic—malignant disease is to be suspected. He could recall cases similar to that reported.

NOVEMBER 11.—A meeting was held at the City Hall, and there was a good attendance. After reading of the minutes and disposal of communications, etc., Dr. D. A. Campbell, a past-president of the Branch, took the Chair and called upon Dr. Doyle to read his opening Presidential Address. This proved to be a very good one, along the line of the early development of the Science of Medicine, and will be published. The paper was discussed at some length by many of the members.

Dr. Hattie thought the subject chosen a singularly appropriate one for an address—we know too little of our medical predecessors. Suggested the setting apart each session of an evening to be specially devoted to consideration of the lives of eminent

medical mn of the past and present, both foreign and local.

The suggestion met with very favourable comment, and the programme committee were advised to bear it in mind.

A vote of thanks to the President for his address was passed unanimously and suitably acknowledged.

Dr. D. A. Campbell exhibited a rare specimen—a salivary calculus which had been removed from the sublingual duct.

Adjournment was then made.

NOVEMBER 25.—Regular fortnightly meeting. City Hall, Halifax. After reading and confirmation of minutes and disposal of business. Dr. A. E. Doull was called and read a short paper explaining the new method of submucous resection of the nasal septum, at present employed by specialists in the treatment of spurs, deviations, etc. The paper will appear in the NEWS.

An interesting discussion followed. Dr. Allan Cunningham, present as a visitor, called, emphasized the importance of the operation, good results obtainable, and referred to the various methods employed for obtaining anæsthesia of the parts.

Dr. Birt mentioned the practice, common among American operators of using very strong solutions of cocaine for local anæsthesia. Adrenalin is used with it to prevent absorption.

Dr. Mathers did not favour the use of such strong solutions: he had seen serious results from it, and does not use it. Had done much work with the weaker solutions—up to 5 per cent., and had seen no ill-effects, and obtained just as satisfactory results.

Dr. Doull closed the discussion, referring to the effects of spurs, etc. on the patient, the relation between such conditions and asthma, catarrh,

etc., and good results from treatment.

Dr. D. T. C. Watson showed a brain removed from a child three and a half years old which had died after an acute illness with fever, convulsions and coma. Previous history was indefinite. A diagnosis of acute tuberculous meningo-encephalitis had been made on a history of tuberculosis in the family and of chronic middle-ear disease in the child, though the clinical features of the case seemed to be more in the line of a simple acute pus infection. Post-mortem, the brain was found to be covered externally with large and small collections of pus. The interior of the organ was soft and broken down, and filled with sero-purulent fluid, microscopical examination of which, with the pus and broken-down brain-substance, had confirmed the diagnosis, revealing the presence of the tubercle bacillus in large quantities and almost entire absence of other organisms. The brain was of exceptionally large size for a child so young, and was exhibited to shew the destructive effect of the tuberculous process on the organ. The presentation of the specimen elicited an interesting discussion on this and allied conditions of infection.

An epidemic of diphtheria of a rather virulent type at present prevailing in the city, some members thought the Branch ought to take notice of and deal in some way with it. Considerable discussion on this point took place, ending in the passing of a motion to hold a special meeting of the Branch a week from this date to discuss diphtheria and to decide upon what we might do to assist the authorities in stamping out the disease.

The meeting then adjourned.

DECEMBER 2.—A special meeting on this date was called to consider diphtheria, and what might be the best method to adopt to assist the authorities in stamping out an epidemic of a rather severe type prevalent in the city now for some time back. The attendance of members and visitors was good, and a spirited and highly instructive discussion occupied the time of the session very profitably.

Dr. A. C. Hawkins opened the discussion, remarking upon the fact of the present epidemic having broken out at a particularly dry time of the year. He would suggest first a consideration of the methods at present in use for keeping the city clean; he thought also that a more efficient mode of inspection of houses should be adopted.

Dr. F. V. Woodbury referred to methods of inspection and prevention in use among the city schools, emphasizing the need for efficient sanitary measures; the cases he had encountered were chiefly in localities where plumbing was bad, cellars damp, etc.

Dr. A. R. Cunningham thought the quarantine period should be longer than it is. Convalescents are allowed too soon to mingle with other children, among whom the disease is often thus spread. In reply to a question from the Chair—the diphtheria bacillus in the dry state survives for a very long time; moist heat of 60°C will kill it.

