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THE
MARITIME MEDICAL NEWS
A MONTHLY JOURNAL DEVOTED TO MEDICINE & SURGERY

VOL. XIX HALIFAX, NOVA SCOTIA, MARCH, 1907. NO. 3

McGILL UNIVERSITY, - Montreal

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Maritime Medical News

CONTENTS FOR MARCH, 1907

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MARITIME MEDICAL NEWS
VOL XIX, *MARCH, 1907*, No. 3

Non-Specific Antiopsonins. Ludvig Hektœn, in the course of a lecture on phagocytosis (*Proceedings of the New York Pathological Society*, 1906) points out that the production of specific antiopsonins does not seem to have received much attention as yet, but in mixtures of bacteria, leucocytes and normal serum phagocytosis may be diminished or inhibited by solutions, isotonic with serum of many different substances. Amongst these are calcium and barium chloride and many other inorganic salts, and also formalin, lactic acid, chloroform and alcohol. Experiments conducted by the author in conjunction with Dr. Ruedinger indicate that the substances mentioned act essentially on the opsonin, which they prevent from acting on the bacteria.

They have found that, when tested in suitable dilutions, the so-called antiphagocytic substances have no appreciably detrimental effect on leucocytes with respect to previously sensitized bacteria. Amongst other substances they have tested lactic acid, and find that here also the property which is generally attributed to negative chemiotaisx appears to depend on neutralization or destruction of opsonin. This observation throws fresh light on the diminution of resistance to various infections which is found to be caused by lactic acid. Hecktœn suggests that non-specific antiopsonins may be important factors in the establishment and spread of various infections, and thinks that substances with antiopsonic action may arise in consequence of local and general metabotic disturbances. Hence may be explained what is generally termed a lessening of vital resistance. It therefore seems unwise to employ injections into the tissues and vessels of agents which, like formalin, possess antiopsonic properties.

*

Physiological Action of Massage. Gustav Norstrom declar s (*Medical Record* January 2nd, 1907) that the affections in which massage has yielded the best results and in which it has been most used and most recommended are those in which the normal relations of the tissues or their elements are altered. In order to obtain a clear idea of the physiological action of massage, one must become familiar with the laws of nutrition of the tissues, of which absorption is one of the main factors. Friction accelerates the venous circulation and diminishes existing stagnation. The practitioner of massage must modify his methods to suit each case. The beneficial action of massage on fatigue may be explained by the assumption that absorption is increased by this treatment. The writer concludes his paper with a reference to the beneficial action of massage in cases of neuralgia.

*

The Habitual Criminal. In the *Journal de Neuralogie*, December, 1906, Morel pleads for a careful and thorough study of all habitual criminals by trained psychiatists. He maintains that most of such cases

present more or less pronounced mental defect, and that institutional treatment should be provided for them. Punitive measures are futile, while good results may be expected from proper training and education under medical direction.

*

The Myelins and Potential Fluid Crystalline Bodies. J. G. Adami, (*Journal of the American Medical Association,* February 9), describes the myelin substances of the body, and gives the history of their discovery and the later studies as to their nature and signification. He gives their characteristics as stated by Virchow and directs special attention to the fact that, as a class, they possess, in addition to these, the power of double refraction, as shown when they are examined under the polarizing microscope. He found also that similar double refracting bodies could be produced with certain simple soaps of oleic acid, and that both these and the myelin forms belong, therefore, to the class of substances recognized by some physicists as potential fluid crystalline bodies, which are capable of showing in certain conditions of fluidity this characteristic crystalline refraction phenomenon. Among these the physicists had included two substances found in the organism—cholesterin and the oleats. From these facts and others that are considered in detail by him, Adami argues that there is strong presumptive evidence that at least two groups of oleic acid compounds give rise to the myelin globules of the organism—the cholin or neurin and the cholesterin. All these fluid crystalline substances unite readily with each other in all proportions, and their power of mixing with and absorbing other substances is very great. In view of their very wide distribution throughout the organism, Adami considers this power of admixture and absorption very significant, and still more so, the observation of Albrecht and others that the appearance of the myelin of the cells in autolysis is coincident with the disappearance of the nucleus, and his own observation that it is possible outside of the body to gain union between oleic acid and nitrogenous bases, such as cholin and neurin. Such facts, he thinks, may have an important bearing in the solution of some of the puzzling questions of fatty degeneration.

*

Dislocation of Shoulder-Joint. In the *International Journal of Surgery,* November, 1906, E. Clifford Chipman describes a method for the reduction of shoulder dislocations, for which he claims advantages in ease and efficiency over most of the established methods, and which will be found to be of especial value when the surgeon is without an assistant. The author describes the method as follows:

Stand facing your patient. Gradually raise the dislocated arm to a horizontal position and place it on your shoulder with forearm flexed on your back. Direct the patient to pass his well arm under your arm and grasp the wrist of the injured arm with the well hand. Thus the patient completely encircles your body, the injured arm on your shoulder, the well arm under your opposite arm, the well hand grasping the injured wrist. Now, direct patient to sag downward.

The weight of the body drags the head of humerous outward and upward, and places it where you can easily return it to the glenoid cavity with your hands.

The dislocation is so easily and expeditiously reduced that even the surgeon himself is surprised. With this

method, there is the least possible injury to the already injured parts; there is the least possible pain to your patient; there is no need of an assistant; there is no need of an anæsthetic; the patient's mind is entirely taken up with assisting you, hence there is no muscular resistance; his body furnishes the power by its weight to place the head of the humerus where it can be easily pressed into place, thus doing away with the necessity of pullies and other mechanical appliances; and the position of the arm is as near the position it was when the dislocation took place as possible. This is where it should be before you try to reduce the dislocation.—*Canada Lancet.*

*

Simplicity in Infant Feeding. The advantages of simple, not too formidably mathematical, rules for the percentage of milk feeding of infants is suggested by C. W. Townsend, Boston, (*Journal of the American Medical Association,* February 16). There is less liability of error by the mother or nurse, it is easier for the physician to prescribe and it it is natural to presume that the less the manipulation generally, the better for the milk. It is better to get a clean cow's milk and modify it to suit the case than to try to improve an unclean milk by centrifuga'ization or Pasteurization, and as the dilution of whole milk would cut down the fat too much it is necessary to begin with a cream as the basis. He prefers pouring off the top milk as the simplest and, on the whole, the safest method of obtaining the cream and one giving very uniform results. As a rough rule, one may remember that in a quart of milk that has stood at least four hours, the upper six ounces about 14 per cent. of cream, the upper 8 ounces 10 per cent., the upper 12 and 16 ounces about 8 and 6 per cent. respectively. The amount of fat must be regulated by the appearance of the stools, and it is better, as requiring less manipulation, to dilute this top milk with water than to combine a rich cream, a lower or fat-free milk and water. Instead of pure water, a cereal water can be used in even the youngest infants, and some have difficulty in digestion without it. After the age of 6 months a cereal modification is better for all infants. It is safest to begin with a mixture weak in all its ingredients and increase the strength gradually. A newborn baby can be put on a mixture of only 3 ounces of the upper 8 ounces of top milk in 20 ounces, and the strength increased by adding half an ounce of top milk and abstracting an equal amount of water every second day until 8 ounces of top milk are given in a 20-ounce mixture. Many infants who have failed on much modified milk mixtures will, he says, respond at once when these simple principles are borne in mind. In a note he gives a simple rule for percentage calculation and explanatory formulas for those who care to use the method.

*

Treatment of Constipation in Neurasthenia. Gilbert Ballet (*La Quinzaine therapeutique,* October 10, 1906) discriminates between the different cathartic agents usually employed for neurasthenic patients, and states that the saline laxatives (sodium sulphate, magnesium sulphate, magnesium citrate, purgative lemonades, and mineral waters) are not suited to these cases. Although they act promptly, they have the inconvenience of producing a secondary constipating effect. At the most, they should be used only exceptionally as an "accidental purgative." Belladona, alone or associated with podophyllin is very

useful in the constipation of neurasthenics. Castor oil is too irritating to the stomach even when administered in gelatin capsules. The compound laxative powders, especially compound licorice powder, are often very useful. As in many of these cases there is a condition of spasm of the intestine, aloin and the majority of the dratsic cathartics should, as a rule, be withheld on account of their being too irritating for the intestine; but enonymine in five centigramme pills associated with extract of hyoscyamus one centigramme, or powdered rhubarb in doses of fifty centigrammes to one gramme, are valuable resources. In regards the use of tobacco, Ballet considers the moderate use, i.e., one cigar or a few cigarettes after meals, as possessing more advantage than inconvenience. In neurasthenics with good digestion, the dietetic treament (with whole wheat bread, green vegetables, baked or uncooked fruits, coffee and hot milk, honey, etc.,) may be successful; but if the digestion is defective this treatment cannot be carried out. Hygienic treatment should be systematically arranged. There should be a fixed time for attempting to move the bowels, suppositories or injections which irritate the bowels should not be used for fear of exciting spasm. Gymnastics, particularly flexion of the body forwards and sideways, should be practiced morning and evening.

*

Approaching Conquest of Cancer. In an article in the *Medical Record,* of February 16, Robert Bell refers to the recent work of Beard in relation to the trypsin treatment. He considers it of the first importance in the treatment of cancer to aim at restoring the functional activity of the thyroid gland and at the same time to adopt measures which will reduce the tendency to the introduction of toxic material from the intestines. This can be accomplished only by adapting the dietary to the requirements of the body, and to the capability of the digestive organs to completely digest and assimilate the food, aided by the thorough evacuation of the effete matter at least once in the twenty-four hours. The thyroid, however, is not the only organ whose utility is impaired. It is likely that the pancreatic secretion is to a certain extent in abeyance, and, as a rule, the proportion of hydrochloric acid in the stomach is greatly diminished. The writer believes that cancer is the culminating point in a series of changes in certain important organs, consequent upon a vitiated blood supply which in turn is greatly due to gross negligence of hygienic laws and overindulgence in unsuitable articles of diet.

*

Right and Left Frontal Lobes. W. C. Krauss, Buffalo, writing in the *Journal of the American Medical Association,* January 26, gives an abstract of the previously reported history of a patient with glioma of the right frontal lobe of the brain, in which the symptoms were merely severe pain and optic neuritis, most pronounced on the right. He also reports in full detail the history of another case of glioma of the left frontal lobe, in which, together with the symptoms of headache and optic neuritis, there was marked mental apathy resembling a mild type of acute dementia, with the consequent symptoms of slowness and hesitancy of speech, loss of memory and ideation, but no paralysis or localized spasm. There was vertigo and a possibly allied to this atactic gait, as pointed out by Bruns as existing in frontal lobe tumours, was very noticeable. A very important

symptom was agraphia both for printing and writing, but more marked for printing, before operation. After the removal of the growth the agraphia partly subsided, although a large part of the second frontal convolution, accepted by Gordinier as the localizing center for writing, was removed. The cause of this is only conjectural. Krauss discusses at some length the question of the function of the frontal lobes, and summarizes his conclusions as follows: 1. The prefrontal lobe of the left hemisphere is in all probability the seat of memory, reason, intuition and judgment, or the higher intellectual faculties. 2. A distinct center for writing and printing exists in the base of the second frontal convolution of the left hemisphere.

*

Admission to Medical School Raised. Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennyslvania decided recently to raise the requirements for admission to its medical school. These requirements include two years of general college training and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.

*

Sugar as a Stimulant. Recently a good deal of emphasis has been placed upon the nutritive value of sugar. In a series of researches, reported in *Revue de Medicine* for January, 1906, Féré gave 300 grams daily to patients suffering from defective nutrition. The effect was beneficial for several months, but then an aversion to it developed and it was no longer of benefit. Féré has further investigated the excito-moto qualities of sugar, as tested by the Engograph, guarding his experiments with the utmost care. He found that when a solution of sugar (30 per cent.) was only held in the mouth for five seconds and then ejected, rapid but intense stimulation was produced, but this effect was very quickly lost and succeeded by fatigue. When the sugar solution was investigated (dose, 100c.c.) the immediate excitation was less marked, but it was more persistent, and it was moreover followed by a fresh excitation due seemingly to the absorption of sugar, about nine minutes after ingestion. In all instances the total result showed loss in work; the most favourable showing that the work accomplished under sugar stimulation was but 91 per cent. of the amount accomplished without stimulation. Féré therefore holds that sugar conforms to the general rule that every sensorial stimulant able to increase activity accelera es fatigue. Excitation is necessary to life, but in using artificial stimulants we must be aware of what we are doing. They are useful for savages, who work in spurts, but are the reverse of advantageous to those whose work is continuous.

