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Original Articles.

IMPORT OF RELAXED ABDOMINAL WALLS IN DISEASE OF THE DIGESTIVE ORGANS.

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Having spent considerable time during the past five years in the dissection of the normal pathological and comparative anatomy of the digestive system, together with fairly close observation of all cases of disease of these organs coming under my care during that time, I feel that the observations I shall present may be of some value as suggestions towards their more scientific treatment. I have purposely quoted considerably from well-known authorities, in order to show, by their own statements, although evidently not recognized by them, that at least the majority of diseases of these organs are dependent upon a simple mechanical derangement, the result of abnormal intra-abdominal pressure.

The natural sequence of events, reasoning analytically, not synthetically, I shall first state in order that we may the more readily follow the developments of the pathology.

We have then, 1st. Infection—as the exciting cause of pancreatitis, pancreatic calculi, cholecystitis, gall-stones, diseases of liver, gastric and duodenal catarrh and ulcers, etc.

2nd. The duodenum, as the point of origin of the infection from below the portal vein, as the source of infection from above.

3rd. Abnormal duodenum, as the normal duodenum is practically free from infection.

4th. Obstruction and stagnation, the necessary requirements for infection, as free drainage cures.

5th. The point of obstruction, being where the sup. mes. vessels cross the 3rd portion of the duodenum.

6th. Tension, upon vessels the cause of the compression as the duodenum is thereby gripped between the vessels and the post. ab. walls.

7th. The intestines, supplied by these vessels as the cause of the tension, their weight, irrespective of contents, being the sole factor.

8th. Insufficient normal support being reason for vessels having to support the weight.

9th. Abdominal walls, being normal support, must contain pathology, which is responsible for above conditions.

10th. The pathology of the abdominal walls is the result of the so-called predisposing causes of disease of these organs.

11th. Preventive treatment must be directed to condition of structures of the abdominal walls and similar tissues throughout the body during the course of and convalescence from these diseases.

12th. The serious nature of abdominal section for trivial causes, and the almost criminal nature of so-called " exploratory incision."

The fact of infection being the cause of disease of these organs and also that the infection is primarily of duodenal origin is so widely accepted that any comment would be superfluous, and I shall therefore limit the discussion of the four first points to quotations from a few well-known authorities.

Deaver, in Vol. III, p. 106, *International Clinics* of this year, says: " Pancreatitis, either acute or chronic, accompanies gall-stone disease in many instances, and for the reason that in both diseases the same factors operate. Infection and obstruction of the excretory ducts of the pancreas and biliary tracts are responsible for the lesions of those organs; again on page 107—

" It can be emphatically stated that gall-stones are always the result of precipitated salts and tissue debris following in the wake of bacterial infection, mild or severe in degree. Furthermore, the complications of chronic gall-stone disease, adhesions, ulcerations, fistulæ, liver and pancreatic disease, etc., are also due to infection."

Mayo Robson says, speaking on catarrh of the gall-bladder and bile ducts: "An extension from the duodenum is probably the usual cause, and as the common bile duct traverses the walls of the duodenum very obliquely it is to be expected that the narrow terminal portion of the duct will be the first to suffer, and be the seat of the primary obstruction. Chronic catarrh of the gall-bladder and ducts is the sequel of above, with dyspeptic symptoms, due to associated gastro-intestinal catarrh."

In discussing the etiology of pancreatitis, he says: "Pancreatitis is probably always a secondary disease, and usually dependent on infection spreading from the common bile duct or duodenum."

Ochsner, pp. 159, 161 of his work on clinical surgery, says of pyloric obstruction, cholecystitis and pancreatitis:

"It is plain that each one of these conditions can only be relieved by securing perfect drainage for the cavities involved, and that stomach surgery is instituted to a very great extent for the purpose of overcoming faulty drainage of this organ."

Mayo Robson further says: "Though well recognized, I think it has not been sufficiently grasped that the essential cause of peptic ulcer is of a septic nature, and in many cases the source of the trouble is oral. Even so, drainage by gastro-enterostomy cures, irrespective of condition of mouth, and therefore we are justified in stating that faulty drainage is undoubtedly the chief cause."

Moynihan, on p. 47 of his recent work on gall-stones and their surgical treatment, says: "The fact that the bacillus coli is the most common inhabitant of the gall-bladder and of gall-stones, suggests that an intestinal origin is the most likely, for this organism abounds in the intestine, *though it is not, as a rule, present in large numbers in the duodenum when in a normal condition.*

Opinion is now universally in favor of the view that it is the irritation of gall-stones that determine the incidence of cancer. Authorities also agree that old-standing gastric ulcers are responsible for the vast majority of cases of cancer of the stomach.

We have here then clearly demonstrated by the statements of eminent authorities that infection is the cause of diseases of the liver, gall-bladder, bile ducts and pancreas, also of ulcer of stomach, and it is evident that the point of great significance is that of (as stated by one eminent authority) the associated gastro-intestinal catarrh. Also another very significant statement is that *the duodenum in its normal condition is practically free from infection.* It is quite evident, even to the superficial

observer, that it is immaterial whether the infection is ascending, as stated above, or descending, viz., by way of the portal vein through the liver, the essential point necessary for infection of the tissues being stagnation of contents, the result of obstruction. We are then led to look to the duodenum, below the entrance of the pancreatic and common bile ducts, for the pathological lesion responsible for the above wide-spread infection. The exact location of this lesion I have demonstrated and have had demonstrated many times to my own satisfaction and that of others. Dr. Byron Robinson, of Chicago, first drew my attention to the condition some five years ago while doing post-graduate work there; he, so far as I know, being the first American surgeon to make a study of the condition. The departure from normal lying at the point where the sup. mes. vessels cross the horizontal portion of the duodenum and is due to compression of this part of the bowel between the vessels and the post. abdominal walls. I have seen this condition many times, post-mortem and otherwise, and was prompted to this report by the investigation of a very marked case which I examined in conjunction with Dr. Bolton. The subject was a young man of some 30 years of age, who had come under the treatment of Dr. Bolton some two or three days previously for tuberculosis of the lungs. His previous history was somewhat meagre, although we learned he had been living the life of a bachelor for a long time in a cabin alone, doing his own cooking, etc. For the last few months of his life he had been noticed standing on the street corners for hours each day, and was evidently taken up by some humane society and placed in the Royal Jubilee Hospital, where he died some two or three days later. The following day we made a post-mortem, the objective point being the lungs, as a slight discussion arose as to their condition, one medical man holding to the belief of there being an empyema, while the attendant believed there to be rather a fibrosis; however, the latter proved to be right. On opening the abdomen, nothing presented but an enormously distended stomach, reaching from ensiform cartilage to pubis, and from side to side of the abdomen, and above and to the right the duodenum presented distended to ten times its normal capacity. Upon raising the stomach the remaining intestines, small and large alike, were found to be absolutely empty. At this point one of the three medical men present remarked on the decided pyloric obstruction, and so content retired to congratulate himself upon his acuity of observation in things pathological. It required, however, but a second's examination to see that the pylorus would readily admit

the entire hand and arm. The point of obstruction was sought and was seen to be due to a tight band which produced enormous pressure of the bowel, between it and the post abdominal wall. This band contained, upon dissection, the superior mesenteric artery and vein, the tension upon which was evidently due to the prolapsed bowels, which were found at the very lowest point of the abdominal cavity and in the pelvis. The point of importance to be noted was the absolute emptiness of the bowel, it being very thin and ribbon-like and comparatively very light.