Dr. M. A. B. Smith thought it essential to determine the cause of the outbreak and mode of propagation of the disease. Believed dry germs are carried about. Discussed method of quarantine in some large cities, where instead of a guard at the house door, one is placed at that of the patient's

room. Patient and nurse can thus be kept away from rest of family, and fumigation can at the end be more easily done.

Dr. Arthur Birt:—Domestic animals act as a medium of contagion far more frequently than is generally imagined. Referred to an extensive and troublesome epidemic in Quebec, the cause of which after a trying search was traced back to sick cats. Cats appear to be particularly susceptible to this disease. Healthy people carry the germs about and a great deal of the failure to check epidemics is undoubtedly attributed to this fact.

Dr. W. H. Hattie referred to the frequent contagiousness of slight nasal discharges in patients, even in whom no membrane shows. Such may be many times more a medium of contagion than a membranous throat.

Dr. A. J. Cowie:—There are many points about diphtheria which we still do not know, and this fact is one which certainly calls for consideration. Diseases, such as this one for example, he thought, change their clinical aspect in time—why, he could not say. Made interesting mention of experiences in the older days of practice. Cases of diphtheria he used to see were, many of them those with a very dark membrane on the fauces, bleeding freely in the throat; this kind did not much tend toward invasion of the larynx. Others were of the type showing heavy white membrane, more or less extensive, and with marked tendency to invade the larynx. In those of the present epidemic which he had seen, the membrane was soft and pultaceous, and of a yellowish-grey colour. He could recall his pleasure when antitoxin first came into use. Spoke of the fact of many sudden deaths occurring during or

after apparent recovery from diphtheria. Why is this? Is it due to faulty antitoxin, or to something about the disease which we do not yet know? Mentioned cases of direct transmission of the disease by healthy people, over long periods of time too, thus proving to his mind the longevity of the disease germ.

Dr. John Rankine, referring to sudden deaths, mentioned facial pallor, sudden abdominal pain and flickering pulse as a group of symptoms he had noticed more than once immediately preceding the collapse. These symptoms, he had been given to understand had their pathological cause in degenerative changes taking place in the vagus nerve. He considered there was urgent need for more thorough fumigation, by all concerned, in infectious diseases.

Dr. D. A. Campbell spoke at some length on the various points brought out during the discussion. He supported the view of pathological changes in the pneumogastric being the underlying factor in many cases of sudden death, and mentioned also like changes taking place in the heart muscle. Did not think blame for death could be attachable to antitoxin—it is now for the most part carefully prepared and thoroughly tested before being marketed. It is certainly discouraging in many cases to see them end fatally in spite of every measure available having been resorted to; in a number, however, in which symptoms such as Dr. Rankine had mentioned, he had derived marked assistance from the prompt use of large hypodermic injections of strychnine.

Dr. Woodbury suggested a more economical and effective measure than a guard at the house door, the employment of trained nurses who

should be confined in the rooms used by the patient and given sole care of the case under the medical attendant. Quarantine would thus be complete, and the need of confining the whole family, including the wage-earners would thus be obviated.

Dr. Hawkins now closed the discussion, which he thought had been a highly profitable one. He considered that the Branch having discussed the matter so thoroughly, ought to go a step further and endeavour to effect some improvement in the method of handling the disease. He regarded Dr. Woodbury's suggestion as a very good one, and would move a resolution embodying it.

Dr. D. A. Campbell expressed the opinion that we should not act too hastily; it would be better first to refer the discussion to a committee to report upon, and offer such recommendations as it might deem advisable. He moved that a committee of five members be appointed for the purpose. Dr. Hawkins upon consideration rather approved of this latter course, withdrew his resolution and seconded Dr. Campbell's motion, which was put to the meeting and carried. A committee composed of Drs. Campbell, Hawkins, Ross, L. M. Murray and Rankine, was then appointed, to report at next meeting.

The Branch at this point adjourned, to meet again in regular session on the 9th inst.

DECEMBER 9.—The Branch held its regular fortnightly meeting on this date at the City Hall, and was well attended. After reading of the minutes, other business was taken up. Complaints of various kinds having been heard of late regarding the *British Medical Journal*, the President brought the subject to the at-

tention of the Branch, and asked for expressions of opinion. Some, he remarked, do not think the Journal at all worth what is paid for it, others found fault with it in a less degree, but in various ways. The matter should claim the attention of the Branch.

Dr. Chisholm suggested enlargement of the type as a necessary improvement.