*

The Tonsil and Infection. Robert Curtis Brown contributes a paper to the *Medical Record* of March 2nd, in which he shows how admirably, from an anatomical standpoint, the tonsil is arranged to resist infriction. The tonsil is continually exposed to the action of pathogenic germs. Inflammation of the tonsil is caused by a pathogenic germ which is endeavoring to enter, and the inflammation itself is essentially

a defensive reaction. When the resistance of the body is lowered, or the germs are virulent enough to overcome the other means of defense, or if the tonsil is wounded, a positive chemotaxis having been produced there is a lacunar tonsillitis. When a negative chemotaxis is produced there is a general systemic infection without tonsillitis. Finally, the relation of the tonsil to infection and infectious diseases is one of protection.

*

The Factors of Safety in Organism. S.J. Metzler, New York, writing in the *Journal of the American Medical Association,* February 23, noticeing the tendency of some wrtiers to emphasize the economy of Nature in the animal organism, both as to material and energy, points out that the factor of safety in the body--the surplus above that which is demanded —is far greater than that which is required is artificial structures. For example h refers to the bilateral organs, each of which is more than capable of supplying the place of both, the kidneys, the ovaries, the thyroids, the adrenals, etc. In the non-pared organs the same prodigality of tissue and functional capacity is apparent, some organs possess at least twice as much tissue as a maximum of normal activity would require, and in other organs, especially those with an internal secretion, the margin of safety amounts sometimes to ten to fifteen times the actual need. He does not think it probable that tissues are usually inactive; such must be the exception, but they work normally only a fraction of their capacity. The power of self-repair is moreover a safety factor far beyond anything in human-made machines. While noting some partial exceptions the rule seems to be that the organs of the body are built on a plan of a surplus of structure and energy, and Meltzer therefore is inclined to quesion the theory advanced by some that a minimum, say of proteid ingestion, is the optimum or ideal. There are no facts that support it, and on the other hand there are facts that point the other way, such as the abundant secretion of proteolytic enzymes and excessive capacity of the digestive tract for the absorption of proteids. These seem to be fair evidence that Nature intended this surplus of material and capacity to be used. The function of supply of tissue and energy by means of proteid food, should, he holds, be governed by the same principle of affluence that has controlled the entire construction of the animal for the safety of its life and the perpetuation of its species. In conclusion he remarks that the factors of safety have an important part in the process of natural selection. The species best provided with a surplus of structure and energy, and thus fitted to meet emergencies, are most likely to survive in the struggle for existence.

*

Gastric and Duodenal Ulcers. Writing under the caption "The Diagnosis and Surgical Treatment of Gastric and Duodenal Ulcer and Their Complications," in the *Medical Record* of January 19, A. A. Berg points out the difficulty of making a diagnosis in certain cases of gastric and duodenal ulcer. With reference to the diagnosis of the complications of gastric and duodenal ulcers, one need rarely be doubtful if there is a previous history of such a condition. From his experience the writer believes that operation is not advisable when the patient's general condition is bad, the hæmoglobin very low, 19-20 per cent., and the pulse not very rapid. In such a condition, even a

slight operative shock, whether or not it is combined with the influence of a general anæsthetic, is sufficient to cause the death of the patient. In such cases internal remedies and complete rest, induced by morphine, to check the bleeding, are far preferable. When the patient's general condition is still good, however, immediate operation is strongly indicated.

*

Fractures of the Hand. In an article entitled "The Use of Plaster in Fractures of the Hand," appearing in the *Journal of the American Medical Association*, March 2, M. E. Preston, Denver, criticises the usual method of applying splints in hand fractures and recommends the use of plaster splints that will better conform to the various curves and not distort the hand or increase the discomfort of the patient. He illustrates the application of such splints to several conditions of fracture; they can be adapted to any emergencies, are easily applied, while the material is inexpensive and readily obtainable. In fracture of the metacarpal bones, if the roller bandage usually applied be previously soaked in plaster, it will be found to require less subsequent adjustment because of the solid support it then gives after the plaster has dried. Details are given of the different applications figured.

*

Research Work in Egypt.

The second annual report of the Wellcome Research Laboratories of the Gordon Memorial College at Khartoum, Egypt, has been in our hands for several months, and contains a wealth of scientific research, edited in the most thorough manner, and illustrated with plates which make our ordinary home publications look shabby in the extreme.

The work of the laboratories is under the directorship of Dr. Andrew Balfour, F.R.C.P. Edin., a gentleman, whose scientific standing is fully attested by the work set forth in the report.

The volume comprises 250 pages, and is intended to cover researches not only in diseases affecting man, but also those affecting the domestic animals. It further deals with diseases of the wild animals in their relation to the diseases of man and animals, and gives an account of investigations into the gums and other economic products.

Reference, however, can here be made only to some of the researches of immediate medical interest. These are, for the most part, directed to the investigation of tropical diseases, almost wholy unknown to us, such as malaria, sleeping sickness, plague, etc Travelling parties were organized and the report presents in extended form the investigations, such as that of Dr. Neave, of the various mosquitos, supposed to be disease-bearing, and that of Major Bray and of Major Moraul, into the origin and extent of the sleeping sickness in the direction of the Congo State and Bahr-el-Ghazel province.

Probably the most interesting, because the most extended and satisfactory in its results, is the mosquito work, especially in Khartoum and the surrounding districts. The report points out that when the work began 50 per cent. of the water collections of Khartoum were infected, but that six month's work reduced this to 9 per cent. with the complete diappearance of the anophelines and largely of stegomya, both suspected to be transmitters of malaria. This has been accomplished by the usual method of pouring oil in pools, wells and cisterns, and draining and filling. In-

stances are given where some oversight has shown the coincidence of malaria with the reappearance of anopheles in same pool as amongst soldiers in barracks. It was noted that boats on the river were not infrequent bearers of anopheles, etc., in their waterbuckets and other vessels, so that constant vigilance is the sole condition of safety. Mosquitos were found to breed in wells 70 feet deep. How economical work may be when systematized may be judged from the fact that for £100 Khartoum is kept practically free from malaria. At least three species of anoph les are known to be carriers of the hæmatozoon.

There were made very extended collections and studies of biting flies (Dipteıa), and to this end circulars were sent out to the governors of all the Provinces with a series of questions, the first being: Are there any flies of this sort (Glossina palpales) in your district known to bite man? To which one made the pointed reply. "What I am seeking for is a species of fly which does not bite. Could I obtain a male and female of such species, I would immediately begin breeding operations."

Of these flies the Tsetse fly (Glossina morsitans) the carrier of the trypanosoma of animals, and Glossina palpalis, the supposed carriers of the sleeping sickness, were especially in vestigated. Major Bray reported an ex tension of the disease into the Sudan from the Congo, brought, the natives stated by Belgians. Other Glossinas are said to be the cause of camel sickness, while Stomoxys causes th. disease in donkeys, horses and mules.

The study of ticks in view of their now known relations to plagues was serious'y pursued. Zambesi fever, Texas fever in animals, and Blackwater fever in man are said to be all due to transmission ticks.

The special study of the T. Nonum, which affects cattle, is full of interest.

But the report is so wide in its references as to make anything less than a careful study of it unsatisfactory. It is illustrative of what other countries are doing, and makes comparison with our own lack of such schools of research anything but creditable to us.

SURGERY OF THE RIGHT UPPER ABDOMINAL QUADRANT

By F. B. LUND, M. D.,

Boston

THE right upper abdominal quadrant has displaced the right lower abdominal quadrant from the position of the area of greatest surgical importance. The appendix and the right ovary, which both afford a fruitful field for surgical work, hardly extend to the surgeon such varied opportunities for differential diagnosis, or offer operative procedures of so great variety and interest, as the organs situated in the right upper abdominal quadrant, namely, the gall bladder and its ducts, the pylorus and first part of the duodenum, the head of the pancreas and the right kidney. The surgeon called to attend attacks of pain in the right upper quadrant has to differentiate between pain due to stones in the gall bladder, to stones in the common duct, cholecystitis, stricture of the pylorus, painful ulcer of the pylorus or duodenum, perforation partial or complete of ulcers of the duodenum or pylorus, and acute or chronic pancreatitis, etc. Complex surely are the problems, and fitted to tax our diagnostic skill to the utmost, and often, we must confess, to defeat it. Who can distinguish in every case, between the pain of gall stones and ulcer of the duodenum and pancreatitis, so accurately as to prove himself right every time by the test of eploratory laparotomy? If such a surgeon there be I have yet failed to meet him. Mayo puts the matter graphically as follows:

"In the upper abdomen we have attempted to study the stomach independent of the associated organs, the liver and bile passages, the duodenum and pancreas. The result has been a confusion in diagnosis and treatment. The palm of a hand may cover a serious lesion of any one of these organs, and that, too, at the point of greatest liability; not only so, but any one of this group may start a pathologic process which may extend to any one of the others, and with fully as great frequency as occurs under similar conditions in either the generative or urinary systems."

Graham, *St. Paul Medical Journal*, Sept., 1904, in an extremely important paper based on 46 cases of duodenal ulcer operated upon by the Mayo brothers, conscientiously attempts the differential diagnosis between cholelithiasis and duodenal ulcer,—"Pain in cholelithiasis is sudden, severe, has a wide field of radiation, comes absolutely irregularly, is independent of, and not eased by food, and is not often traced to it. No stomach history is given between the short precise spells. Spasm of the diaphragm is nearly always observed, and vomiting and gas are present only during the attacks, and relief through vomiting and gas eructation is not as certain. In duodenal ulcer the pain comes in decided periods of attack, may be irregular as to time of separate attacks, but regular as to periods. It is quite dependent upon food, being early eased, but later pain and distress appear. The history of gas, vomiting and acidity runs parallel to the periods of pain. No spasm of the diaphragm occurs except in some

cases of perforation. The vomiting and belching are usually decided in quantity and followed by relief."

In distinguishing between the duodenal and purely pyloric ulcer, he calls attention to the fact that the pain, gas, acidity and vomiting are more extreme in the latter than in the duodenal form, and the type of pain is more apt to approach that of gall stones.

Stone in the common or cystic duct or decided infection of the gall bladder has a definite period of attack, but jaundice, enlarged gall bladder, chills and fever may here be present to assist in diagnosis.

Who of us is not familiar, however, with cases in which we have made a diagnosis of gall stone disease, on a basis of irregular attacks of pain in the right hypochondrium, with localized spasm and tenderness, the pain radiating over the abdomen and perhaps into the right shoulder, only to find on operation an ulcer of the pylorus, requiring a gastroenterostomy for its relief? We have also operated for relief of a dilated stomach, with constant vomiting and emaciation, expecting to find a cancer or chronic ulcer of the pylorus, and found a gall bladder full of pus with a stone impacted in the cystic duct, obstructing the pylorus by involving it in a mass of adhesions and requiring gastroenterostomy.

In the presence of pain due really to a duodenal ulcer, the downward projection of an enlarged right lobe of the liver has simulated an enlarged gall bladder, so as to mislead us into an erroneous diagnosis of gall stones.

I may remark in passing that it has been a not uncommon mistake with myself and my colleagues to cut down upon a gall bladder, believing it on the evidence of palpation and percussion to be enormously enlarged, and find out that the supposed dilated gall bladder was an enlarged right lobe of the liver, hiding under its edge a gall bladder filled with stones and surrounded by fresh inflammatory adhesions.

The gall bladder varies in its relation to the median line, also. In males with a high lying liver it lies not only well up under the ribs but further from the median line of the body. The reason for this is that the liver lies in its normal position in the thoracic cavity, in the hollow of the ribs.

In women where the liver has been pushed down by lacing the waist, as it descends it is pushed inward by the inward projecting edge of the thorax so that the gall bladder is pushed with the liver nearer to the median line, and the location of pain and tenderness approach more nearly the pylorus and the head of the pancreas. And here is introduced another element in the diagnosis, that of pancreatitis. In the typical cases of chronic or recurrent sub-acute pancreatitis we have usually antecedent history of gall stone attacks, so that the history here is consistent with either gall stones, pancreatitis or both.

The pylorus also varies very much in position, the variations being sometimes the result of adhesions, sometimes apparently congenital. In a recent operation for cancer of the pylorus the writer operated by a median incision, only to find the pylorus far up under the liver and to the right, so as to be accessible with difficulty. In the next case the right rectus incision was made, but the pylorus was adherent to the liver exactly in the middle line. It is worth while to attempt to determine the position of the pylorus by inflation of the stomach before operating.