The condition of the viscera, above the obstruction, was next examined. The stomach and duodenum were distended with a dark grumous liquid, their mucous membranes thickened and showed undoubted evidence of long-continued irritation. The head and body of the pancreas were enlarged and hard with greatly distended ducts and showing a similar condition. The common bile duct, as also the cystic and hepatic ducts, were likewise enormously distended and presented marked thickening of their mucous membranes and walls, the liver was swollen and hard, the gall-bladder was at least five times its normal size, and presented several large pockets, some of which contained enormous stones. Lack of time prevented further examination, which I greatly regretted, as I had never before, nor have I since, seen such marked pathology. Before this I had seen several such cases, only not nearly so well marked, and since have seen several others.

Not later than a few months ago, in company with Dr. Fraser, whom I assisted in doing a post-mortem, did I see the same condition in a lady 53 years of age, who had died from acute alcoholism. Dr. Fraser remarked at the time the condition of the large, flabby stomach, and when I pointed out the condition of the duodenum, which was at least twice the normal size, and the cause of the trouble, he remarked: "Gracious, what a weight that band is!" as he lifted it on his hand.

I mention these two cases as they were examined by two local men besides myself; and although the same condition has been written on by others, yet the importance of it pathologically has evidently been appreciated by but very few.

It is very interesting to note that Dr. Ochsner, during his operative work, has noted a similar condition of obstruction, for in the 1905 February number of the *Annals of Surgery*, in a discussion on gall-stone surgery, he remarks: "Upon opening the abdomen it would be found that the duodenum, at its upper end, was greatly distended, and that the pylorus was wide open. When one lifted up the transverse colon and examined the small

intestine, the jejunum, where it passes through the mesentery, was contracted. It was empty, while the duodenum was open. Enlarged glands were found along the duodenum. This could only be explained in this manner: that there was a physiological obstruction opposite the entrance to the common duct into the duodenum, and for that reason the duodenum was distended with gas above and was closed lower down. In a large majority of these cases he had found either gall-stones or sand in the gall-bladder, and furthermore, in many cases he had found pancreatitis, due to physiological closure at a point behind the stomach, a little below the entrance to the common duct." He would like to have other surgeons observe this condition in operating, *i.e.*, whether in many cases they found a dilated duodenum, a wide-open pylorus, and a contracted jejunum down below. This statement is exceedingly interesting, as it shows the location of the obstruction to be practically the same as I have already given, with the explanation of its being a physiological obstruction—whatever is meant by that. Dr. Ochsner has since explained the nature of this obstruction. He has demonstrated the existence of a sphincter muscle surrounding the duodenum at a point midway between the opening of the common bile-duct and the dudeno-jejunal junction. This, however, being of the nature of a sphincter, it is difficult to conceive how normally it could act as an obstruction. On the other hand, the obstructive effect of pressure by the sup. mes. vessels on the third portion of the duodenum can be readily seen and demonstrated, by either pressure from above, by bands or corsets, or by tension from below, as by adhesions or enteroptosis, which latter in itself is amply sufficient to produce considerable pressure and obstruction even when the bowels are absolutely empty, as I have seen many times.

The fact of the matter is the only obstructing element that can be shown to exist in this region, physiologically or otherwise, is the sup. mes. vessels with their immediate surrounding mesenteric tissues.

We have here demonstrated the cause of the obstruction to be the band above referred to, and this in turn to be due to the weight of the prolapsed intestines. The next question naturally arises, Why do the intestines prolapse? Evidently from weak supports. The mesenterics are not the natural supports of the intestines, but as Byron Robinson has so ably put it, they are but "Neuro-vascular visceral pedicles." True they offer considerable support, and the degree of that support is readily demonstrated in that condition of relaxed abdominal wall, termed by

the Germans, "hanging belly," where, on opening the abdomen we find invariably, in my experience, well-marked visceral ptsosis, with the various pathological conditions which necessarily follow in its train. Upon close examination of the structure of the abdominal walls they will be found with elongated and separated muscular and elastic fibres throughout all layers, the lines alba will be very much widened, thinned and relaxed, the entire abdominal wall offering but comparatively poor support to the contained viscera.

Any one doing careful post-mortem work cannot but verify the correctness of the above findings, but the great source of error into which those who do post-mortems, and those who write for the directions of others, have fallen, is that they have completely ignored the belly walls as a factor in disease, and have consequently by one grand sweeping incision from ensiform to pubes alighted upon the poor innocent viscera and accused them of the entire sin, much as do a good many respected citizens in laying upon the shoulders of the devil the blame for misdemeanors for which they and they alone are responsible.

For one moment, let us consider the normal structure and formation of the abdominal wall and then ponder over the calamity which has befallen the individual with a belly wall as above described.

Taking into consideration the complete muscular boundaries of the abdominal cavity, with the variety of directions of the muscular fibres and the fibro-elastic tissue found in their sheaths and in the remaining deep fascias of the part, we cannot look upon the abdominal wall in its entirety in any other light than that of a highly contractile and elastic apparatus, admirably adapted by its powers of distension and contraction for accurately fitting, as it were, its contents. In short, as Byron Robinson says, it is the function of the abdominal wall to contract and dilate in the volume changes of the abdominal contents, as well as the volume changes in the thorax. And to keep up a vigilant guard, a vigorous but delicate elastic regulation of abdominal visceral contents. It is the elastic spanning of the abdominal walls that maintains the delicate visceral poise. Gray (anatomy), refers to the same function: "When at the end of respiration the diaphragm relaxes, the abdominal walls return to their normal position; they therefore push up the viscera again, and these pressing on the diaphragm cause it to resume its ordinary position of rest."

We therefore see the abdominal wall to be the main support of the viscera, preventing prolapse and maintaining them in their

normal relations, and therefore its pathology explains why such conditions as pregnancy, typhoid, chlorosis, tuberculosis, etc., are pre-disposing causes of gall-stone gastric ulcer, etc., *i.e.*, by causing a weakening of the muscle fibres and elastic tissues either from stretching, as in pregnancy or intra-abdominal tumors; or as a general debilitating effect as in typhoid fever, influenza, tuberculosis and other prolonged constitutional diseases; and the treatment is therefore apparent, *i.e.*, the restoration of the normal structure and function of the parts. The details of application I shall leave to your consideration.

It is interesting at this point to analyze the causes of two or three of the more common diseases of the digestive organs, as given by eminent authorities.

First taking Mayo Robson's classification of the etiology of gall-stones:

1. EXCITING CAUSE.

(*a*) Infection.

2. PREDISPOSING CAUSES.

(*a*) Age—

Under 20 years,	2.4 per cent.	Time of life in women when effects of child-bearing on muscular wall would become evident; also 50 years and upwards when muscular system in general has lost tone.
20 to 30 "	3.2 "	
30 to 40 "	11.5 "	
40 to 50 "	11.1 "	
50 to 60 "	9.9 "	
60 and over,	25.2 "	

(*b*) Sex—

Women,	20 per cent.	Pregnant, 90 per cent. which produces over-stretching.
		Non-pregnant, 10 per cent., corsets, etc.
Men,	4 4 per cent.	Debilitating diseases, etc.

(*c*) Habits—

Want of exercise whereby the gall-bladder is unaided in its expulsive efforts by the contraction of the abdominal muscles. (Significant).

(*d*)

Limited supply of nitrogenous food with bile-salts diminished and a resultant proportion of cholesterin.

His classification of the etiology of pancreatitis is also suggestive, viz.:

1. EXCITING CAUSES.

(*a*) Infection. Depending upon stagnation and obstruction.

(*b*) Irritation. Result of infection.

2. PREDISPOSING.

(*a*) Obstruction in the ducts from—

Duodenal catarrh,
Ulcer of duodenum,
Pancreatic calculi,
Gall-stones,
Cancer of head of pancreas.
} All due to—
Infection,
Stagnation,
Obstruction.

(*b*) General ailments, viz.:

Typhoid,
Influenza,
Mumps, etc.
} Causing general debility, and therefore loss of muscular tone.