Dr. D. A. Campbell considered the Journal worth the money paid for it, in spite of its faults, the main one of which to his mind was not so much the small type as the poor quality of paper, which rendered reading very difficult.

After further discussion, which supported the view that some change was desirable, a motion carried to the effect that a request be sent to the Home office that in future the edition sent to members of this Branch be that printed on better paper.

Dr. Campbell suggested that any one desiring to retain the present edition, less bulky for binding, etc, or for other reasons, might still have it upon sending Home a personal request to that effect.

Reports of Committees being next called for, that appointed to look into the diphtheria situation, reported at length, making valuable suggestions. The report was taken up clause by clause, discussed, amended to suit, and passed.

A motion to adopt the whole report as amended, append it to the minutes and transmit a copy to the City Health Board, then carried, and

the thanks of the Branch was formally tendered the Members of the Committee for the work they had performed. The substance of the committee's report will no doubt appear later in the daily press under the transactions of the Board of Health, and will be read there.

Another matter for consideration which came before the meeting was that of the work being done in other places regarding the prevention of tuberculosis. The subject was discussed briefly. The Branch was of the opinion that a local anti-tuberculosis society should be formed here, and that we ought to take an initial step in that direction. It was finally decided that, in order to be intelligently informed, a paper containing an outline of the results achieved to date along this line of work should be submitted to the Branch before any definite move be made.

Resolved to call a special meeting for the 16th inst., at which this paper, which Dr. Arthur Birt kindly consented to prepare, would be read and discussed; the feasibility of formation of such a society would thereafter be considered; members of the profession irrespective of membership in Branch to be invited to attend and the Press asked to send representatives.

The regular programme for the evening which was to have been a "Discussion on Diagnosis and Treatment of Fœtal Presentations," had to be deferred, the subjects mentioned having fully occupied the time. Adjournment was made at 10.40 p. m.

OBITUARY.

DR. LUCIUS C. ALLISON.

It is with much regret we have to announce the death of Dr. Lucius C. Allison, of St. John, N. B., which took place on the 26th of November.

Dr. Allison was born in St. John in 1845, and was the son of the late Edward Allison, of that city. He was educated at the St. John Grammar School and the University of New Brunswick, where he graduated in Arts in 1863. His medical education was obtained in Edinburgh University, where he took the degree of M. B., C.M., in 1868.

That same year he began the practise of his profession in St. John. For many years he was on the visiting staff of the General Public hospital and was an examiner for the Pharmaceutical Society from its foundation until 1906.

After thirty years of active practise he was compelled to withdraw from professional work owing to progressive disease of the heart, which culminated in his death.

Dr. Allison was a man of marked literary ability and taste. He was one of the first Editors of the MARITIME MEDICAL NEWS, and was well known to the local press as a contributor on various general subjects, and was noted for his remarkable memory.

He was of a gentle, courteous and kindly disposition, and is survived by his widow and one son.



FRANK MIDDLEMAS, M. D. (Harv.)

The somewhat sudden death on 10th ult. of Dr. Frank Middlemas, of Berwick, the senior practitioner in

that part of King's county, came as a great shock to a large circle of friends and patients.

Graduating at Harvard in 1873, imbued with the traditions of Holmes, Niemeyer, and of Bigelow, and, possessing as he did keen natural powers of observation and a genial and unvindictive nature, he was always an interesting personality.

Practically, his whole long professional career had been spent in the district where he died, and many a humble family must have felt a pang of regret when they heard that their old friend and chief support in time of sickness had passed away. For with Middlemas, until in recent days his health perceptibly failed, no weather was too inclement, no road too rough, and no "dead-head" too "dead" to annul his sense of what he conceived to be his duty. Mere monetary consideration, affected in no wise, either the quality or the quantity of his work.

Although he had for years been too busy a man to be a steady reader, he was always interested in the wonderful advances of modern medicine and surgery.

He had had a large obstetric experience, a branch to which he had a special leaning and was deservedly regarded as a sound and skillful obstetrician. He was a strong opponent of "meddlesome midwifery," and his results seem to have been excellent.

Middlemas was a real lover of good literature, and was never tired of discussing with one or two of his cronies, the merits of his special heroes, Burns and Carlyle, Hugh Miller and Byron. His retentive

memory and superior enthusiasm gave him a great advantage over any dissentients.

He was an excellent citizen and took a keen interest in all that concerned the welfare of his district.