In pancreatitis the tumour is nearer the epigastrium, and in its typical manifestation the tumour and area of tenderness is a little lower than in pyloric ulcer, and nearer the median line than in cholecystitis. The attacks of pancreatitis are attended with more shock and constitutional disturbance than cholecystitis, and in cases preceded by a history of gall stone attacks extending over months or years, and presenting in the attack under treatment a marked element of constitutional depression with moderately high temperature and slight jaundice, the tender area corresponding to the head of the pancreas, and especially if a tumour corresponding in outline to the head of the pancreas can be felt, we must be on the lookout for sub-acute or chronic pancreatitis. Fotrunately the chief desideratum in the treatment of these conditions is the drainage of the gall bladder, so that through the exploratory incision we are in a position for the therapeusis of either infection. The writer has within a year dealt successfully with two cases of chronic pancreatitis and one of acute, by an incision through the upper part of the right rectus for the relief of attacks supposed to be due to gall stones. In two of the cases the location of the tenderness and resistance led to pancreatitis being suspected before operation, though an absolute diagnosis was not made till the abdomen was opened. In the acute cases, especially of the right hypochondriac or epigastric peritonitis, the diagnosis between perforating ulcer, pancreatitis, and acute cholecystitis, in my belief, is not always in the power of any man to make. These cases, however, urgently call for immediate exploration, and through the right rectus incision the diagnosis can be cleared up and the appropriate operative procedure carried out.

In the vast majority of acute stomach perforations, as is well known, the perforation is on the anterior surface, and early diffusion of fluids takes place downward and to the left along the front of the great omentum.

In these cases the mortality is in proportion to the promptness with which the surgeon acts, as many as eighty per cent. of the cases operated upon within twelve hours getting well.

The same is true of acute perforations of the gall bladder, except that in the writer's opinion these have been even more serious than hose of the stomach. The mortality in acute pancreatitis, which Mayo well classes with acute perforations, is as yet in doubt, but early operation with peritoneal drainage will undoubtedly bring about a more satisfactory state of things in this regard.

Operation upon an acute pancreatitis in a woman of 60, consisting of drainage of the gall bladder with incidentally the removal of two stones, and saving the anterior surface of the pancreas and stopping the bleeding with gauze packing, the operation done twenty-four hours after the attack, has resulted in the gratifying and complete recovery of the patient.

In two cases, both male, the writer has recently operated upon a diagnosis of cholecystitis, made by careful clinical observers, finding in one an ulcer of the pylorus which had perforated but had been walled off by adhesion to the under surface of the liver, and in another an ulcer of the first portion of the duodenum. A gastro-enterostomy gave complete relief in both cases.

Duodenal ulcer is even more apt than gastric ulcer to be mistaken for cholecystitis, especially when threatened perforation sets up a local peritonitis, as the descending portion of the duodenum is directly in relation

with the common duct and almost directly below the neck of the gall bladder.

In duodenal perforations it is an interesting fact, several times demonstrated in the writer's experience, that occasionally the greatest tenderness instead of being over the source or focus of the peritonitis is situated at the edge or border of the process, where the advancing pus is limited by fresh fibrous adhesions. The peritonitis is hot at the edges and cold in the middle, so to speak.

In a case of recent peritonitis with general splinting of the abdomen, the writer made an incision over the appendix because here was the only tender point. The appendix was normal, but pus had run down between the colon and the abdominal wall from a perforation of the duodenum, which was found after carrying the incision upward. It was sutured and drained, and the patient recovered.

In alluding to the cases mentioned in this paper, which are selected from among a large number as the ones in which a wrong diagnosis was made, the writer does not wish to give the impression that it is not worth while to exhaust all possible means to make a correct diagnosis before operating, for the reason that operation is so apt to reveal the fact that the diagnosis has been wrong. Careful weighing of the history together with thorough physical examination will enable one to arrive at a correct diagnosis in a majority of the cases, but there will remain a considerable number in which exploratory laparotomy alone will reveal the true condition.

We have spoken of the upper abdomen as the borderland of surgery; it is also the borderland of medicine, for in what other therapeusis than the surgical can we hope for relief of these conditions? At the autopsy we can get a picture of the conditions at the fatal close, whose secondary conditions have marked the beginings of the course of the disease.

The surgeon, by early operation in cases of gall stones and gastric ulcer, has given us our present knowledge of the pathology of these diseases in their early and curable stage, and also afforded to us in many cases our only method of rational therapeusis.

These facts have an importance also to the practitioner of medicine. If he wishes to acquire skill in the diagnosis of the intra-abdominal conditions which he is so often called upon to treat, he must attend not the post mortem room but the operating table of the surgeon. There he may find his diagnosis checked, confirmed or disproved, and can see the pathology of the conditions in the living at a time when they are often susceptible of relief. It is my belief that the clinic has displaced the autopsy table as the place for acquiring the pathological knowledge upon which skilful diagnosis may be based. The practitioner who sends his cases to the surgeon and then does not personally attend the operation and see the pathological condition misses his greatest opportunity for acquiring skill in diagnosis. He has followed the symptoms of his patient over a length of time and with a closeness of observation impossible to the surgeon or to anyone else than the medical attendant. If then he attends the operation and sees the actual pathological conditions, he is in even better position than the surgeon to profit by the combination of clinical observation and that of the operating table. Only by the co-operation of the surgeon and the clinician can either attain any special degree of diagnostic skill. The fact that the diagnosis is in doubt should make no difference to the patient. He comes to the physician not

for an exact diagnosis, but to be relieved of his pain and disability. In many cases we cannot say to him, you have gall stones or you have duodenal ulcer, but you have a lesion in the upper right abdominal quadrant requiring operation for its relief. If we are prepared to deal with whatever lesion we may find of these organs we can benefit our patient, and unless we are so prepared we shall meet with many failures. The most important practical deduction to be made is that no operator should attack these cases of supposed cholecystitis unless he is prepared to execute a change of front and perform a gastro-enterostomy or other suitable operative procedure in case he finds himself called upon to relieve an ulcer of the duodenum or pylorus.

The question may be legitimately asked, "Is the early surgery of these conditions safe and attended by satisfactory results?" The answer is that in the early cases, and in these alone, is the surgery of this region eminently safe and satisfactory. The mortality of gall bladder operations uncomplicated by stones in the common duct or cholecystitis is less than one per cent. in competent hands. Gastro-enterostomy for pyloric stenosis gives a mortality of less than five per cent., and a high percentage of permanent cures. It is only in the late and neglected cases of surgical diseases of the upper quadrant that the mortality is high, and here it is understood that the operation is one of last resort.

The speaker is aware that this excursion into the surgical borderland of the upper abdomen has been brief and unsatisfactory. He will be satisfied, however, if his hearers carry away the following points:

1. The advantages of early operation in diseases of the stomach, gall bladder and pancreas.

2. The imperativeness of early operation in perforations.

3. The recognition that present diagnostic measures are inadequate, and consequent readiness to meet conditions different from those suspected before operation.

4. An interest in the great and growing field of the surgery of the stomach and the pancreas.

CANCER RESEARCH.

By MURDOCH CHISHOLM, M. D., C. M., L. R. C. P.

Professor of Surgery and Clinical Surgery, Halifax Medical College.

Read before Halifax and Nova Scotia Branch, B. M. A., January 1907.

HISTORY.—The first notable step in the investigation of the causes and nature of cancer was made by Russell of Edinburg, in 1890. This paper on the characteristic organisms of cancer excited profound interest. The bodies described by Russell and named fuchsin bodies, were thought by him to be blastomycetes, a species of the yeast plant. In 1892 Armand and Rufir, of London, and Sondakewitch, of Kieff, publishe d papers describing these bodies. Metchnikoff carefully examined them and believed them to be parasitic protozoa. The field of investigation opened by Russell was quickly occupied. His observations were challenged by many workers and his fuchsin bodies were shown by many, to their own satisfaction at least, to be nothing but degenerated cells. San Feliel and Roncali of Italy have veered round to Russell's opinion. And Scofold has been successful in cultivating blastomycetes from malignant tumours. He has had positive successes in inoculating other animals, and the latest investigations are along these lines.

The great difficulty met with at the first, viz., the immunity of most animals to cancer, has been fortunately overcome by the discovery of the susceptibility of mice. Papers detailing the results of inoculations of these animals were read at the last meeting of the British Medical Association last August in Toronto. The enormous amount of work done may be inferred from the statement that in the New York State Laboratory alone 7,000 mice had been experimented with.

The questions grappled with in these papers fall under the heads of origin and growth on the one hand and immunity and treatment on the other.

As to origin and growth, it has long been observed that certain houses and districts of country were more subject to cancer than others. I know of one district in Nova Scotia where cancer of the stomach is almost if not altogether endemic. I remember seeing an account of the very great prevalence of cancer in a part of a town in Europe, where the people watered their greens from a near-by river, whereas other parts of the town at too great a distance from the stream to permit its use in this way, escaped.

In the light of these facts, the recently reported discovery of the endemic occurrence of cancer of the thyroid in the brook trout hatcheries of Germany by Pick is of the greatest significance.

Bonne reports a similar visitation in a hatchery at Torbole on the Sardesa, which destroyed no less than three thousand fish in five months.

Certain hatcheries escaped. The disease appeared in certain tanks or pools only, and other fish introduced into these acquired the disease. Pick concludes very naturally that the water of these tanks contains the agent which is the cause of the disease, and that it must be chemical, bacterial or protozoon.

Dr. Gaylord supplements these facts by stating that certain cages in

their own and other laboratories acquired the name of cancer cages. He devotes four columns of the journal to the development of cystic sarcomata of the thyroid in rats confined in one or two cages under the supervision of Dr. Loeb of Chicago. Two of the tumours so developed turned out to be fibrosarcomata, and in explaining away the change of character, he refers to Erlich and Apolant as having demonstrated beyond doubt that a carcinoma can under given conditions lead to the development of a sarcoma in the adjacent connective tissues. I have not been able to examine the data upon which these observers founded their conclusions. If substantiated by other observers a very important advance indeed has been made in our knowledge of cancer. I will refer to this further on.

Dr. Gaylord also refers to a cage originally in the possession of Mr. Landes, in Springfield, Ohio, and afterwards purchased by the New York State Cancer Laboratory. In this cage upwards of sixty spontaneous tumours developed in the course of three years. The location of the cage was frequently changed, and the stock of mice entirely renewed; but this did not interfere with the production of tumours, which makes it apparent that the cage itself was the source of infection.

"The source of infection:" These are Mr. Gaylord's words, and it is hard to find any other terms so suitable. If certain houses or districts develop tuberculosis, we look upon them as infected. Shall we not apply the same term to places that develop cancer?

Under the head of immunity, several important facts have been pretty well proven. (1) In one series of cases inoculation with the Jensen tumour, 20 per cent. recovered without any treatment. (2) A larger percentage recovered if treated with serum from recovered mice, and, (3) the growth of the tumour was checked in those which were not cured. (4) Reinoculation of recovered mice failed to produce a growth of tumours. "Those that had recovered on the first occasion failed entirely to develop tumours on further inoculation with a far more virulent material." (5) The serum of recovered mice apparently exerts a definite, though slight retarding effect, when directly injected into affected mice, and also when mixed with the cancer strain before being injected. (7) It was found that incubation of tumours for a week or so increased their virulence. (8) Mice on which tumours are already developing are with few exceptions immune to subsequent inoculation.

The net results of these experiments would seem to justify us in looking upon cancer as due to some virus which, like that of syphilis, or tubercle, or small-pox, presents certain well-known phenomena. There is a close parallel in several respects at any rate.

GROWTH.—The most prominent feature of cancer is its persistent and luxurious growth. This of course is due to the proliferating energy of the cancer cell. It multiplies and grows with alarming swiftness. In this it acts in accord with the lowest forms of animal vegetable life. The lower the scale the more prolific the growth --bad weeds grow apace—but a cancer cell is none other than an epithelial or connective tissue cell which has turned pirate or cannibal. Its voracity is enormous and its procreating capacity keeps pace with its appetite. What has caused either of these cells to change so in their behaviour? What has turned them into veritable demons? Conheim's theory of stray

germinal cells taking on active development is pretty well discarded. Beard's theory is like Conheim's. He thinks embryonic cells in different parts of the body which should die persist for want of development and function on the part of the pancreas. Add the pancreatic juices to the economy and these cells are killed.

Two other theories have taken hold of the medical mind; one, the theory of atrepsia or the side chain theory, the other that of infection by parasites.