(*c*) Anatomical peculiarities.

Here he evidently refers to anatomical peculiarities in the organs themselves, such as the common bile-duct passing through the head of the pancreas, narrowness of duct at entrance to duodenum, etc., all of which are factors, but of secondary consideration.

(*d*) Hæmorrhage into gland.

Irritation is usual cause and generally from infection—which is at present generally held to be cause of hæmorrhagic pancreatitis.

(*e*) Injury. Result obvious.

(*f*) New growth. Results of irritation from infection.

(*g*) Fatty degeneration of blood vessels.

OSLER'S ETIOLOGY OF ULCER OF STOMACH.

(*a*) Female sex, 2:1. Other authorities as high as 5:1.	Relation of abdominal walls from distention by pregnancy, ovarian tumors, lack of exercise of muscles.
Externally,	Waist bands, corsets, etc.
(*b*) Tuberculosis.	Evident asthenia.
(*c*) Anæmia and chlorosis.	Lowered muscular tone.
(*d*) Copræmia.	Same.
(*e*) Post-puerperal state.	Over-stretching of abdominal walls, and loss of tone.
(*f*) Neuropathy.	Deranged nerve supply to muscular system.
(*g*) Hysteria.	Same.

All the above conditions obviously produce general muscular weakness, and the majority of the conditions effect especially the abdominal muscles and elastic tissues. Pressure from without will also force the intestines distalward and produce tension on the sup. mes. vessels. Plainly, too, in order to produce the above results, it is not necessary that the intestines should prolapse to any great extent, but only that the abdominal walls should become deranged to an extent sufficient to throw a part of their support upon the mesenteries, thus causing tension on the vessels, the degree depending upon extra weight to be supported by the mesenteries.

Before closing, it might be well to refer to that most contagious surgical procedure, viz., abdominal section. From the foregoing it is apparent that we cannot be too careful in the repair of the belly wall wound, and especially in the proper adjustment of the supporting elements, viz., the muscle sheaths and deep fascias. But more especially should we denounce in no uncertain manner that too-prevalent so-called surgical procedure, "Exploratory Incision," instituted, no doubt, for the convenience of ignorance and indolence. The seriousness of the procedure is evident from the statement of Glenard and Albrecht, which follows, viz.: "That as after celiotomy the intra-abdominal pressure is lost, there is general enteroptosis, and the traction exerted upon the superior mesenteric artery, with its accompanying bundles of connective tissue, compresses the duodenum and causes stagnation of stomach contents."

We have here then also the ideal condition for the widespread infection of the entire digestive system. Finally, then, after such evidence as this, should we not be more inclined to render unto the viscera the things that belong to the viscera, and unto the belly wall the things that belong to the belly wall? Thoracic and pelvic diaphragms are also included in abdominal walls.

Clinical Department.

A Case of Hypertrophic Cirrhosis of the Liver, etc. By John Welzmiller, M.D., in *Post Graduate.*

P. A., male, aged 38 years; occupation, maltster; born in Germany. Has resided in United States 21 years.

Family History.—Father died of dropsy at 75 years of age. Mother died of phthisis. Has six brothers and two sisters. Three brothers dead—two died of phthisis and one cause unknown. The two sisters are living and well. All the other brothers are in good health.

Previous History.—Never had diseases of childhood; was always healthy up to 22 years of age when he had gonorrhea. Later in the same year had a "chancre" followed by sore mouth and throat, but had no rash or alopecia. Was treated for chancre locally for two weeks. Has always indulged in intoxicating beverages, sometimes to the extent of 100 glasses of beer daily. He has never taken much whiskey. Says he has continued this habit for 12 or more years. Has always indulged freely his sexual appetite. Has had frequently slight attacks of articular rheumatism. First noticed trouble with his heart eight years ago. Was walking and suffered with shortness of breath. Six and a half years ago he noticed that his abdomen was increasing in size, legs swelling during the day, and respiration becoming more and more difficult. Was confined to his bed for nine weeks, during which time paracentesis abdominalis was performed and about two quarts of fluid withdrawn. He returned to work, but soon had to give it up. Shortly after this he came to the Dispensary.

Present History.—Complains of dyspnea, edema of legs, enlarged abdomen, pulsating vessels in neck, and a sticking pain in left side while walking. Is unable to walk more than two blocks at a time. Appetite fairly good, some flatulence after eating; bowels constipated.

Inspection.—Skin somewhat jaundiced; conjunctivæ yellow; in fairly good state of nutrition; external hemorrhoids; pulsating jugulars; abdomen distended and legs edematous to knees; respiration labored; heaving precordia.

Palpation.—Heart, apex beat in fifth interspace and near nipple line; no thrill.

Liver, left lobe enlarged to two inches of umbilicus. Right lobe extends two fingers' breadth below ribs. No pulsation. Spleen not enlarged.

Percussion.—Lungs, negative.

Heart, dulness extends nearly to nipple line, and half an inch to right of sternum.

Liver, as determined by palpation, considerable ascites demonstrated by succussion.

Auscultation.—Lungs, Negative.

Heart, systolic murmur at apex and transmitted into axilla and angle of scapula.

Urine shows slight trace of bile. No casts.

Patient was tapped by Professor Burt in his clinic and two gallons of fluid withdrawn. Hydrogogue cathartics and cardiac tonics were administered and ascites failed to reaccumulate. His strength increased and he was able to go about selling cutlery.

To exclude syphilis as a possible cause for his liver, a course of mercury and potassium iodid was given for three months. No apparent change in the size of his liver followed.

About three years ago his liver began to pulsate, and the right lobe increased considerably in size. Since then he has accumulated considerable ascites and other manifestations of disturbed compensation have occurred frequently, but nearly always cleared up under active catharsis. Paracentesis abdominalis was required only three times in six years.

PHYSICAL EXAMINATION.

Oct. 20, 1905. *Present Condition.—Inspection.*—Color good, and in fairly good state of nutrition. Conjunctivæ natural. Pulsating jugulars. Abdomen somewhat distended. Ankles edematous at night. Apex beat not seen.

Palpation.—Heart, heaving precordia; apex beat in sixth interspace just outside of nipple line. No thrill.

Liver, pulsating, with right and left lobes extending to one inch from umbilicus.

Spleen, enlarged, extending to one inch from left iliac crest, and to anterior axillary line.

Stomach is considerably dilated.

Percussion.—Heart, dulness nearly one inch outside of nipple line and one inch to right of sternum.

Liver, same as determined by palpation.

Lungs, dulness extends upwards nearly to inferior angles of scapulæ.

Auscultation.—Heart, no murmurs heard at base. Three are heard at apex. A systolic soft blowing murmur, somewhat musical at times, transmitted into axilla.

A presystolic murmur heard about two inches above and inside of apex, limited to a radius of two inches.

A faint systolic murmur just inside of apex and diffused over region of base of sternum.

Lungs, respiratory note very faint posteriorly corresponding to area of dulness obtained by percussion.

Foreign Body in the Lung, Report of a Case. By Francis E. Fronczak, A.M., M.D., Buffalo, N.Y.

On the sixth day of July, 1905, I was called to see a child about 8 years old, who was said to be choking. The little patient, a girl, was in bed, somewhat cyanotic and breathing with considerable difficulty, about 32 times per minute, and coughing almost continually. This attack, as described by the mother of the girl, was quite sudden, the child being perfectly well a few hours before. On examination I found the throat to be perfectly clear and absolutely normal in every respect. On percussion of the chest the right lung gave a dull sound; on auscultation there were found many rales on the right side of the chest,—the left having no abnormal signs of any kind. The elevation of temperature was very slight. The child denied swallowing or aspirating anything, though I suspected some foreign body either in the bronchus or the lung. Removal to the hospital was proposed but declined. I saw the child several times, but there was no change in the condition, the physical signs remaining the same as on my first visit. The rales, though, were very much in evidence, so that they could be heard without the stethoscope.