Altogether, Frank Middlemas had many of the qualities which go to gain a man friends and to keep them friends; and both as a physician and as a man it is hard to see how

his vacant niche in the little community is to be filled.

The writer knew him well and liked him well, and impartially weighing up his faults and his virtues, he thinks that for many a long day the Berwick district will mourn the loss of its senior practitioner.

Dr. Middlemas is survived by a widow, three sons and two daughters, to whom the NEWS extends its most sincere sympathy.

PERSONALS.

DR. C. D. Parpitt, who was for forty-six years physician-in-charge of the Muskoka Free Hospital for Consumptives at Gravenhurst, Ont., and has been for the last seven months resident consultant to that institution and the Muskoka Cottage Sanitarium, has resigned his position. Dr. Parpitt will remain in Gravenhurst and continue practice in pulmonary and laryngeal tuberculosis.

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Dr. A. P. Reid, Provincial Health Officer for the Province of Nova Scotia, left recently for a trip to Mobile and New Orleans. We regret to learn that the Doctor has not been as well as he would like to feel, and trust that the winter's sojourn in the South will do him good. Mrs. Reid accompanies him. During his absence matters which may have to be taken up with the Provincial Health Department should be referred to Dr. L. M. Murray, Provincial Pathologist.

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Dr. D. R. MacDonald, formerly of the cable steamer "Minia," and Dr.

F. S. L. Ford, formerly of New Germany, sailed on the 28th. ult. by the "Empress of Britain" for London, where they intend taking up post-graduate work for some months.

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Dr. W. H. Eagar also sailed on the same steamer for London, where he will be married to Miss Scarfe this month.

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Dr. B. W. Mosher, of the last Dalhousie graduating class, has been appointed Surgeon to the Cable steamer "Minia" in place of Dr. D. R. McDonald.

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Dr. A. I. Mader arrived home on the 12th inst. from a trip to London, where he spent several weeks, and also visited Edinburgh and Paris. The doctor is much improved in health.

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Dr. H. V. Kent, Truro, has been laid aside for some weeks through illness, and is contemplating taking a rest to recuperate.

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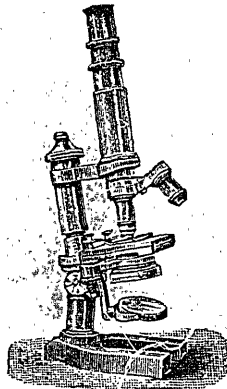
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THE NEUTRALIZATION OF DYSCRASIA.

In a very excellent article on "Various Forms of Headache" which appeared in *Medical Progress* a short time ago, Dr. J. U. Ray, of Blocton, Ala., states that "We must not only

be particular to give a remedy intended to counteract the cause which produces headache, but we must also give an anodyne which will relieve the pain until the constitutional dyscrasia to which this trouble is due, has been neutralized. To answer this purpose, two antikamnia tablets will be found a safe and convenient remedy. Usually they relieve the pain within twenty minutes. When we have a patient subject to sick headaches, we should caution him to keep his bowels regular, and when he feels the first premonition of an attack, he should take two antikamnia tablets. Most all patients tell us they know by certain symptoms when an attack is about to come. To these patients we can do nothing better than give them antikamnia tablets to be carried around with them always ready for use. They are prompt in action, and

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EATING TOO MUCH AND TOO OFTEN.

A great many people seem to think that it matters little what kind of material goes in to the building of the human structure!

They offer the body thistles and ask it to give back figs.

They feed on thorns and expect to pick roses.

Later they find they have sown indigestion and are reaping ptomaines.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. Bilioussness is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

In order to carry out the important command, "Keep the Bowels Open," we are offered laxative antikamnia and quinine tablets, the laxative dose of which is one or two tablets, every two or three hours, as indicated. When a cathartic is desired, administer the tablets as directed and follow with a saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

We are pleased to welcome again our old friend, *Belcher's Almanac*. This annual publication is useful to everybody, and it has an interest for practitioners in the Maritime Provinces in that Medical registers of all

HALIFAX MEDICAL COLLEGE,

HALIFAX, Nova Scotia.

FORTIETH SESSION, 1908-1909

The Fortieth Session opened on Tuesday, September 1st, 1908, and continues for the eight months following.

The College building is admirably suited for the purpose of medical teaching, and is in close proximity to the Victoria General Hospital, the City Alms House and Dalhousie College.