The concensus of opinion would seem to favour the side chain theory. Bashford says there is much biological evidence in favour of the problems of malignant new growths being cellular problems. In this he follows Erlich, who says that the growth of cancer is the result of an over capacity of certain cells for assimilating food and consequent growth and propagation at the expense of neighboring cells. He assumes that all cells are possessed of side chains or receptors by means of which the necessary foodstuffs are attached to the cell, and that abnormally rapid proliferation and growth is due to an increased number of such receptors or to an increased affinity for food on the part of such receptors.

The question of the cause of this aberrant behaviour on the part of these cells is not in the least elucidated by this theory. It is of German origin and fashionable in certain quarters at the present time.

It must be admitted too that it has much data to support it. Why does a displaced germinal cell remain quiet for years, and then suddenly start on its futile aping after normal development, as a result possibly of some blow or irritation from without? This is not unfrequently seen in dermoids and growths springing from branchial clefts. Why does long-continued irritation of the skin start its cells on a career of abnormal growth and piracy? Why does a melanotic papilloma of the cutis start enormous growths in the liver? What starts the chorionic epithelium on a course of exceptional modification which results in the formation of hydatiform moles, and seems to determine the growth of cancer of the endometrium at some future time? Why does a hydatid mole pass insensibly into a malignant mole?

These questions and many others which seem to point to the cell as being the sole or primary factor in causing cancer are discussed by Dr. F. G. Bushnell in a very able paper on "Structural Continuity in New Growths."

But here the question obtrudes itself—what made Captain Kidd turn pirate? What made Judas sell his master? Was it his own evil heart or some influence from without acting on a weakened moral economy? Scripture expressly states that Satan entered into him after the sop, and became his master. Some of us will not deny the possibility of this after their experience with that hypnotic message from Truro.

Scripture also states that the temple was a pattern of things in the heavenlies. It seems more than probable that we may have many such patterns.

Drummond wrote a work entitled "Natural Law in The Spiritual World." It remains for someone else to write the converse of this, viz., 'Spiritual Law in the Natural World.' In that case the horned and hoofed pictures will give place to winged creatures with a penetrating proboscis: a blood sucker of crimson dye when its belly is over-filled. We become painfully cognizant of this faculty for going about sucking whom

he may devour, but we know nothing of his injector demons till they subsequently shew their colours. Then we recognize them as malaria or yellow fever or sleeping sickness, and no one knows what more. All these come from without. We know that the agent in determining the growth of the tubercular and leprous nodule, the syphilitic gumma and the tumours of actinomycosis, glanders, &c. come from without. What determines the change which turns the normal cell into a cancerous genetic pirate comes from without or not is yet sub judical, but it seems to me the weight of evidence is in favour of the theory of infection.

TREATMENT.—Nothing practical has been elucidated by these experiments and yet there is a fore-shadowing of certain lines. The necessity of prophylaxis has been emphasized by the terms "cancer cages." The establishment of immunity by inoculations would seem to point to a modified form of vaccination as a possible method of treating cancer.

The high resistance of tumour materal to antiseptics would point to the futility of parenchymatous injections of these agents with a view to cure cancer. It was found that prolonged contact with mercuric chloride did not hinder the growth of the inoculated material. The association of a high potassium and nucleo-proteid content with high virulence and of low potassium and high calcium content with low virulence may point to the importance of some forms of constitutional treatment. The local origin of cancer in the early stages is beyond doubt. Hence the necessity of early removal by the knife in order to effect a permanent cure.

SOME REMARKS ON DUCTLESS GLANDS AND INTERNAL SECRETIONS.

By L. M. CURREN, M. D.,
Fairville, N. B.

(Read before St. John Medical Society.)

THE function of a gland that has a duct is a comparatively simple physiological problem, but the uses of the ductless glands have long been a puzzle to investigators. Recent research, however, has shown that most of the ductless glands form a secretion, and these internal secretions, so called, leave the glands by the venous blood or lymph, and thus are distributed to minister to the needs of the body.

Many of the glands that possess ducts and form external secretions, form an internal secretion as well. Among those the liver and pancreas may be mentioned.

In many cases the internal secretion is essential to life, and the removal of the gland which forms it leads to a condition of disease culminating in death. In other cases the internal secretion is not essential and its place is taken by that found in similar glands in other parts of the body.

The difficulty of investigating this subject is increased by the fact that it is impossible to get an internal secretion in a state of purity, and examine it, as it is always mixed with and masked by the blood or lymph into which it is poured.

These blood glands stand in close relation to one another, and the pathological findings after certain diseased conditions, show that there must be an interdependence of function in many cases. Thus, in acromegaly, in addition to the almost constant alterations in the pituitary body, there exist also changes in thyroid pancreas, thymus, adrenals and sexual glands. Osler states that Furnival has recently analyzed he recorded autopsies, 34 in number. Changes in the pituitary body were found in all, and in the majority there was hypertrophy or tumour. In twenty-four cases in which it was examined, the thyroid was normal in five hypertrophied in twelve. The thymus in seventeen cases examined, was absent in seven, hypertrophied in three, and persistent in seven. Arnold Lorand, of Carlsbad, who has made a life study of ductless glands, thinks that the thyroid is altered in acromegaly more frequently than the pituitary. He considers the change in the thyroid as primary, leading in a secondary manner to those of the pituitary body. The anterior lobe of the pituitary gland resembles the thyroid in structure, and if the gland be removed in animals, tremors and spasms occur like those which take place after the removal of the thyroid. Some observers have stated that over-growth of the pituitary follows excision of the thyroid, but whatever interdependence there may be, we are taught by clinical experience that many of these important ductless glands have a special role to play. Acromegaly is very different from myxœdema, and the injection of extracts prepared from the thyroid or pituitary body have very different physiological results. Acromegaly may be present with also symptoms of myxœdema or hyperthyroidea. In those cases of acromegaly in which there also exist symptoms of hyperthyroidea,

diabetes is liable to supervene, and this brings me to the main object of this paper.

I have at present under observation an interesting case, which I wish briefly to present to you. Miss A., a slight, healthy girl until about her twentieth year, began gradually to change in appearance. Her features became changed, the bones of the face enlarged; also the bones of the extremities, principally in the hands and feet. The nose and tongue thickened so that the girl's appearance became quiet altered. There was some thickening in the region of the thyroid; tachycardia and neuralgic symptoms about the head, principally about the right temple; amenorrhœa (menstruation was quite normal previous to this change) urine negative. Since the onset of this change until June last, six years have passed, during which time the patient has suffer d a very embarrassing change in her appearance, much pain about the head, and general loss of vigour. Mentality has been good, and so far as I could detect unaffected.

In March last she began taking thyroid tablets, one after each meal. These were taken irregularly until June, when the patient went to the country, and there was given another quantity of thyroid tablets, which she began again to take. Abruptly the symptoms of diabetes set in. The quantity of the urine became great with marked glycosuria. Since June the progress of the diabetes has been rapid, the patient emaciating fast, but the features, and hands and feet, remaining as large as ever. This case is undoubtedly one of acromegaly with hyperthroidea.

Dr. Lorand reports a case of acromegaly in which the urine was found free of sugar in September, and in which much sugar was found towards the end of October. This patient was given thyroid tablets in treatment of his acromegaly in October. There was no glycosuria before the treatment with thyroid.

In those cases of acromegaly with diabetes where the thyroid and pancreas have been examined, they have been found in an altered condition, the pancreas often degenerated, and the thyroid hypertrophied with much colloid material present. Again the extract of either the adrenals or thyroid injected into animals, will produce glycosuria. Diabetes does not tend to supervene in those cases of acromegaly with symptoms of myxœdema. These facts show that certain relations exist between the thyroid and the pancreas, which seem to be of an antagonistic nature.

Diabetes in the young, due to degenerative changes in the pancreas, runs a rapid course. Here the thyroid is active, while in the old, where the thyroid is not so active, the disease is more protracted.

There appears to be very good reasons then for concluding that there is an interdependence among these glands as well as more or less special function on the part of each, and that the role taken by them collectively or separately is a very important one.

Certainly here is great scope for future investigation and study. Beyond all controversy these glands control the vital processes. When the thyroid or adrenals from any cause become over-active, the activity of the oxidation process is increased in the organism, and there result hastened metabolism and higher keyed vascular and nervous tension. These are vital processes, for upon them do we

depend for our existence, our immunity to, and our recovery from disease.

Note how nutrition is influenced by these internal secretions, as shown in the abnormal skeletal changes where the pituitary is over-active. It has been suggested that giantism and acromegaly were similar, in both being due to superfunction of the pituitary. Osler states that certain persons exhibited as giants, or who have been strong men and wrestlers, have become acromegalic, and the skulls of some notable giants show enormous enlargement of the sella turcica. He concludes that the pituitary body is the growth centre or at any rate the proportion regulator of the skeleton.

Again, in myxœdema there is marked torpidity of mind and body.

How much do we depend then for our pabulum vitæ upon these obscure organs! And if we can judge aright, the ambitious inspirations and determined zeal of our experimenters and leaders in medical science, how much of the medicine of the future will be of these glands and their internal secretions!

NOTE ON THE TREATMENT OF ENURESIS.

By D. A. CAMPBELL, M. D.,
Halifax, N. S.

I WISH to call your attention very briefly to some points in the treatment of that form of enuresis which is so common in children.

Nocturnal enuresis is a purely functional disorder of micturition, and should be considered apart from those forms of the disorder which arise from disease or malformation of the genito-urinary organs, or are caused by organic disease of the nervous system.

In a typical case of nocturnal enuresis, the urine is passed in a normal manner while the individual is awake, but during sleep there is an involuntary escape of urine, once, twice, or several times. There is not a continuous dribbling away of the urine, but a full involuntary evacuation of the bladder.

Functional enuresis is sometimes a mere sequel of the normal condition of early infancy. Usually, however, the disorder develops about the fourth or fifth year, or even later, and as a rule without any apparent cause. The duration of the affection is variable. In most cases recovery takes place often spontaneously before the tenth year, in some instances it persists up to puberty, or even later Cases differ in severity. Some show no abatement; others are marked by more or less prolonged remissions or exacerbations.

The general health is sometimes good, but in most cases there is evidence of impaired nutrition, and a distinctly neurotic tendency. Anæmia is often present. Rachford found marked anæmia in 80 per cent of his cases. In many cases adenoid growths exist.

Reflex irritation occasioned by high acidity of the urine, stone in the bladder, phimosis, adherent prepuce, pin worms, a loaded bowel, polypi or fissures of the rectum, and inflammatory action in adjacent parts is sometimes responsible for the continuance of the disorder.

In all cases of enuresis, a careful and minute research should be made for such an irritant, but even if such be found and removed, it by no means follows that the disorder will be cured.

The polyuria of renal disease and diabetes may simulate nocturnal enuresis — and these conditions should be kept in mind in cases which persist after puberty. The possibility of contracture of the bladder should be remembered also, especially in stubborn cases.

The treatment of nocturnal enuresis is very unsatisfactory, yet in the great majority of the cases, a cure is possible, provided the patient will submit long enough to a regular plan of treatment. Occasionally we meet with cases which promptly respond to treatment, but it is probable that in such instances treatment has been instituted about the time when spontaneous recovery is about to take place.

In most cases treatment must be continued from six to eighteen months to ensure recovery, and it is very necessary to continue remedies for some time after the incontinence has ceased, on account of the strong tendency to relapse.

Notwithstanding the disagreeable nature of the affection and the immense amount of trouble it occasions,

parents for various reasons are disinclined to follow up steadily a prolonged course of treatment, and finally take refuge in the assurance, too often given by physicians, that the child will eventually outgrow the affliction.

In respect to general treatment, I shall not enter into particulars, for these measures are well known.

Among hygienic measures, cold bathing or sponging, and the use of the cold shower bath give the best results. I have not seen much benefit derived from frequent waking. Mechanical measures are useless, and very troublesome to carry out. Raising the foot of the bed may be of service in some cases.

In respect to diet, not much is gained by restricting fluid, but I am convinced that a dietary from which carbo-hydrates, and more especially sweets, are eliminated, is often of marked service. Stimulants are inadmissible and beverages like tea and coffee are better dispensed with.

If there is impairment of the general health, a few weeks of running wild in the fresh country air is of decided advantage.

The tonics which act best are preparations of iron, nux vomica and cod liver oil.

Among the many drugs recommended, belladonna enjoys the best reputation. In the majority of cases of nocturnal enuresis, there is an abnormal excitability of the muscular coat of the bladder, either from undue irritability of the vesical nerves or from undue sensitiveness of the nervous centres. Belladonna lessens the exaggerated tonicity of the bladder and proves beneficial in many cases.