Two months afterward, that is, on September 12, the girl had a very violent fit of coughing and after some time coughed up a melon seed, somewhat decayed. I learned later that on the day this girl became ill, she was eating a melon and presumably aspirated a seed which at times threatened her life. The fits of cough stopped almost immediately, the rales disappeared within a few days, and the child, who was losing both color and weight, began to recover lost ground, and at present has the appearance of a perfectly healthy school-girl.

The points which interested me in this case were: the length of time the foreign body lodged in the lung, over two months; the sudden development of the symptoms and their speedy disappearance when the object was dislodged from the lung, where, I believe it was located; and lastly, it taught me a very useful lesson,—namely, not to make a prognosis too grave. I told the mother after the child denied swallowing or aspirating anything, and not improving under treatment, that she had probably developed some disease of the lung, tuberculer, and that she would not recover. I was wrong in both of my deductions and diagnoses, of which fact I am glad. It is human to err, but medical men are not often forgiven their errors.

A Case of Maladie de Tic Convulsive. JAMES JOHNSON in the *British Medical Journal.*

The movements of the patient, a man twenty-eight years old, were quite different from those of any ordinary case of chorea. The involuntary muscular movements were well marked, affecting chiefly the brachial muscles of the face and arms. The patient often raised his hand, blowing at the back of it as if there were a piece of soot on it. He also spat on it in a convulsive manner. He sometimes suddenly jerked his head to one side without raising his hand, and then spat convulsively on the floor or on any one near and would often bark, and at times say "blast," or "dam," in quick succession. These words were frequently indistinct. At table he beat a tatoo on his plate with his knife or fork or spoon. When rising from a chair he shuffled his feet before commencing to walk, as if preparing for a step dance. He was greatly attracted by lights in the street at night. Not only did he then indulge in his curious habits, but as he walked he turned his head round to keep his eyes fixed upon the light. At times he staggered as if he were drunk. He had imperative ideas which forced him to execute certain movements. He felt compelled to satisfy that impulse. The movements were always worse when the patient was busy. Otherwise the patient was in perfect health, always attending to his business.

Therapeutics.

Treatment of Whitlow.

Every kind of acute inflammation of the fingers is called whitlow, says Prof. Reclus, whether it be seated in the skin, under the skin, in the sheaths of the tendons or in the bones. To each of these different situations corresponds a clinical variety, and thus we have superficial whitlow or phlyctenular, which does not go beyond the papillæ of the derma. The subcutaneous whitlow can succeed the superficial form, and was called shirt button whitlow by Velpeau. This variety is extremely painful, the patient is deprived of sleep and the slightest pressure on the part caused excruciating agony. The finger is swollen and of a dark red. The pulp is hard and remittent by distention of the pus, contrary to what is observed in other regions where fluctuation generally reveals the existence of purulent matter. The pulp of the healthy finger always presents a fluctuating sensation.

Whitlow of the sheaths of the tendons is quite as painful as the last variety and particularly grave, as the function of the organ is generally compromised; it is caused by direct inoculation, a penetrating wound, but it can also follow superficial inflammation, which, by the lymphatics, reach the sheaths. The infection, where the thumb or the little finger is affected, can be propagated to the palm of the hand; for the other fingers it is arrested at the base, as the sheaths terminate in culs de sac at the articulation of the phalages with the metacarpal bones.

This kind of whitlow of the sheaths can become an osteo-periostic whitlow, but sometimes the whitlow is osteo-periostic from the beginning.

The causes of the four varieties of whitlow are almost always the same; inoculation of germs in the different tissues of the finger by small punctured wounds, produced by splinters of wood, rusty nails, etc.

When the slightest wound occurs in the finger, it should be washed in very warm water and plunged in a bath of 122°F., and this treatment continued if the finger shows signs of inflammation. However, if it becomes swollen, pulsatile and painful, whitlow has set in and the only treatment is that of the bistoury.

The operation is very painful as everyone knows, and always superficial and incomplete when attempted without anesthetics. Surgeons, however, do not care to employ chloroform for such a small operation and have tried local anesthesia by means of refrigerating mixtures, ether or chloride of ethyle spray, ligature of the base of the finger with an elastic band, etc.; but all these

applications are of themselves more or less painful and do not remove the sensitiveness of the deep tissues.

This being the case, M. Reclus would not hesitate to employ chloroform if Stovaine, as a local anesthetic, did not give marvellous results. His method of proceeding is as follows—with an ordinary subcutaneous syringe he injects a solution of half per cent. of Stovaine into the base of the finger under the skin, and leaving the needle *in situ* he repeats the injection three or four times, until the skin whitens, then injects another syringe in the four sides of the finger so as to surround it with a kind of ring of the anesthetic solution. In a few minutes the finger is rendered completely insensible and the operation can be done in the easiest manner, the patient looking on with the greatest composure if not with indifference. After the operation the finger is plunged for half an hour in a warm solution of oxygen water reduced to six volumes. After the bath an antiseptic ointment is applied, and the cure is complete in seven or eight days.—*Medical Press.*

Sunstroke. There are certain conditions which are necessary to induce sunstroke: they are a disordered state of the general health, overtaxing of the stomach with improper food or an overindulgence in alcoholic beverages. The laborer who is exposed to the direct rays of the sun need not fear sunstroke provided he is not in a weakened state or has not overtaxed his system with an excess of alcohol.

Sunstroke usually follows those who are exhausted by excessive strain due to overwork, so that a prime factor is to have all those people who are exposed to the sun live in a very rational manner. They must have sufficient sleep so that the nervous system is not overtaxed. We can, therefore, include what has just been said under the head of preventive measures.

Headache is usually an early symptom and should never be neglected in summer. The slightest giddiness or dizziness should be looked upon as an early symptom of a possible sunstroke if the person so suffering is compelled to work and be exposed to the sun. So much for the direct action of the rays of the sun. Not infrequently we have cases in which a similarity of symptoms, such as headaches or giddiness, vomiting and general prostration exist in people who have worked indoors or even in people who have worked at night in hot places near ovens; for example, bakers or moulders, or firemen working in the hold of a ship. In such people it is simply a question of exposing the body to extreme heat and causing thereby general prostration.

When these cases are found nothing is better than an icebag to the head and a cold plunge or shower for the body as a general

stimulant. A mustard foot bath will usually rouse the circulation. If there is violent throbbing of the temples then one or two leeches applied will sometimes relieve this condition.

Hot coffee, cracked ice or several drops of aromatic spirits of ammonia are valuable cardiac stimulants. If very high fever continues then a cold colon flushing by the use of several quarts of cool saline solution will reduce the temperature effectually as well as stimulate metabolism. For thirst, iced tea, buttermilk, water ices and ice cream may be liberally given.—*Dietetic Gazette.*

The Treatment of Typhoid Fever at the Roosevelt Hospital.

Thomson, in the *Medical News* of March 25th, 1905, details his experience with this disease and advises that with the first sign of dryness at the tip of the tongue, the oil of turpentine in 15- to 20-minim doses be given in mucilage every three hours till the tongue is moist again.

When cardiac weakness develops, alcoholic stimulants are given in the form of whiskey. The writer objects to repeated small doses, such as half an ounce, and much prefers an ounce at a time every three hours, given after milk. At first alcohol should be given only after midnight, then, as the fever continues, in the evening, and then in the afternoon. It is better to omit it in the forenoon, for that is the natural period of lessened fever and prostration. The secret of giving alcohol is not to look upon it as possessing any continuous sustaining power, but only that of a temporary stimulant for times of prostration, and hence the dose should be large enough to produce stimulation.