The recent enlargement and improvements at the Victoria General Hospital have increased the clinical facilities, which are now unsurpassed. Every student has ample opportunities for practical work.

The course has been carefully graded, so that the student's time is not wasted.

For further information and annual announcement, apply to—

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65 Morris St., Halifax

Physicians —

You will appreciate the advantage of being in touch with a Spa such as is Caledonia Springs, to which you can conscientiously recommend such of your patients as need waters of assured therapeutic value in the treatment of Rheumatism, Gout, Gravel, Calculi and similar troubles. Not only, however, do you want to be certain that the waters are of intrinsic merit for drinking and the baths; but you will take much interest in knowing that surrounding sanitary conditions are perfect—that hotel accommodations are good—that the food is proper and abundant and that prices are not exorbitant.

In other words, your wish is to effect a cure from every standpoint, while at the same time feeling certain that the creature comforts of the patient are in every way conserved.

These things are offered respectively in the Magi Caledonia Waters and in the Caledonia Springs Hotel.

The Caledonia Springs and Hotel

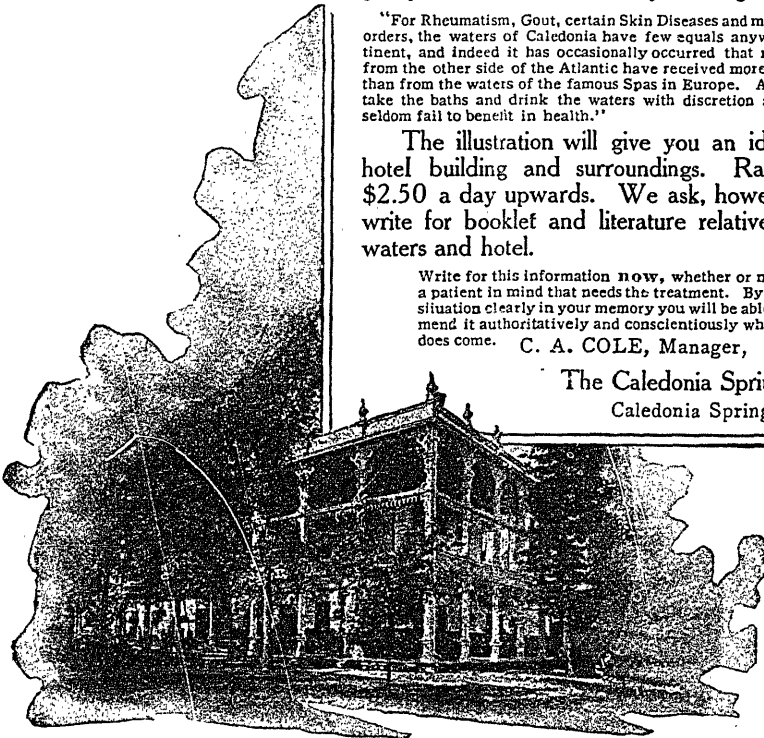
are situated in the Township of Caledonia in the Province of Ontario, within short distances of both Montreal and Ottawa, making travel easy and convenient. It is, of course, impossible for us here to go into details as to the merits of the Magi Caledonia Spring Waters save to say that they are famous throughout Canada. Neither is it possible for us to describe the Caledonia Springs Hotel. The following, from a letter from the famous Dr. T. G. Roddick, will give you a clue to the efficacy of Magi Water:

"For Rheumatism, Gout, certain Skin Diseases and many functional disorders, the waters of Caledonia have few equals anywhere on this continent, and indeed it has occasionally occurred that rheumatic persons from the other side of the Atlantic have received more benefit from them than from the waters of the famous Spas in Europe. As a rule those who take the baths and drink the waters with discretion and under advice, seldom fail to benefit in health."

The illustration will give you an idea as to the hotel building and surroundings. Rates are from \$2.50 a day upwards. We ask, however, that you write for booklet and literature relative to both the waters and hotel.

Write for this information now, whether or no you have a patient in mind that needs the treatment. By having the situation clearly in your memory you will be able to recommend it authoritatively and conscientiously when the time does come. C. A. COLE, Manager,

The Caledonia Springs Co., Ltd.
Caledonia Springs, Ont.



three Provinces are published therein. Of course in a general way it also has an interest for readers of the MARITIME MEDICAL NEWS, for there are many matters of public concern in these Provinces about which one can get the desired information by referring to its pages. It is only 25c. a copy in paper covers and 35c. a copy in cloth covers, and is certainly well worth the investment. The McAlpine Publishing Co., Halifax, are the publishers.