For a number of years I invariably prescribed belladonna for nocturnal enuresis, and followed the plan first suggested by Trousseau, who advised gradually increasing doses up to the point of causing dryness of the throat and dilatation of the pupil. The results obtained were unsatisfactory. Transient improvement followed in most instances, but seldom a complete cure. I did not lose faith in the efficacy of belladonna, but learned that where this drug is pushed to its physiological limits, unpleasant and sometimes alarming effects are induced, and the parents at once stop treatment.

Belladonna should only be given by Trousseau's method when it is practicable to carefully watch the effects of the drug. If you are able to see the case frequently, or can depend on the intelligence of the mother to guard against mishaps, then belladonna can be used with a free hand, and good results can be obtained, but not otherwise.

For some time past I have employed hyoscyamus instead of belladonna, using first the fluid extract, and latterly hyoscyamine, and I have been very much pleased with the results. The action of hyoscyamus is very similar to that of belladonna, with following differences.

(1) On the whole the influence of hyoscyamus is less severe than that of belladonna.

(2) Hyoscyamus does not produce nearly as much mental disturbance as belladonna.

(3) As a bladder sedative, hyoscyamus is greatly superior to belladonna.

The advantages of hyoscyamus over belladonna are that with a given dose you get a more decided effect upon the bladder with much less general discomfort.

It is therefore better adapted to the requirements of the general practitioner, who cannot always exercise a careful supervision of patients suffering from enuresis.

I have used hyoscyamine in preference to other preparations, because it is more uniform in strength, and is readily prescribed in pill form.

I usually commence with 1-200 of a grain, and very gradually increase the dose, until the condition is controlled. To guard against relapse the preparation is continued in diminished doses, for at least three months after the incontinence has ceased.

So far I have had no serious mishaps, the only inconvenience complained of being visual disturbances among children attending school.

Of course, I must admit that I have paid much greater attention to general measures of treatment latterly than in the earlier years of practice, and this may have to some extent enabled me to get more satisfactory results from hyoscyamine than I was able to obtain with belladonna.

RHEUMATISM IN CHILDREN.

By F. H. WETMORE, M. D.,
Hampton, N. B.

(Read before the St. John Medical Society on Nov. 21, 1906.)

ACUTE rheumatism is a disease with which the general practitioner has to deal. It is frequently disastrous in its effects on the central organ of the circulatory system, at different ages, and in children the cardiac involvement is very prone to supervene without manifest warnings in the joints. These facts together with the knowledge that our ideas of this disease have lately undergone an entire change, are sufficient apology if any were needed for bringing this subject before the society.

CAUSES.—It is now generally acknowledged that acute rheumatism is a germ disease—that it is caused by a diplococcus, producing symptoms somewhat resembling those following the introduction of the pyogenic cocci into the system, although the life history of the specially suspected organism has not yet been entirely worked out. And it is believed that these bacteria, like the bacteria of the various exanthemata and the Pfeiffer bacillus of influenza, frequently enter the blood-vessels and the lymphatics through the crypts of the inflamed faucial tonsils.

Osler's Practice of Medicine (6th Edition) places rheumatic fever under the heading of "Specific Infectious Diseases" I quote from this article as follows:

(a) GENERAL EVIDENCE.—" The causes of the mortality statistics * * * approximate very closely to those of pyæmia, puerperal fever, and erysipelas, diseases which are certainly associated with specific micro-organisms."—(quoted from Church.)

(b) CLINICAL FEATURES.—Physicians have long been impressed with the striking similarity of the symptoms to those of septic infection. In the character of the fever, the mode of involvement of the joints, the tendency to relapses, the sweats, the anæmia, the leucocytosis, and above all, the great liability to endocarditis and involvement of the serous membranes, the disease resembles pyæmia very closely, and may indeed be taken as the very type of an acute infection.

Dr. A. D. Blackader, in a paper on this subject read before the recent meeting of the British Medical Association, and from which paper I have quoted very freely in this article, expressed a belief in this theory. He says "arthritic pseudo-rheumatic symptoms are not infrequently met with in many systemic infections, notably in infection by the pneumococcus, the gonococcus, the streptococcus, and the spaphylococcus; and clinical appearances occasionally would indicate that there may be other organisms, as yet undistinguished, which have a similar specific action on synovial membranes."

HEREDITY.—Authorities differ as to whether or not the disease is inherited. Osler says 25 per cent. of his cases give a family history of rheumatism. It may be that there is a specially inherited vulnerability of fibrous tissue and serous membranes to the action of the microbe.

I have read somewhere that in infancy this inherited tendency exhib-

its itself as an eczema; later, in early childhood when the tonsils are most active, from the first to the eighth year of life, the same family will be subject to attacks of tonsillitis; and that later still the serous membranes constitute the vulnerable part.

AGE.—Infants are seldom attacked by the disease; of 655 cases of rheumatic fever investigated by Windham for the Collective Investigating Committee of the British Medical Association, 32 or 5 per cent. were under the 10th year, and 80 per cent. between the 20th and 40th year of life. Osler says this percentage is too low for children. He says at least 10 per cent. have their first attack before their 10th year.

SEX.—Between 10 and 15 years of age girls are more prone to the disease, although of all ages males predominate.

CHILL, ETC.—Exposure to cold, a wetting, or a sudden change of temperature favor the onset of an attack, although Osler says these conditions were present in only 12 per cent. of his cases. Barlow mentions overexertion as a frequent cause; he says a long day in the country, such as during a church picnic, selects the rheumatic children, giving rise to swollen knees and ankles.

SYMPTOMS.—In the adult the symptoms of acute articular rheumatism are usually very pronounced—severe joint pains, with soreness and stiffness, high fever, and the cardiac complications. In the child, on the contrary, the joint involvement is seldom very marked, nor the fever very high; in fact the rheumatic manifestations of childhood are apt to be insidious, and are in danger of being overlooked, notwithstanding the great danger of involvement of the heart tissues with, frequently, disastrous results.

Barlow, 20 years ago, drew attention to the fact that there were numerous cases of cardiac disease in children, not congenital, due to rheumatism of an ill defined nature. This is still true, and on that account it becomes our duty to emphasize the fact that rheumatic manifestations in children frequently consist not of the joint pains, but of attacks of tonsillitis, chorea, pleuritic pains, muscular pains, some form of skin lesion, such as erythema nodosum, or epistaxis, severe and persistent headaches, or anæmia or enuresis.

Dr. R. M. McConnell, of the Vanderbilt Clinic, New York, in a paper read before the New York Academy of Medicine, stated that of 500 cases of rheumatism in children, in which the initial symptoms could be ascertained, 35 per cent. began with tonsillitis, and for that condition the patients had been brought to the clinic. In 23 per cent. the complaint was of shortness of breath, and pain in the chest, endocarditis being found present. Arthritic pain was the chief complaint in 24 per cent.; chorea in 15.5 per cent.; muscular pains or growing pains in 2 per cent.; torticollis in 1 per cent.

The articular pains even when present are generally subacute in character, and show slight tendency to metastasis. In some cases the pain is in the fibrous tissue at the insertion of the liganents and tendons, and not in the joint itself.

TONSILLITIS AND RHEUMATISM.—In the statistics of the Investigating Committee of the British Medical Association, tonsillitis was associated with rheumatism in about 25 per cent. of all cases in the Montreal hospitals tonsillitis was an early and prominent symptom in 13 per cent. In the Vanderbilt Clinic, New York, it was a prominent feature in 35 per cent. of

the cases as mentioned above. Gurich reports 17 consecutive cases of rheumatic affections with evidence of tonsillitis in 13 cases. These cases were mostly the chronic form and not acute, although this is contrary to the usual experience of observers. The tonsils were hypertrophied and contained cheesy looking plugs of unpleasant odour. In such cases Gurich stronly recommends medical treatment of the tonsillar condition, and says that in several of his cases the rheumatic symptoms stopped suddenly on sacarification of excision of the gland.

Any form of tonsillitis may be associated with rheumatism—a diffuse form with pain on deglutition is supposed to be the usual form. Holt finds quinsy most frequently in association with the disease. While Crandall finds in closest association a soft, almost purulent, exudate on boggy, greyish tonsils.

Dr. Blackader, in the paper above referred to, and from which *British Medical Journal*, Oct. 13, 1906) many of the above facts were taken, ends a discussion of this subject by saying that "careful attention to the condition of the tonsil is, therefore, especially demanded in all children with a rheumatic tendency."

CHOREA AND RHEUMATISM.—W. S. Thayer says that of 689 cases of chorea observed at the Johns Hopkins Hospital and Dispensary, during one or more attacks, 25.4 per cent. showed evidence of cardiac involvement; such evidence was present in 50 per cent. of cases in the wards of the hospital.

In a case of chorea of my own—a girl just in her teens—there was no improvement with arsenic and iron, but a good dose of calomel with continued doses of aspirin proved entirely satisfactory. This chorea was evidently a rheumatic manifestation, as shown by the therapeutic test.

CARDIAC COMPLICATIONS.—In English hospitals 80 per cent. of rheumatic cases affected in the first decade, and 60 per cent. of those affected in the second decade of life have the heart more or less permanently crippled.

Some years ago I remember being puzzled by a case I was asked to see. The boy complained of being out of sorts; he was somewhat weak, had a little shortness of breath, and later præcordial pain, but without any special fever or joint symptoms. A more thorough examination disclosed evidence of a cardiac lesion, and absolute rest in bed, with treatment for rheumatism cured him. And so in children with perhaps only slight muscular or tendinous pains, or the so-called growing pains, there may be associated an endocarditis or pericarditis even with but little variation of the pulse and temperature. For this reason it is important that in case of any rheumatic manifestation in children, we place the patient at rest in bed, and make frequent examination of the cardiac area.

Anæmia is frequently a marked manifestation of the rheumatic tendency. Goodhart says that in all cases of anæmia in children without obvious cause, he looks for a rheumatic tendency.

TREATMENT.—Dr. Gurich says that the natural treatment of rheumatism is a correction of the tonsil condition, a free opening and draining of the diseased crypts with thorough excision of the tonsillar tissue, and the diseased connective tissue in the neighborhood.—(*Post Graduate*, Vol. xx. p. 1104).

The general health should be carefully attended to. The constant wearing of flannels, tepid and cool

bathing, and proper exercise are of course required. Particular attention should be given to constipation and all gastro-intestinal disorders. I have in my mind the case of a young girl with marked tendinous and muscular pains, with evidence of a cardiac lesion, and a history of worms, who was quickly relieved of all rheumatic symptoms by a dose of calomel and santonine.

Water should be drunk freely.

Meat, sugars and starches should be partaken of in moderate amounts. With any rheumatic manifestation at all marked, such as joint pains, tonsillitis, etc., put the patient at rest in bed, restrict the diet, give a good dose of calomel, and repeat a moderate dose every few days; give salicylates in any form that will agee. I have found aspirin frequently satisfactory when the the salicylate of sodium will not agree with the stomach. Or the alkalies may cause less digestive disturbance, and do more good. Some form of iron should be given as soon as possible. When once a child has had an attack of rheumatism, Dr. C. G. Kerley of New York, advocates "interval treatment"—namely moderate doses of aspirin and bicarbonate of soda for five or seven days in each month.

AN UNUSUAL CASE OF HEMIPLEGIA.

By W. H. EAGAR, M. D.,
Halifax, N. S.

(Read before H. and N. S. Branch British Medical Association.)

Patient, a man aged 26, single.

CONDITION.—Was called to patient for convulsions and unconsciousness.

FAMILY HISTORY.—Father has chronic rheumatism; also, grandmother on mother's side. One sister, aged 6, had paralysis of left leg: has left some wasting. One uncle died from tuberculosis.

HISTORY.—Traveller by occupation. Has had measles, scarlet fever, whooping cough, chicken pox; had influenza five years ago; had gonorrhœa; no history of syphilis, but gives a history of chancres which healed very rapidly. Has never had rheumatism, but has had frequent attacks of quinsy. Has never used alcohol regularly or to any extent; has not touched it in any form for a year. Smokes a lot, especially cigarettes. Has always eaten heartily of meat three times daily. Went in for athletics and received several bad blows on head, playing football, and falling off his wheel, but never lost consciousness. For the past few months has been working very hard and was worrying a great deal over his approaching marriage, which was to take place the day following his present illness.

HISTORY OF ILLNESS.—On Nov. 23, while in Alberton, P. E. I., he woke feeling very ill as if right side of body had gone asleep, and with a bad headache, but with the assistance of friends he went to Summerside. On arrival there he was unable to walk owing to paralysis of the right side. The paralysis involved the arm, leg and face. (Gradual onset.)