Strychnine is very commonly regarded as a needed cardiac stimulant in this affection. Its routine and persistent administration is mischievous, and it is well to suspend it every few days, and note the effect. Occasionally in pronounced cardiac debility the writer prescribes it in combination in a pill of

℞ Strychnine sulph., gr. ss ;
Caffeine citrat., grs. xxxvj ;
Sparteine sulph., grs., xv ;
Ext. taraxaci, q. s.

M. Div. in pilul. xx. S. : One every three hours.

Much the most certain of all cardiac stimulants, however, is camphor given subcutaneously in 7½-grain doses dissolved in 20 minims of sterilized almond or olive oil. The author has seen it succeed in conditions of collapse in typhoid, as well as in pneumonia, when every other heart stimulant had failed. It may be repeated once an hour in urgent cases, or once in three hours.—*Therapeutic Gazette.*

Gelatin in the Treatment of Aneurysm.

At the meeting of the Academy of Medicine, Paris, held on April 11th, M. Le Dentu reported a successful case of popliteal aneurysm treated by injections of gelatinised serum, a method which was introduced by M. Lancereaux and M. Paulesco. Measures tending to occlude the artery, such as ligature above the sack or extirpation of the sac, are, in the case of a popliteal aneurysm, peculiarly prone to be followed by gangrene. M. Le Dentu's patient was a man, aged twenty years, who suffered from a traumatic popliteal aneurysm. During a period of two months he received seven injections of a serum containing 2 per cent. of gelatin in quantities of 200 grammes at a time. The injections were made in the gluteal region. After the second injection the pulsation in the sac had disappeared, and at the end of two months the cure was complete. The method is simple and, if care be taken to sterilise the gelatin by exposing it to a heat of 115°C., so as to remove any risk of tetanus infection it may be said to be free from danger.—*The Lancet.*

The Osmic Acid Treatment of Tic Douloureux.

Dr. W. Payne Babcock, at the March 8th meeting of the Philadelphia County Medical Society, reported a case of trifacial neuralgia of extreme severity. The case was of thirty-five years standing, the patent having undergone eight operations in that time, two of them being attempts to remove the gasserian ganglion. Nine months ago Dr. Babcock injected a two per cent. solution of osmic acid, under cocain anesthesia. The patient, a man, has since gained thirty-five pounds, with complete revolution of his physical condition.

THE examination for tubercle bacilli in the urine by the ordinary method of staining, is not decisive by any means, even if the bladder has been catheterized and differential stains for smegma bacilli have been employed. Numerous examinations with the aid of these procedures must be made, and even then the diagnosis is only a presumptive one. The only sure test is by injecting a large quantity of the sediment into a guinea-pig. —*American Journal of Surgery.*

Proceedings of Societies.

SEVENTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, TORONTO, AUGUST 22, 23, 24, 25, 1906.

ABSTRACT OF MEMORANDUM FOR OFFICERS OF SECTIONS.

Meetings of Sections.—The Sections will meet on Tuesday, Wednesday, Thursday and Friday (August 21st, 22nd, 23rd, and 24th), at 9.30 a.m., adjourning at 12.30 p.m. each day.

Sectional Committee of Reference.—The President, Vice-Presidents, and Secretaries of each Section will form a Committee of Reference, and shall exercise the power of inviting, accepting, declining, or postponing any paper, and of arranging the order in which accepted papers shall be read.

Guests.—Papers by guests will be presented upon invitation. If the Committee of Reference desires to invite persons to read papers in the Section who are not eligible to become members of the Association, their names should be submitted for the approval of the Council. If it is desired to ask any such persons to attend the meetings of the Section and take part in the discussions, a general permission to issue such invitations should be obtained.

All papers read are the property of the British Medical Association, and may not be published elsewhere than in the British Medical Journal without special permission.

Discussions.—Secretaries are requested to communicate to the General Secretary a preliminary statement of the arrangements made for the discussions in the Section, to be laid before the Council at the earliest possible moment. This should consist of a statement of the subjects selected, together with the names, if possible, of the gentlemen who have undertaken to open the discussions.

Papers.—The offer of a paper should not be accepted on its title alone, and save under exceptional circumstances no paper should be accepted for reading until it has been sent to the Secretaries.

Secretaries are requested to communicate to the General Secretary of the Association, 429 Strand, London, W.C., not

later than June 15th, a complete list of papers approved and accepted for reading.

It is suggested that the Secretaries resident in the United Kingdom should collect papers from members on this side, and the Secretaries in Canada should deal with all papers in the Dominion and the United States.

Only titles of papers which have been accepted, and which may be reasonably expected to be read, should be included in the programme of Sectional proceedings.

Offers of papers ought not to be accepted in excess of the number likely to be read. Failure to observe this condition leads to many inconveniences and gives rise to complaints of unfair preference.

Report in the "British Medical Journal."—A report of the actual proceedings of the Section will be published in the *British Medical Journal* and in any communication addressed to persons who offer papers to be read in a Section, two things should be made quite clear:

(1) That papers read are the property of the British Medical Association, and cannot be published elsewhere than in the *British Medical Journal* without special permission.

(2) That the authors of papers not read have no claim for the publication of their papers in the *British Medical Journal.* Papers cannot be "taken as read." If they are not read they form no part of the proceedings of the Section.

Secretaries are requested to co-operate in preparing the report of the proceedings of their Section for publication in the *British Medical Journal,* with the reporter of the *British Medical Journal* appointed to the Section, and to hand to him all matters for publication for transmission to the Editor of the *British Medical Journal,* 2 Agar St., Strand, London, W.C.

The attention of authors should be particularly directed to the time limit (see below), and the text of papers submitted for publication in the *British Medical Journal,* as part of the report of the Section should represent what is actually read to the Section.

It is important that each author should hand the text of his paper in proper form for publication to one of the Secretaries of the Section immediately after it is read. It should be made clear that neglect to comply with this request may result in the omission of the paper in question from the proceedings of the Section subsequently published in the *British Medical Journal.*

Time Limit.—The attention of the Council of the Associa-

tion has been called to the non-observance by readers of papers of the rule as to the time limit, which is as follows: "No paper must exceed fifteen minutes in reading, and no subsequent speech must exceed ten minutes." The attention of Presidents and Secretaries of Sections is particularly requested to this rule.

Honorary Local Secretaries,

DR. F. N. G. STARR,
DR. D. J. GIBB WISHART,
PROFESSOR J. J. MACKENZIE.
} The Medical Laboratories, University of Toronto, Toronto, Ont.

SASKATCHEWAN MEDICAL ASSOCIATION.

The first regular meeting of the Saskatchewan Medical Association was held at the City of Saskatoon on March 14th and 15th, 1906. The draft of the Constitution and By-laws prepared by the Executive Committee was read and adopted. A draft of the new Medical Act was presented and unanimously endorsed by the members of the Association. Resolutions were passed memorializing the Provincial Government as to the necessity of enacting a Public Health Act at the coming Session of the Legislature, and also to adopt measures for the prevention of tuberculosis within this Province.

A resolution was passed memorializing the Dominion Government as to the necessity of checking the spread of tuberculosis among the Indians on the Government Reserves and among Indian school children.

In the evening of March 14th, a banquet was tendered to the members of the Association by the local Medical Society. A most enjoyable evening was spent, the whole affair reflecting much credit on the members of the local Medical Society.