ABOUT BRASS SIGNS.

G. Booth & Son, Toronto, make a specialty of Brass Plate Signs. These Brass Signs are mounted on Walnut Mats $\frac{7}{8}$ of an inch or $1\frac{3}{8}$ thick, as preferred, with corrugated edges, thoroughly oiled and varnished, the signs themselves being made of heavy sign brass, which is about $\frac{1}{8}$ of an inch thick, and the letters are cut so deep on the routing machine as to nearly go through the brass—not acid cut, which is only cut on the surface and will not wear more than about a year before coming out. If the user uses Matchless Paste Polish these signs will last a

lifetime. The filling used is also a composition of their own (not wax) and does not crack and come out. Messrs. Booth & Son can refer the reader to all the best signs in Toronto or Canada generally. Doctors requiring signs may be interested enough to write to Messrs. Booth & Son for photos of the goods they supply and prices.

“An English-Chinese Lexicon of Medical Terms,” prepared by Dr. Philip B. Cousland, has just been published in Shanghai. Though the author is an Englishman, by birth, he has based his book largely upon the Medical Dictionary of Dr. George M. Gould, of Philadelphia, a high compliment to American scholarship. Dr. Cousland has recently published a translation of Prof. Halliburton's edition of *Kirkes' Physiology*.

Doctor—Is your husband in?

Composer's Wife—Yes; but he is composing. Don' you hear him singing?

Doctor—Composing? Heavens! I thought from the sound he was decomposing. That's why I stopped.

Treatment of Rheumatism*

Iron Treatment.—*** “Form which I have found most useful is the soft *Blaud, Mass*, with Arsenic, made by *Duncan, Flockhart & Co.*—*J. T. Fotheringham, M.D., Toronto.*

* Contribution to “Symposium on Rheumatism,” read before Toronto Clinical Society.

Capsule No. 104.

Formula

Blaud Mass - - - 5 gr.
Arsenical Solution, 2 minims
(= *Arsenious Acid* 1/50 gr.)

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ANTIGONOCOCCIC SERUM



For Gonorrheal Arthritis, Etc.

Although of comparatively recent introduction, many evidences are at hand that

Antigonococcic Serum will play an important part in the therapeutics of the future. Its field, it should be understood, is not in acute urethritis, but in the *sequelae* of gonorrhea—joint involvement (arthritis and tendosynovitis), gleet, epididymitis, orchitis, etc. We suggest that you give it a trial.

Bulbs of 2 Cc., three in a package.

LITERATURE FREE ON REQUEST.

Some New Agents that Broaden the Field of Biological Therapeutics

The development of the opsonic theory marks a long step in the advancement of medical science—such, at least, is the opinion of men who have made an intelligent study of the new therapy. Believing with Sir A.E. Wright of London (the originator) that the bacterial vaccines have an important future, we are now marketing a number of these products, as follows:

STAPHYLOCOCCUS VACCINES.

Albus (Staphylococcus Pyogenes Albus).
Aureus (Staphylococcus Pyogenes Aureus).
Citreus (Staphylococcus Pyogenes Citreus).
Combined (Staphylococcus Pyogenes Albus, Staphylococcus Pyogenes Aureus, and Staphylococcus Pyogenes Citreus).

These vaccines are applicable in the treatment of furunculosis, suppurating acne and other forms of staphylococcic infection. They are prepared from various strains of staphylococci. They are sterilized by heat and are ready for use. Bulbs of 1 Cc., 4 bulbs in a package.

GONOCOCCUS VACCINE.

Applicable in the treatment of the chronic conditions following acute gonorrhoea. Prepared from pure cultures of the gonococcus. Sterilized by heat and ready for use. Bulbs of 1 Cc., 4 bulbs in a package.

STREPTOCOCCUS VACCINE. (Streptococcus Pyogenes.)

Applicable in the treatment of the localized forms of streptococcic infection. Prepared from various strains of streptococci. Sterilized by heat and ready for use. Bulbs of 1 Cc., 4 bulbs in a package.

TUBERCULIN PRODUCTS. (Used in the treatment of tuberculosis.)

Tuberculin T. R. (Tubercle Residue)—Bulbs of 1 Cc.
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