Previous to this for several weeks he had not been feeling well and suffered from violent headaches, paroxysmal in character, without any regularity in their onset, and located in the left temporal region.

He recovered sufficiently to return to Halifax on Nov. 27th, where he was attended by Dr. Ross for electrical treatment of paralysed side, but neglected mixed treatment, which Dr. McLellan, of Summerside, P. E. I., had been giving him, and which he was ordered to continue.

On Dec. 4th, while at the home of his fiancee, he was suddenly seized with blindness and a convulsion.

Patient is a small man, rather thin, pale, somewhat pimply faced. Semi-conscious, very restless and confused, unable to express himself intelligently other than by yes or no, and that doubtful; breath very foul, ammonical; pupils equal, not dilated, slight ptosis of left eyelid. Temp. 98.2°; pulse 76, fair tension; no thickening of arteries. Tongue coated, turns to right on protrusion. Buccal folds almost absent on right side with paresis of right arm and leg. Reflexes increased on this side: no Babinski or ankle clonus. Heart and lungs normal. Calomel and soda, gr. v. were given with orders to administer two teaspoonfuls magnesium sulphate in five hours. Heat was applied to body and ice to the head, morphine, gr. ¼, and atropine, gr. 1.50, hypodermically.

Dec. 5th, A. M. Temp. 100°, pulse 90, irregular, full, condition unchanged, no passage of fæces or urine. Catheter specimen shewed high

colour, acid reaction, Sp. gr. 1023, excess urates, so albumen, no sugar. Was given ʒi sat. sol. magnesium sulph. every hour for bowels, potass. gr. x, potass. citras, gr. xxx, t.i.d Formoloid mouth wash.

11 P. M., Temp. 102.2, Pulse 90, three motions of the bowels. Complained of violent pain in head over left eye. Had passed very little urine. Gave saline solution with Kemp's tube for 1½ hours, followed by free perspiration.

Dec. 6th, Temp. 99.2, Pulse 72, brighter, pain in head very bad. Herpes at left angle of mouth. Used Kemp's tube for 40 minutes. Codeine, gr. ⅛ every hour for head.

5 P. M., Temp. 98.3, Pulse 72 Very much better.

Dec. 7th, Temp. 98.4, Pulse 70, feels better. Weakness in right extremities marked more in arm. Vision blurred, more in right eye. Marked tenderness on percussion over parietal area.

Dec. 8th, Temp. 98.6, Pulse 68. vomited iodide mixture. Ordered same quantity, well diluted during 24 hours, instead of in three doses, which was retained.

Dec. 9th. Pain in great toes more in right, swollen and red. Hot lead and laudanum lotion to toes. Codeine, gr. ⅛, every ½ hour for pain. Mercurial inunctions, and increased iodide to 40 grs. daily.

Dec. 11th. Toes better. Iodide, 60 grs. daily, with liquor arsenicalis, 6 minims.

Dec. 19th. Went to Halifax and has since been under the care of Dr. Ross.

Paralysis was never complete while under my care. The paresis and other symptoms shewed steady and rapid improvement from day to day. Joint symptoms subsided in 4 days. Memory was very poor, after the attack, with difficulty in talking, amounting to a motor aphasia. Marked improvement followed the use of salines per rectum. The iodide and inunction have seemed to be of benefit.

Feb. 6th, 1907. Examination of eye by Dr. Dickey; disk rather pale. retina somewhat anæmic, no definite evidence of a past or existing optic neuritis..

DIAGNOSIS.—Uncertainty regarding the actual diagnosis must necessarily exist. Following Dr. A. A. McLellan, of Summerside, both Dr. Ross and myself agreed that for the purposes of treatment at least we would assume the condition to be of syphilitic origin.

The complexity of symptoms paresis of the right extremities and face, with ptosis of the left eye-lid, justify us in thinking that the lesion was most probably situated in the crus.

In support of the supposition that syphilis is the cause, we have the patient's age 26, a history (however indefinite) of syphilitic infection, prodeomal symptoms of headache and general malaise, accentuated by the nervous strain under which the patient was laboring, the mild and rather indefinite character of the paralyses, the second attack following so soon upon the first, occurring suddenly and preceded by a convulsion, especially when the patient had been off treatment, and the subsequent history of steady, rapid improvement under anti-syphilitic remedies.

Statistics show that intracranial symptoms may occur as an early manifestation. In 70 cases submitted to post mortem examination, 44 per cent. occurred within the first three years, most frequently in brain workers, and following some traumatism.

and it is generally recognized that the earlier syphilitic manifestations have been mild, or that the sore and cutaneous symptoms have been overlooked.

The condition was probably the result of an endarteritis obliterans with good collateral circulation improvement in the arteries having followed the mixed treatment.

Symptoms of arterial obstruction from this cause would be somewhat slow and similar to thrombus formation, and this was the case in his first attack, which took some hours before the paralytic symptoms developed.

CASE OF VARIOLA HÆMORRHAGICA MALIGNA.

By D. MACKINTOSH, M. D.,

Pugwash, N. S.

IN view of the epidemic of small-pox referred to in your issues of December and January, I thought the following case might be of interest to the readers of the NEWS.

On Sunday, Dec. 30th, I saw S. D. B., who had been sick since the previous Wednesday with chills, backache, headache, vomiting and general malaise. His face, neck and arms and indeed most of his body, were then covered with a rash which at first sight suggested measles. His pulse was very rapid, his temp. 104, and he was very sick. Knowing that his son had just recovered from a very mild attack of small-pox, I was at once put upon my guard. Next day I called again and found my patient much worse. His eyelids were much swollen, his face very red, suggestive of erysipelas. His skin of arms, legs, abdomen and chest was covered with dark coloured petechiæ. His mouth and throat were much inflamed, his voice husky, and it was with difficulty he could breathe, apparently from œdema of the glottis. He was spitting bloody mucus, and was altogether in a deplorable condition. Between, and covering the patches of ecchymosis, there could be seen many papules and vesicles, which were of a dark bluish colour. I saw him again on Wednesday, 2nd January, two days later, and found him much worse. The vesicles were now developing into pustules, which were dark, as if blood had been effused into them. The skin was almost black, and the poor fellow presented a pitiable aspect. He was still spitting bloody mucus. He died that night, six days after the initial chill, and presenting the typical aspect of variola hæmorrhagica maligna.

The interest of this case lies in the following facts—viz.: That so far as I know this is the only death since the outbreak of the epidemic; that the patient contracted the disease from his son, whose case was so mild that he did not require any medical attendance; that the son contracted it from a paternal uncle, who had confluent small-pox. I may say that none of those people had ever been vaccinated. A question very naturally arises here—how can we account for this malignant case arising in its solitary severity in the midst of an epidemic of such acknowledged mildness?

A MISTAKEN DIAGNOSIS CORRECTED.

By HERBERT E. MACE, M. D.,

Boston, Mass.

THE case here reported of syphilitic origin, came under my observation and treatment in 1887. Not so long ago but that the bewildering features furnish a lesson worthy of consideration in the treatment of obscure cases.

The patient, a married lady, 30 years old, belonged to a wealthy and influential family whose social status was established. Previous to this history her health had been excellent. At this time she was pronounced enceinte and confinement predicted in a few days. All the external physical signs of pregnancy were prominent, morning sickness, absence of menstruation, full and evenly distended abdomen, protruding nipples, dark areola, breasts firm and enlarged, etc.

During the absence of her attending physician I was summoned to relieve her of a uterine colic, with which she had suffered several attacks in the past two months. Concluding that they were caused by mechanical pressure, I made a digital examination, but found the uterus small, easily flexed, and, on further examination, that it was empty. I informed the mother that her daughter was not pregnant. On the following day the patient was sent to Boston where a consultation was held by two prominent gynæcologists, who confirmed my diagnosis.

She remained in Boston about one year, returning home, in a neigboring state, to have the advantages of better air and surroundings. During her absence her general health perceptibly failed, the former symptoms were aggravated, hemiplegia supervened, though not complete, speech and mental confusion much affected, and general weakness with great loss of flesh was pronounced. In this condition she came under my care and I must confess the situation puzzled me until a few weeks after, I recalled a limited gossip of years before in which her name was coupled with that of a gentleman whom I knew had specific disease. Without any attempt to secure a confirmation of this from the patient, I commenced the use of anti-syphilitic remedies. It was not long before improvement in her condition was noticeable—especially in the mental and hemiplegic symptoms. The steady gain in health continued uninterruptedly for one year, at which time the form had resumed its normal proportions and she called herself well. She certainly appeared so. Continuing at intervals the treatment there has been no relapse, and to-day she carries no perceptible evidence of disease.

(The above is certainly an interesting communication and instructive as well. We do not intend to speak of the mistaken diagnosis nor of the puzzling features of the case. What we do wish to allude to is the peculiar basis employed to establish a diagnosis. Our readers will readily acknowledge that a mere suspicion is not a good foundation upon which to base a treatment, especially for such a serious condition as syphilis. We certainly would require something more tangible before inaugurating a treatment for syphilis, but when such serious symptoms as hemiplegia and mental confusion occur these demand a careful investigation. Of course, the nervous sym-

toms which presented themselves should be looked upon as suggestive of lues, but more convincing evidence than these was the information conveyed by the history of the patient previous to marriage. The nervous conditions which presented themselves, in addition to the other symtoms, certainly pointed to syphilis, which the treatment proved to be such.—*Editor American Journal of Dermatology.*

THE NEED OF AN AMERICAN YOSHIWARA.

OUR readers may have read of the Yoshiwara, and some perhaps have seen this peculiar Japanese institution, as the writer has, and it has occurred to us that the methods followed by the Japanese in this respect are certainly worthy of imitation and emulation. The establishment of this peculiar institution would do more in the way of moral and venereal phophylaxis than all the societies and Congresses which have this laudable end in view. The Yoshiwara is the quarter in which the prostitutes are permitted by the government to live and do their traffic. It is strictly under governmental supervision, and the women themselves are hired to the government by their parents at a fixed annual wage, being housed, clothed and fed by the State which in turn, takes all their earnings and fixes the tariff which they may exact of their customers. Should the woman in the Yoshiwara contract any disease, care is taken of her in a hospital set aside for this class. The *shogi* or courtesans are very closely watched by the police, and as a result of this careful supervision, the cases of crime and venereal infection are comparatively small in number. The system of licensing is a very strict one, and the houses must be built according to the regulations made by the police. The result of this supervision is that all the houses in the Yoshiwara are orderly, and foreigners who visit there are surprised at the order which is preserved. The entire plan of the Yoshiwara is one of segregation, the result being that bawdy houses are not in respectable neighborhoods, nor permitted to taint the decent abodes of honest people. That there exists some clandestine prostitution is well known, but it is carried on very secretly, and not with the brazen effrontery so characteristic of European and American cities. The Yoshiwara is so well known that the youth is careful not to be seen entering the place more often than is safe. Midnight brawls are unknown, and everything is conducted in such a quiet and orderly manner that some of the great incentives to immorality are withdrawn. In the brothel houses there have been recently introduced prophylactic measures to prevent infection in the way of mouth washes and solutions to wash the genitals which must be used by all the women and their male visitors. This has had some effect upon the prevalence of venereal diseases. Of course these affections exist in Japan as they do in every country on the

globe, but they are far from being as prevalent as in enlightened countries. When we take into consideration the almost perfect police control of prostitution in Japan, and the good results which have been attained thereby, it strikes us that the same method applied to this country, especially the segregation of prostitutes, would certainly be a great stride in the way of moral prophylaxis, and the control of prostitution would be a long step in the direction of venereal prophylaxis, and would be withal practical and impossibly theoretical like the abolition of this condition which, in reality cannot be abolished.

The entire problem reduces itself to the forced recognition of a condition, and it is acknowledged to be a bad one. The only practical solution is to render it less dangerous to the morals and physical health of youth. To point out the immorality of such practices is certainly proper and necessary; but it must also be kept in mind that the genesic impulse is a strong one in young males, and will lead them to run all sorts of chances, and that it cannot be suppressed. We are here placed face to face with a difficult problem and a due consideration of the conditions attaching to it will show that the only practical solution lies in the establishing of Yoshiwaras, which should be known as the forbidden cities.—*American Journal of Dermatology.*

SOME OLD HEALTH RULES.

THE Mosaic law was intended to regulate and for centuries actually did regulate the entire life and policy of the Jewish people. It embraced within the sweep of its cognition and contrast the personal conduct of the citizens, their domestic and social relations, their land tenure, their education, the relief of the poor, their sanitary regulations, their policy and the administration of civil and criminal justice. It was, in brief, the national constitution and code. And there is no system of law, ancient or modern, not excepting the marvelous system bequeathed by Rome, which is more worthy of careful study.