At the evening session of the second day, several papers and addresses were given on Medical and Surgical subjects by Dr. M. M. Seymour, Regina; Dr. W. Henderson, South Qu'Appelle, and G. A. Charlton, Regina. The papers were freely discussed and will be published, together with the Constitution and By-laws, in the first number of the *Saskatchewan Medical Journal.*

The following members were elected for the ensuing year:

Hon. President, M. M. Seymour, Regina; President, J. W. Kemp, Indian Head; 1st Vice-President, T. C. Spence, Prince

Albert; 2nd Vice-President, H. Eaglesham, Weyburn; Secy.-Treasurer, G. A. Charlton, Regina; 1st Mem. Executive Committee, A. B. Stewart, Rosthern; 2nd Mem. Executive Committee, A. W. Allingham, Broadview; 3rd Mem. Executive Committee, C. M. Henry, Yorkton.

STANDING COMMITTEES:

Committee on Credentials.—Wm. McKay, Saskatoon; W. R. Sparling, Battleford; A. R. Turnbull, Moose Jaw.

Committee on Public Health.—A. C. McKean, Rouleau; P. D. Stewart, Saskatoon; J. V. Connell, Indian Head.

Committee on Legislation.—H. E. Monroe, Saskatoon; H. G. Nyblett, Abernethy; D. Low, Regina; J. R. Bird, Whitewood; A. W. Allingham, Broadview.

Committee on Publication.—Wm. Elliott, Wolseley; A. G. Denmark, Langenburg; R. G. Stevenson, Moosomin.

Committee on By-laws.—J. A. Deyell, Alameda; A. S. Shadd, Melfort; T. A. Patrick, Yorkton.

Committee on Ethics.—G. R. Peterson, Saskatoon; A. C. McKean, Rouleau; D. R. Davis, Estevan.

The next meeting of the Association will be held at Prince Albert, as soon as possible after the close of the coming British Medical Association meeting.

RESOLUTION RE TUBERCULOSIS.

At a meeting of the Saskatchewan Medical Association, held at Saskatoon on March the 15th, 1906, it was moved by Dr. Seymour, seconded by Dr. Kemp, and carried unanimously: "That the Secretary of this Association be instructed to memorialize the Dominion Government as to the necessity of taking immediate and definite action with regard to the treatment and prevention of tuberculosis among the Indians on Reserves and in the Industrial and other schools in this Province, by the establishment of sanitaria in the vicinity of Indian Reserves. Attention is directed to the amount of tuberculosis existing among the Indian children attending schools and the necessity of removing infected children to sanitaria, where they may be treated separately, and be no longer a source of transmitting the disease to others, and also that cases of tuberculosis occurring among adults and others not in the schools may be properly isolated and treated. And be it yet further resolved that this resolution be published in leading Medical Journals and news-

papers, also that a copy be presented to the Canadian Association for the prevention of tuberculosis at the coming meeting in Ottawa, and that copies be sent to Hon. Frank Oliver, Minister of the Interior; Frank Pedley, Superintendent-General of Indian Affairs, Ottawa, and Dr. P. H. Bryce, Medical Inspector for the Indian Department, Ottawa."

G. A. CHARLTON, Secy.-Treasurer.

Physician's Library.

P. Blakiston's Son & Co. have sold of Gould's Medical Dictionaries during 1905, 17,084 copies; they have sold previously, 181,173 copies, making a total sale to date of 198,257 copies. It is their opinion that this grand total has been achieved by reason of the intrinsic merits of the books having been recognized throughout the English-speaking world.

International Clinics. Vol. IV. Fifteenth series. J. B. Lippincott Co.

The volume before us is quite up to the usual standard of excellence and presents a number of very interesting articles. In glancing over the first article, "The Treatment of Psoriasis," by Wm. S. Gottheil, M.D., we were reminded of a very excellent paper on this subject, in one of the early volumes of clinics, by Dr. George Henry Fox, and on looking it up we find it in the April Quarterly for 1891 (the first of the series, if we are not mistaken), and we were impressed with the similarity of the drugs used; but the different and, what seems, much more satisfactory methods of applying the remedies. By the way, a comparison of the Quarterlies of 1891 and those of the present, are by no means unfavorable to the former; and this is by no means meagre praise, when we consider the high state of excellence which characterize the present volumes. Among other important articles may be mentioned: "The Symptomatology and Diagnosis of Malta Fever," by Charles F. Craig, M.D.; "The Study of the Clinical Course of Joint Tuberculosis by Means of the X-rays," by Albert H. Freiberg, M.D.; and "An Experimental Study of the Effects of Rontgen Rays upon the Blood-forming Organs, with special reference to the treatment of Leukemia," by Aldred Scott Warthin, Ph.D., M.D.

The Practical Medicine Series of Year-Books, comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Series 1905. Chicago: The Year-Book Publishers, 40 Dearborn St.

Vols. I. and VI. Treat of General Medicine. Edited by Frank Billings, M.S., M.D., and J. H. Salisbury, MD.

Vol. II. General Surgery, by John B. Murphy, M.D.

Vol. III. Embraces three departments. The eye, by Casey A. Wood, C.M., M.D., D.C.L.; the ear, Albert H Andrews, M.D.; the nose and throat, Gustavus P. Head, M.D.

Vol. IV. Gynecology, by E. C. Dudley, A.M., M.D., and C. von Bachellé, M.S., M.D.

Vol. V. Obstetrics, by Joseph B. De Lee, M.D.

Vol. VII. Pediatrics, by Isaac A. Abt, M.D., and Orthopedic Surgery, by John Ridlow, A.M., M.D.

Vol. VIII. Materia Medica and Therapeutics, by George F. Butler, Ph. G., M.D., with the collaboration of George S. Browning, B.S., M.D. Preventive Medicine, by Henry B. Faull, A.B., M.D.; Climatology, by Norman Bridge, A.M., M.D.; Suggestive Therapeutics, by Daniel R. Brower, M.D.; Forensic Medicine, by Harold N. Moyer, M.D.

Vol. IX. Anatomy, Physiology, Pathology, Bacteriology, Dictionary, by W. A. Evans, M.S., M.D., Adolph Gehrmann, M.D., William Healy, A.B., M.D.

Vol. X. Skin and Venereal Diseases, Nervous and Mental Diseases, by W. L. Baum, M.D., Hugh T. Patrick, M.D., Charles L. Mix, A.B., M.D.

This is essentially a Chicago production. Most of the authors are well known to the medical fraternity, and are in the front rank of their profession and chosen specialists. The others are mostly connected with teaching faculties in Chicago and are winning their spurs. This promises well, then, for an annual production of merit and comprehensiveness. A volume is issued about every month. It will be seen from the foregoing introduction *re* titles that the entire range of medicine is sought to be covered, and in the 1905 series it appears to have been accomplished to purpose. Chicago medicine is to be congratulated upon the production of this handy series. Each book is neat, nicely printed, and the entire series will make a valuable edition to any library.

Christianity and Sex Problems. By HUGH NORTHCOTE, M.A. Crown Octavo, 257 pages. Bound in Extra Cloth. Price, $2.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

There is a large proportion of the laity to whom the sex problem, or any literature bearing on this subject, is a source of morbid interest. Quacks know this full well, hence the fascinating advertisements purporting sure cures for lost manhood, etc. Not a few clergymen—more especially professional revivalists—like to speak or write on this subject. The above work seems to be a case where the layman has undertaken to write for the enlightenment of the medical profession, and has evolved a work which seems to be both good and new; that part which is good is not new, while that part which is new is not much good to the medical man.

Diseases of the Eye. A Handbook of Ophthalmic Practice. By G. E. DESCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania. Fifth edition, revised and enlarged. Octavo of 894 pages, 313 text-cuts and six chromo-lithographic plates. Philadelphia and London: W. B. Saunders Company. Canadian Agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. 1906. Cloth, $5.00 net; Half Morocco, $6.00 net.

Dr. deSchweinitz's work on the eye is so well known that anything but a mere mention of the new edition seems superfluous. The success it has achieved is readily accounted for if one but glance through its contents. In this edition, enlarged by the addition of new matter to the extent of some one hundred pages, there have been added, amongst other subjects, chapters on the following: X-ray Treatment of Epithelioma, Xeroderma Pigmentosum; Purulent Conjunctivitis of Young Girls; Jequiritol and Jequiritol Serum; X-ray Treatment of Trachoma; Infected Marginal Ulcer; Keratitis Punctata Syphilitica; Uveitis and Its Varieties; Eye-ground Lesions of Hereditary Syphilis; Macular Atrophy of the Retina; Worth's Amblyoscope; Stovain, Alypin; Motais' Operation for Ptosis; Kuhnt-Muller's Operation for Ectropion; Haab's Method for Foreign Bodies; and Sweet's X-ray method of Localizing Foreign Bodies. Other chapters have been rewritten. The excellence of the illustrative feature has been maintained, and thirty-three additional text-cuts have been added. Dr. deSchweinitz's work was long ago recognized as an authority, and this new edition goes a long way in strengthening its reputation, if any strengthening be needed.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure blackmailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enrol themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only $2.50 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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Dominion Medical Monthly

And Ontario Medical Journal

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VOL. XXVI. TORONTO, APRIL, 1906. No. 4.

COMMENT FROM MONTH TO MONTH.

An evening paper in Toronto published a short time ago the salaries of those practitioners employed in the Provincial hospital service of Ontario. Neither the amounts paid to the superintendents nor to their assistants are excessively large, although in many instances the present Government has seen fit to add to the former salaries. The question is: What inducement is there to a young man in medicine in this Province to enter the service of the Provincial hospitals for those of unsound mind, when the emolument to an assistant never, perhaps, goes beyond $1,500 per annum; when there is practically nothing to spur him to qualify for an expert alienist; when he is constantly and regularly passed by when promotion is in sight for a politician, fresh from the stump or party caucus? Once a professor in one of our medical colleges (he was not a physiologist) said it requires a good deal of nerve for a man to accept a position as examiner for physiology, who had not read any physiology for twenty years. It surely requires more for a politician to accept a position over men who have given fifteen or twenty years in con-

stant practice upon those in these self-same public institutions. These politicians must be exceedingly great in the "uptake," when they consider themselves qualified for such positions.

The efficacy of vaccination has been so long established and its worth so satisfactorily proven to the regular medical profession, that it seems now a little out of place to say even a word in its behalf in the way of upholding it, in any medical journal. But the late action of the Toronto Board of Education in abolishing the compulsory vaccination of school children, has brought the question to the fore again for the time being. It is only to refer to one of the claims of the anti-vaccinationists that we now take any notice of the subject. This claim is put forward with a great deal of gusto, and is apparently believed by the author of the claim that to it there attaches a great deal of weight. Of this, however, let his mind be disabused. It is alleged that one of the members of the Ontario Board of Health, at a recent meeting of the Association of the Executive Health Officers of Ontario, asked his auditors: "Can you guarantee to the parents of your patients in vaccination that tetanus will not follow as a result of this operation?" Of course no doctor can guarantee that, for tetanus has been known in some few isolated and very regrettable cases, to have followed vaccination. Nor can any doctor guarantee that no blood poisoning will follow, nor gangrene, nor syphilis, nor any other malady that can enter one's system through an abraded skin. Neither can any doctor guarantee absolutely, that he himself will return unscathed from any operation, for physicians and surgeons have fallen victims themselves to and have lost their lives to the slightest of operations upon their patient. Neither can he guarantee that his patient will survive the anesthetic, be the anesthesia induced by an anesthetist never so competent and never so careful. Yet deaths do occur now and again under or from the effects of anesthesia. By analogous reasoning the anti-vaccinationists should call for the suppression of chloroform, ether and all other anesthetics.

During the past year or two extensive research has been carried on with the object of determining the exact causative agent in syphilis; and it would seem that the problem has, in the main, been solved. About two years ago Metchinkoff commenced a series of experiments at the Pasteur Institute, with anthropoid apes, whereby he proved absolutely that syphilis could be transmitted from man to the higher order of the ape. That the disease could be transmitted from one ape to another was also readily demonstrated, the infected animals showing both primary lesion, and, later, typical secondary lesions. The same experiment applied to monkeys, produced a primary sore, but no secondaries. As a result of these experiments, various investigators applied themselves with renewed interest to the discovery of the specific micro-organism. In January, 1905, Siegel, in Berlin, announced the discovery of a micro-organism characteristic of syphilis and belonging to the protozoa. Schaudinn, the eminent biologist, was interested with the verification of this discovery, and he succeeded in finding an organism (which had previously been described by Bordet and Geugon—two Belgian observers) in the form of a spirochæta. Schaudinn, working with Hoffman, the eminent syphilographer, investigated twenty-six cases of primary sores and papular syphilides, and in all the cases they found the spirochæta in varying numbers. The exceedingly delicate structure of the organism, and also the fact that it stained very faintly, suggested the name of spirochæta pallida. Dr. L. B. Goldhorn, of New York, has suggested a stain which makes the demonstration of the S. pallida much more distinct. The organism varies in length, usually about the same as the diameter of a red corpuscle. Its curves are sharp and regular (unlike those of the spirochæta, found in the smegma or simple stomatitis), and the organism is actively motile, its movements resembling those of a snake. It seems to move forward or backward with equal facility. It is rarely found in the blood and probably infects the system through the lymphatics. It has never been demonstrated in tertiary syphilis.

Science Notes.

AN electric heater as a substitute for a hot water bottle has been devised by a resident of Ohio. There is an incandescent lamp which is closed in by a perforated metal case. It can readily be attached to any electric lamp socket. Then when the current is turned on the lamp will heat the casing. To avoid direct contact of the metal with the body a bag of some soft material is placed over the metal casing. It is concave on one side longitudinally to conform to the body and has the advantage of sending out heat continually and at a constant temperature.

A RESIDENT of Birmingham, Ala., has invented an eye-massage machine. By it mechanical vibrations can be imparted to the eye through an electrically operated vibrator. It is so constructed as to permit of either primary or Faradic currents to the eye. It is used for catarrhal troubles of the eye and eye-lid, as well as for muscular nerve weakness.

A RESIDENT of New Rochelle, N.Y., has invented a packing of paper, one side of which is a mass of absorbent material. Both the packing of paper and the absorbent are medicated. When dampened and applied the medicines exert a curative effect and at the same time cleanse the parts. It appears to be for piles and fissures.

A NEW hypodermic syringe, designed to secure a tight fit of the piston in the barrel, has been invented by one Mr. J. W. Horner, of Columbus, Ind. It is said to be a very compact instrument.

A NEW surgical instrument, hailing from Leiden, in the Netherlands, is designed for removing a rib. The rib to be cut through is laid bare and here the pleura is removed and pushed away from the rib. The instrument is then held in such a way that its hook is turned towards the pleura. The operator pushes the hook on the piece of rib laid bare, along the rib, by little jerks and so loosens the pleura more and more from the rib, by little jerks at the place where separation is to take place. The two shanks of the instrument are then pressed together, when a knife passes over the same and cuts through the rib.

DENATURIZED is a new word not yet in the dictionaries which is applied to certain alcohol. It is common alcohol to which, if some substance such as wood alcohol be added, renders it unsafe for any purpose other than mechanical. There are other substances that can be added to alcohol with like effect.