It is a remarkable characteristic of Mosaic law that a very large proportion of its provisions are devoted to purely hygienic and sanitary prescriptions. Of the 613 injunctions into which the Jewish doctors divide the law, more than one half relate to matters of health, while of the 524 paragraphs of the Mosaic and the corresponding chapters of the Talmud, 213 are devoted to purely sanitary regulations. State medicine, which, even among the more advanced and enlightened of nations, is little more than a term, was with the Jews a practical and potent reality of everyday life.

The principles which underlie and pervade, and mould the whole of the sanitary enactments of the Mosiac law, are that health is a matter not merely of individual, but of public concern, that in the body politic, if one member suffers, all the members suffer with it; that infectious or contagious disease is a subject not merely

of individual or family interest, but of public and state importance; that when an individual, in whatever rank of life, becomes the victim of infectious or contagious disorder, not only is his own life imperilled but he becomes the centre and source of grave public danger; that his person, his clothing, his dwelling and its furniture are all a standing menace to the public weal; that the community of which he is a unit has the duty and the right by isolation of the patient so long as danger exists, and by the disinfection, and if necessary, the destruction of his material surroundings, to secure itself against the spread of the disease, and that no consideration of private interest or family affection, or social distinction shall be permitted to stand in the way of the impartial and rigid enforcement of the statutory remedy.

The Mosaic law regarding the treatment of infectious diseases, of which these are the fundamental principles, is minutely detailed in chapters xiii and xiv of Leviticus. It is unnecessary to recite the numerous provisions of that law, as they are easy accessible to all, but the following comprehend generally its enactments:

1. The compulsory and immediate notification of a responsible health officer of every case of suspected or actual infectious disease or of other insanitary conditions fraught with danger to health.

2. The immediate inspection by such public health officer of the afflicted individual or of the alleged unsanitary articles and conditions.

3. In doubtful cases the total isolation of the patient from family and friends and the community for a period, to determine whether the disease shall assume an infective or non-infective form.

4. In actual cases the continued and permanent isolation of the patient so long as the disease continues and consequent danger to the community exists.

5. On the favorable issue of doubtful cases, or on recovery from actual cases of infectious disease, the restoration of the patient to the community only with permission of the public health officer, after due inspection and upon compliance with certain prescribed purifications.

6. The disinfection and, if deemed requisite, the destruction by fire of all infected clothing and other effects.

7. The disinfection and, if necessary, the demolition and destruction of infected dwellings, or of dwellings the sanitary condition of which is dangerous to health.

These are generally the enactmens of the Mosaic law regarding the prevention, the arrest and the extermination of zymotic diseases of whatever character.

OUR SCHOOLS AND THE WHITE PLAGUE.

SOME years ago the Department of Public Instruction for the Province of Quebec issued a pamphlet on the subject of tuberculosis. It contained the findings of the Berlin Congress. The step is one suggestive to other educational bodies.

The report of the Berlin Congress recommends that parents should be taught "that the disease was acquired in the young people *by breathing the germs.*" Every care should be taken to keep children free from infection, and also to see that they were well fed, live as much out-doors as possible and have such extra nourishment as may be necessary to strengthen their tissues and make them able to resist the disease.

Commenting on this subject the *Educational Record*, of Quebec, says:

"Thus far the information deals with the cause of consumption, the manner of infection and how to prevent its spreading is of much value to the sensible teacher and her pupils. Are not many of our schools *crowded centres*, with *chalk dust-laden atmosphere*, to which is often added the filthy dust of the school-room floor, when it is swept at noon by the pupils in turn? Moreover, is not the occupation of the school-room *sedentary* for both teacher and pupils and is not the atmosphere of the room both *diluted* and *polluted?* These four conditions constitute the *favourable circumstances!* required to make a *consumptive hot-bed.* All that is further required is the importation of a few germs of the tubercle bacilli. These are frequently found in some of the homes of the pupils, and their importation to the school-room is only a matter of time.

"It is a sad truth that the provisions for ventilation of many of our public schools favor the disease, but no wide-awake, sensible teacher will sit still and perish without doing all she can to save her own health and that of her pupils.

"*First*—Let the floors be swept after school each day with a damp broom When this is being done the windows or ventilators should be open to allow fresh air to enter and the foul, dust-laden air to go out. Next morning the blackboards should de cleaned with a damp cloth and the furniture dusted with a soft cloth moist with coal-oil. If the floors are cleaned regularly, or even every two months in winter, the best results will accrue to the school in health and cheer and wide-awake pupils.

"*Second*—The crowded condition can be somewhat overcome by combatting its effects by ventilation. To do so, where the door and windows are the only means, it is well to give the pupils some vigorous exercise, in which all must join, thus preventing the quieter pupils from remaining motionless aside and catching cold. In this manner the *sedentary* fault is overcome as well as the crowded condition and the few minutes used for this purpose are soon made up by the renewed hope and fresh vigor of the brightened pupils, whose teacher is more valuable to them than rubies.

Moreover, if the teacher so conduct her school she will find a brighter class of pupils, less irritation, better lessons, no need for "keeping in" after school and long hours in a foul atmosphere. Let us arouse, be watchful and strenuous in the conflict for better things, and a fair share of reward shall be ours."

THE CURABILITY OF TUBERCULOSIS.

By W. J. DOBBIE, M. A., M. D. C. M.,
Physician-in-Charge of the Toronto Free Hospital for Consumptives.

TUBERCULOSIS is both communicable and preventable. Let it be known equally well that it is also curable. Of this there is an abundance of adequate proof, and yet it is not easy to present in a concise form the grounds upon which is based this now almost universally accepted belief. Formerly tuberculosis was thought to be an absolutely incurable desease. Some there are who still are firmly of that opinion. Others again, while admitting the possibility of a more or less temporary improvement, do not believe that anything like an absolute cure is ever possible.

It is true that the proportion of absolute cures obtained is not as yet large, and that much depends on the progress made by the disease before the patient is subjected to treatment. For, as in any other disease,it would be unreasonable to expect as good results from cases which are advanced as from cases which are but in early stages. These considerations, however, are only such as would be taken into account in the case of any other disease. The proofs available are of different kinds and come from various sources.

The most distinguished pathologists in the world have made known the conditions found at many of their autopsies.

Observations have been made by them in cases in which tuberculosis has been the cause of death, and in cases in which death has been brought about by some other disease or condition. In the latter cases, in which tuberculosis was never thought of as a cause of death, healed tubercular lesions have been found in the lungs. This did not happen in one or two isolated cases in which it might have been possible to suspect some misconception or mistake in observation, but forty to fifty per cent, of such cases were found to have had at some time tuberculosis, and, as demonstrated beyond doubt after death, the disease had been cured. Other cases, moreover, in which tuberculosis was known to have been an active disease some years before death, but in which death had been caused by some other disease or condition after the tuberculosis had been apparently cured, were examined in like manner. In these also healed lesions were found in the lungs.

Such proofs as these furnised by post-mortem examination are most convincing although when Brehmer attempted to apply such post-mortem findings to practice and to accomplish similar artificial cures by treatment, he met with considerable opposition.

Equally convincing, however, are proofs of a different nature which are also available. The results published from time to time by the different sanatoria cannot but be accepted as fairly reliable data. Such institutions are as a rule in charge of men who are specialists in their particular line, and in the cases quoted in statistics, the disease had been recognised beyond the shadow of a doubt. This is a very important point to make because it is a common habit of those who are inclined to be sceptical to say, when instances of cures are quoted, "Oh, they never had it." As a matter of fact, the rule is for the case to be diagnosed by the family physican or a consultant before the patient enters the sanatorium at all. And furthermore, if there could be any such chance of error, the results would not be, as they are, accepted by the most progressive medical men of the day.

It is quite impossible to give summaries of statistics from any but a few of the numerous sanatoria now in

existence. Similar results are, however, being obtained everywhere and the statistics of one institution do not vary very materially from those of another.

Dr. Brehmer, one of the pioneers of the open air treatment, established his sanatorium in Goerbersdorf in 1859. This institution has now 250 beds, and as the result of investigation in over 5000 cases, Dr. Brehmer gives the following statistics as to the number that have been cured:—

Incipient Cases (early).....59% cured.
Moderately Adv. Cases.....21% "
Far Advanced Cases..... 3% "

The German Imperial Health Officer analyzes the results of treatment in 6,273 cases treated in sanatoria in the year 1899 and 1900 with the following results: In the opinion of the sanatorium physicians 87.7 per cent. were cured or improved, of whom 67.3 per cent. were regarded as sufficiently well to resume work at their former occupation.

Dr. Burton Fanning reports on 716 cases collected from various sanatoria in England, Scotland and Ireland. Quiescence of the disease or relative recovery was obtained in 37.4 per cent. of cases; amelioration in 40.2 per cent.; no improvement in 22.3 per cent., and this in spite of the fact that only 52 of those cases or 7.4 per cent. could be described as "cases of slight lung mischief."

The second annual report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, in Philadelphia, shows that of 2,344 cases treated in two years, there were 9 cases of disease arrested, 810 improved, 768 unimproved, 528 cases in which results were not recorded, and 229 dead. These cases were, as the report says, "with few exceptions advanced cases. Most of them were taken into the hospital because they were reported to the Institute as dying cases. Nearly one half of those admitted were discharged as improved."

The ninth annual report of the Massachsettes State Sanatorium, at Rutland, Mass., shows that of 566 cases taken into consideration during the year, only 7.4 per cent. did not improve, 58.9 per cent. improved, and 33.7 per cent. were arrested or apparently cured.

Similar results have been obtained in Canada. At the Muskoka Cottage Sanatorium 1,287 patients have been treated, and during the last year of which we have a report, 18.8 per cent. of the patients were apparently cured, in 29 per cent. the disease was arrested, 31.2 per cent. were much improved, in 15.9 per cent. the patient's condition was stationary, 3 per cent. failed and 2.1 per cent. died.

OBITUARY.

DR. DANIEL McINTOSH JOHNSON.

DR. Daniel McIntosh Johnson, died at his home in Tatamagouche, N. S., recently. The doctor had been ill for but a short time, suffering from la grippe, and his death was unexpected.

Dr. Johnson graduated in 1875 at the Halifax Medical College, and soon made his home at Tatamagouche, where he has had for years quite an extensive practice. He also kept a drug store that was a great convenience to his professional brethren and the general public "over the mountain."

A few years ago he was appointed Postmaster of Tatamagouche.

In his immediate family Dr. Johnson leaves a widow and five children. Dr. J. W. Johnson, of Bury, England, is a brother of the deceased.

Dr. Johnson was one of the most prominent citizens of Tatamagouche, and his death will be a decided loss to that little town.

❋

SIR WM. HINGSTON.

The death of Sir William Hingston occurred at Montreal on February 19th, in the 79th year of his age. The immediate cause of death was gastro-enteritis, probably induced by ptomaine poisoning.

His father was Lieut. Colonel of the Militia, formerly of the 100th Regiment, or "The Dublins;" who was a native of Ireland.

From the *Montreal Medical Journal* we have culled the following:

"In 1851 William Hingston graduated from McGill, and at once crossed the Atlantic in a small sailing ship to Edinburg, and soon became a favorite of both Simpson and Symes. He afterwards studied in London, Paris, Berlin, Vienna and Dublin. All through his stay in Europe he was obliged to practise the strictest economy, his diet at times consisting of bread and water only. He returned for a short time to Edinburg before leaving Europe, and Simpson strongly urged him to remain as his assistant, but he yielded to the desire of his mother and returned to Montreal.

"The second year of his practice was the year of the cholera epidemic, and the poor people found him the only one willing to sacrifice his days and nights without hope of remuneration.

"In later years, when these people became thriving, he had an almost exclusive practice with them. In 1860 he was appointed to the Hotel Dieu staff. In 1882 he was made Professor of Clinical Surgery at the Montreal School of Medicine, Victoria University, five years later becoming the Dean till the union of Victoria and Lewal, in 1891.

"When the British Medical Association met in Nottingham in 1892, Dr. Hingston delivered the address on Surgery, which was well received.

"Fifty years ago he was doing capital operations as well as they could be done in those days. He never entirely mastered the technique of asepsis, indeed, he was never fully convinced of its importance. In the early eighties, ovariotomy for cystic tumours was a comparatively new operation. His success at first was small, but two or three years after his first operation he had a series of thirteen cases operated on without a death.

"In 1900 he received the honorary fellowship of the Royal College of Surgeons of England. Dr. Hingston was elected Mayor of Montreal in 1875, receiving about ten votes to his opponent's one. He was re-elected by acclamation, but declined a third term.

"On May 24th, 1895, he was created Knight Bachelor, and the same year ran as Conservative candidate in Montreal Centre for the House of Commons, being defeated by Mr. James McShane. The following year he was appointed to the Senate.

"Tall and erect, with well cut features, bearing an expression of strength and kindness, Sir William always attracted attention. His career was the embodiment of all which is best in the profession of medicine. By a long and well conducted life he won the respect of his colleagues, the confidence and affection of his parents, and the good will and consideration of his fellow-citizens."

SOCIETY MEETINGS.

HALIFAX AND NOVA SCOTIA BRANCH BRITISH MEDICAL ASSOCIATION.

FEB. 6th.—The President, Dr. Ross, in the chair.

Dr. D. A. Campbell showed a case of paroxysmal tachycardia, which he regarded as beng a larval form of exophthalmic goitre. Patient is a florist, 29 years of age. Pulse rate, 140 per minute; tremors present; no exophthalmos. There has been some improvement lately, following the use of spartein sulphate in small doses. Patient has gained a little in weight.

Dr. Eagar read report of a case of "Hemiplegia" (published in this issue).

Dr. Ross concurred in the diagnosis and treatment.

Dr. D. A. Campbell considered the diagnosis justifiable, and mentioned a case of cerebral syphilis in which he had given 600 to 1000 grains of potassium iodide daily on the advice of Weir Mitchell. He would regard the lesion in Dr. Eagar's case to be vascular and obliterative, and agreed that the prognosis was good, provided that specific treatment be continued.

It was moved by Dr. Eagar, and seconded by Dr. Murphy, that Dr. Ross be requested to present a paper on "The Therapy of Syphilis" at some future meeting.

FEB. 23rd.—Dr. Mathers exhibited two very interesting cases.

(1) Congenital cataract in a young man, needled and detritus washed from anterior chamber. Splendid sight in one eye, the other clearing up.

(2) Abscess of frontal sinus in a lady who suffered with frightful head aches; polypi in the nose present. Operated and removed a lot of stinking pus. Put in iodoform gauze, two yards long and one inch wide. Brain exposed at operation. After operation headaches disappeared and result in every way was good.

Dr. Eagar then gave a demonstration of "Hypnotism," exhibiting a patient, a young man who had formerly been extremely nervous, becoming melancholic where ordinary treatment had entirely failed. Under hypnotic suggestion the patient had improved wonderfully. Dr. Eagar showed various phases of hypnotism in this case.

After considerable discussion, Dr. Hattie suggested that Prof. W. C. Murray be invited at some future meeting to discuss the "Psychology of Hypnotism."

Dr. Hattie then read a paper on "Cerebral Localization" dealing with the latest researches in this interesting topic.

Dr. Goodwin reported a case of a needle inserted to its full length in the back of a patient, with thread attached, which he removed, and showed to the meeting.

Dr. Watson referred to a grayish ring around the pupils in a case of meningitis.

Canadian Medical Association.

The Canadian Medical Association will meet in Montreal, on the 11th, 12th and 13th days of Septem-

ber, 1907. Many have already promised papers amongst others being several well-known French-Canadians, who will take an active part in this meeting.

WORKING COMMITTEES.

Medicine.—Drs. H. B. Cushing, F. G. Finley, Gordon, H. A. Lefluer, Martin, Morrow, Nicholl, Peters, Richer.

Surgery.—Drs. Armstrong, Archibald, Bell, Barlow, Bazin, Elder, England, Garrow, Monod, Forbes, von Eberts.

Dermatology.—Drs. Jack, Shepherd.

State Medicine.—Drs. McTaggart, Louis Laberge, Starkey.

Laboratory Workers.—Drs. Keenan, Yates, Duval, Adami, Klotz, Bruere.

Pediatrics.—Drs. Blackadar, Gordon Campbell, Fry, F. P. Shaw, Francis.

Gynecology.—Drs. Chipman, Gardner, Lockhart, Lapthorn Smith.

Museum.—Drs. Adami, Maud Abbott.

Eye.—Drs. Byers, J. J. Gardner, Stirling, McKee, Tooke.

Laryngological.—Drs. H. S. Birkett, R. Craig, Jamieson, H. D. Hamilton.

Neurologist.—Drs. Shirres, Colin Russell.

Obstetrics.—Drs. Cameron, Evans, Ready, Little.

St. John Branch British Medical Association

The St. John, New Brunswick Branch of the British Medical Association, held its deferred quarterly meeting on the 7th March, Dr. Murray MacLaren, President, in the chair.

A communication from the head office confirming the bye-laws was read.

After the conclusion of the routine business, the members dined at the Union Club, the occasion being the inauguration of the Branch.

Those present were Dr. MacLaren, elect, Dr. James Christie, Vice-President, Dr. J. R. McIntosh, Treasurer, Dr. J. H. Scammel, Corresponding Secretary, Dr. Warwick, Financial Secretary, Dr. McInerny, President of the New Brunswick Council, Dr. T. D. Walker, Vice-President Maritime Medical Association, Dr. Skinner, President New Brunswick Medical Society, Dr. Melvin, President St. John Medical Society, Dr. White, (Moncton) Dr. Wetmore (Hampton) Dr. W. A. Christie, Dr. G. A. B. Addy, Dr. Malcolm, Dr. McAlpine, Dr. P. R. Inches, Dr. Roberts.

Letters of regret were read from Dr. James Ross, President of the Halifax and Nova Scotia Branch, Dr. Daniel, Dr. Moorhouse and others.

The formal toasts were, The King, The British Medical Association, and the New Branch. The Medical Council, The Medical Societies of Canada, The Canadian Army Medical Services.

A very pleasant evening was spent by the members and guests, and a favorable entree was made by the New Branch.

COMPLIMENTARY DINNER GIVEN BY THE NATIONAL DRUG AND CHEMICAL CO.

The remodelled warehouse of the National Drug and Chemical Company, this city, was formally opened on the evening of the 21st. inst., followed by a dinner at the Queen Hotel.

The building has a floor space of 33,000 feet, in the five floors and a basement. Improvements have been made at a cost of $15,000. This large industry has been thoroughly modernized and there are 66 persons employed.

The Company besides has a large warehouse on the Plant Wharf, where surplus and heavier goods are stored.

The guests, who comprised a large number of druggists from the city and province, and likewise a number of physicians, were shown through the building and then conducted to the Queen Hotel, where a most creditable dinner was served to the gathering, some seventy in number.

The President, D. W. Bole, of Winnipeg, occupied the chair and delivered a most interesting speech, part of which, taken from the *Acadian Recorder*, was as follows:

"Mr. Bole dwelt at length with the patent medicine bill before the Canadian Parliament. He spoke of preparations which were now sold which contained cocaine, by which some hundreds of people have been ruined. There was a Chinese joint in Montreal which had bought this preparation in large quantities, where people went and stayed all night. He did not believe in the proposed stamp clause, which the retailer would have to pay. People would not pay the extra cent on a 25 cent purchase, two cents on 50, etc. He had a hint this would be eliminated from the bill; if it was not, he would not vote for the Government he supported. His own idea was three simple amendments to the adulteration act would fill the bill, and that was to forbid the sale of any patent medicine containing cocaine, or any preparation containing a large percentage of alcohol sold under the guise of a patent medicine, and that it should be impossible to obtain any medicine containing poisonous drugs unless what it really did contain was plainly printed on the package"

PERSONALS.

DR. John Stewart has returned from Bermuda considerably improved in health. He has been advised, however, not to resume work for some months yet, and will leave for Scotland about the end of March.

Dr. E. M. MacDonald, of Sydney, was elected councillor at the recent elections in that city.

Dr. D. T. C. Watson, accompanied by Mrs. Watson has sailed for Jamaica to pay a visit to the doctor's relatives.

Alderman A. C. Hawkins has been delegated by the City Council to attend the annual meeting of the Canadian Association for the Prevention of Consumption, which meets in Ottawa this month.

*

It will be learned with very general regret that the venerable Dr. William Bayard, of St. John, was recently severely injured by falling down the stairs of his residence. From the last reports we have, he was doing well. It will be the unanimous wish of the profession in these provinces that the worthy doctor may be speedily restored.

*

Those who were privileged to meet Mrs. Elliott, wife of Dr. George E. Elliott, Secretary of the Canadian Medical Association, will be grieved to hear of her sudden death at Toronto. Mrs. Elliott who visited Halifax with her husband during the meeting of the Canadian Medical Association in 1905, made numerous friends who were charmed by her bright companionship. The NEWS extends its deep sympathy to all relatives so sadly bereaved.

*

Mrs. Thompson, wife of Rev. Dr. Thompson of Trinidad, died suddenly on the 19th, inst., after four day's illness of yellow fever. Mrs. Thompson was the oldest daughter of Dr. W. H. Macdonald of Antigonish, and sister of Dr. W. Huntley Macdonald, and had only been married a few months.

THERAPEUTIC NOTES

A STERILE EYE BATH.

An eye bath fashioned from a single piece of aluminum has been introduced by the Kress & Owen Company. That this little device will be well received by the medical profession is not to be questioned when one considers the many points of advantage this metal cup has over the old style glass contrivance. It is cleanly, unbreakable and can be sterilized instantly by dropping into boiling water. The surgical bag in the future will hardly be complete without one of these cups, which will give happy results in many an emergency. It will be found invaluable for treating opthalmia, conjunctivitis, eye strain, ulceration and all inflammatory conditions affecting the eye.

DIRECTIONS.—Drop into the eye bath ten to thirty drops of Glyco-Thymoline, fill with warm water; holding the head forward, place the the filled eye-bath over the eye, then open and close the eye frequently in the Glyco-Thymoline solution.

No pain or discomfort follows the use of Glyco-Thymoline. It is soothing, non irritating, and reduces inflammation rapidly.

THINGS GOOD AND BAD.

Dr. Uriel S. Boone, formerly Professor of Pharmacology and Surgery, College of Physicians and Surgeons, St. Louis, says:—"There is one thing bad about the grippe. Its victims instead of being rendered immune by the first attack, seem to become more liable to its recurrence. There is one disconcerting feature about it. Its symptoms resemble those of so many far more serious maladies. This country is full of people who are going about darkly ruminating, because of evidences of heart trouble, nervous

prostration, dyspepsia, liver complaint and old age, "together with a plentiful lack of wit and weak hams."

"There is one thing good about the grippe. It yields rather readily to the "antikamnia and quinine tablet" treatment. This remedy given in one or two tablet doses, every three hours, with plenty of rest in bed, and among pleasant and quiet surroundings, will work wonders.

"If suffering from nervous headache, nervous exhaustion, general nervousness, muscular aches, irritability or insomnia, administer one "antikamnia and codeine tablet" three or four times a day at regular intervals. Nothing equals this remedy in relieving the organic pains of women, and this without unpleasant after-effects. In these particular cases, prescribe one tablet every hour until three are taken."

*

Sanmetto in Enlarged Prostate, Etc.

I have used Sanmetto in enlarged prostate and chronic cystitis in old men, with marked good results, and observed that there was decided aphrodisiac effects; also in irritable bladder and urethra in the early months of pregnancy, with very happy results.

M. A. RUSH, M. D.
Anderson, Ind.

On the morning of March 4th, Kress & Owen Company, New York, were visited by fire, which practically destroyed the manufacturing end of their business. They had, however, a duplicate plant in storage, and are pleased to state that after four days and nights of continuous work, they were again turning out Glyco-Thymoline. This is regarded as a record.

Nova Scotia Health Association

This Association opened its proceedings in the City Council Chamber on the 21st inst., continuing for two days. In next issue we hope to give particulars of this meeting —which was evidently a successful one— and publish some of the papers read.

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EACH SUPPOSITORY CONTAINS:
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What do you use in the medical treatment of hemorrhoids?

The ordinary vegetable astringents, in ointments or suppositories?

Aren't these mere palliatives?

Do you know that **Adrenalin Suppositories** are incomparably better?—that they are used with pronounced success by many practitioners?

May we ask you to try them in that next case?

Supplied in boxes of one dozen.

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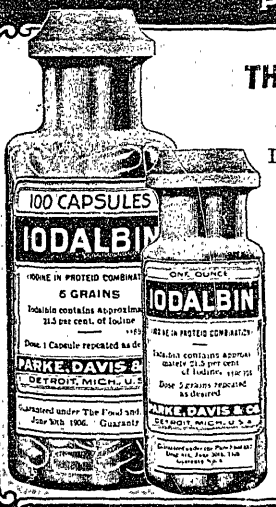

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