IN a paper presented to the Académie des Sciences, Messrs. Guntz and Roederer mention their researches upon the preparation and properties of the metal strontium. The properties of this metal are but little known up to the present, and seem to differ according to the authors who treat the question. Therefore, it seemed of interest to take up the study of this body. The authors prepare it by the method which they already used in preparing barium. At first the hydride of strontium is formed, which is free from mercury by the continued action of hydrogen upon a strontium amalgam. When placed in a vacuum produced by the mercury pump and heated to 1,000 deg. C. this body is decomposed and we are able to condense the vapor of strontium on a cooled steel tube without any difficulty. The authors mention some of the properties of the metal which they have observed. Their product contained 99.43 per cent. of the pure metal. It is of a silver white color and is crystalline in form, but it tarnishes almost instantly when in contact with the air. It melts at about 800 deg. C. and volatilizes at a higher temperature. Dry carbonic acid gas has no action upon it in the cold. At a red heat this gas is absorbed with formation of a carbide and also of strontia. Ether and benzine have no effect on the metal, but absolute alcohol dissolves it easily and hydrogen is given off. Water is also decomposed by the metal, forming strontia, which is dissolved. In the test which they made to find the heat caused by the oxidation of the metal, they find that this lies between the figures for calcium and barium, as the chemical analogies lead us to suppose.—*Sc. Am.*

CONSUL PIKE, of Zittau, reports that an interesting discovery is being discussed by the German press, which refers to the result of a recent investigation by Prof. Emil Fischer, of Berlin. He writes:

"It is contended that the principle nourishment required by the human body for its maintenance is albumen, according to the renowned professor of physiology, Pfeiffer, the source of all muscular strength. For this reason it has at all times been the endeavor of our learned men to obtain more knowledge of this

important ingredient of our daily food. Up till now all such efforts have been in vain, but it was recognized that were it possible to make artificial albumen, a complete change in the present system of nourishing the human body would be brought about and would render the now so necessary meat foods to a great extent dispensable.

"Prof. Emil Fischer, director of the leading chemical institution, the Berlin University, has gained the credit of having accomplished the first analysis of natural albumen. He has established the composition of the various ingredients, some of which he has succeeded in producing artificially. The substance thus obtained he has called 'polypeptide,' and it is said to possess a large number of the properties characteristic of natural albumen. The vast importance of this discovery will be better comprehended when we realize that the introduction of this artificial food will reduce the disastrous effects of bad harvests, pestilence, etc., to a minimum, and cause famine to become a thing of the past."—*Sc. Am.*

A NEW compound described by Dr. T. Gigli has appeared in the European chemical trade which is designed to imitate saccharine. It is known as "banana essence." The taste of this syrup liquid is at first caustic and then bitter, but soon after very sweet. Its specific gravity is 1.188 at 20 deg. C., and it gives an acid reaction. Analysis shows it to contain 54 per cent. of saccharine in combination with a base analogous to pyridine. Heated on platinum foil it gives white fumes, then burns with a bright flame, leaving a thin layer of carbon. When the latter is burned, the ash is negligible. The syrup gives a precipitate with Nessler's liquid and most of the alkaloid reagents. Adding dilute mineral acids we can separate the saccharine as a white crystalline precipitate, and ether dissolves it again. By evaporating the ether solution we have white crystals which melt about 225 deg. C. The author tried to prepare a solution of saccharine in pyridine, but did not obtain a product identical with the above.—*Sc. Am.*

EVERYONE knows that the human body is a conductor of electricity, but that it may be employed as a radiator and antenna instead of the usual aerial in wireless telegraphy, may not be so well known. During the recent electrical show at the Madison Square Garden, a series of experiments was performed by Prof. Ovington, of Boston, Mass., with high-potential and high-fre-

quency currents. One of these consisted of substituting the body of the lecturer's assistant for the usual vertical conductor used in sending wireless messages. The connections were made by the current from the machine passing through the assistant's body, from whence the energy was radiated as wireless waves in the ether. The messages were sent from this novel radiating arrangement in the small demonstration hall at the extreme western end of the building, and were received by a De Forest receptor set up and furnished with the usual wire antenna located in about the middle of the main auditorium. The potential and frequency of the oscillations were very much in excess of those utilized in the commercial transmission of wireless telegrams and hence the waves radiated were exceedingly short. It was Prof. Tommasini, of Geneva, who first demonstrated that the human body could be successfully substituted for an aerial of the same length and capacity. The body is not, of course, as good a conductor as are the metals, but this is offset by the fact that a current of high frequency penetrates the skin only a very small fraction of a millimeter. M. Emile Guarini, of Brussels, actually sent messages through space by connecting one human body to the positive side of a spark-gap, and another similarly connected to one terminal of the coherer.—*Sc. Am.*

THE physician of the future will find his greatest service in prolonging human life. The asylum and the poorhouse are not to be regarded as shining lights of advanced political economy, but there is something in life besides mere political economy, and the prolongation of existence is regarded as one of the chief functions, both of the medical profession and of public charities. On the other hand, it must be considered that there is a distinct economical loss in cutting off from existence a man before he has run the full course of his career. To train a man for usefulness requires now fully a quarter of a century, and it seems only fair that he should have at least twice that time for the manifestation of his activities. If, therefore, he be cut off at thirty-five, forty, or forty-five, the community is robbed of service to which it is entitled.—*Sc. Am.*

THE process of pill-making in a large manufacturing pharmaceutical house is very interesting. The powdered drugs are carefully mixed, and moistened with a fluid of special composition. The mass thus formed is worked to a proper consistency upon revolving iron rollers, and afterward divided into portions of definite weight. These are fed into a machine which de-

livers the mass in long, slender cylinders or "pipes," varying in diameter according to the required size of the finished pill. The pipes are accurately divided by another automatic machine into segments which are rolled into pills, either ovoid or spherical in shape. Sugar-coating is applied in revolving copper pans, such as those used by the manufacturers of confectionery. As the pan revolves the pills roll and tumble over each other, collecting the coating material on their surfaces, and eventually become highly polished by mere friction with one another. Gelatin coating is applied by means of special machines of recent design, which are so ingeniously constructed that a perfect coating can be applied to thousands of pills with remarkable rapidity.—*Sc. Am.*

THE fly is doomed; the fiat has gone forth, and its days are numbered. Doctors have recognized the fact that the house fly is not only a nuisance, but also a real danger, because it is the bearer of microbes and nastiness of all kinds. Fired with the spirit of enterprise, and wishing to do good to humanity at large, the Matin, of Paris, recently offered a prize to the discoverer of the most practical and efficacious means of destroying these insect pests, and thus eliminating one great source of the spread of epidemics.

A pamphlet entitled "Delenda Musca" has carried off the prize.

According to the writer of this essay, very few people are aware that the domestic fly lays its eggs in cesspools, drains, liquid manure, and dung heaps of all kinds. In these delectable media the *Musca domestica* deposits oblong eggs, which are opened by the detachment of a narrow longitudinal band or strip—much in the same way as the blade of a knife is opened. The larvæ grow with surprising rapidity, attaining their full size, in summer, in eight days' time. One fly may give birth to millions of others, as it breeds continuously for several consecutive months (usually from May to October). Assuming that one specimen lays 200 eggs (containing an equal number of males and females) then, as will be seen from an easy calculation, in six months' time one hundred thousand million flies will be brought into the world to tease bald-headed men and the helpless in general. After showing that it is useless to attack the full-grown insect, the author seeks some means of destroying it while it is in the period covered by the laying of the egg to the formation of the pupa—just when the insect is most vul-

nerable, and is found collected together in more or less considerable quantities. The greatest points of attention to this end are cess-pools, muck heaps, drains, manure heaps, and the like. Arsenic and arsenical compounds should not be used for the destruction of flies' eggs and larvæ in open cesspools in country districts, where—too often, unfortunately—they are in underground or other communication with wells, watercourses, and springs, which might thus get poisoned. Recourse should be taken to some substance which not only dissolves in the liquid contained in the drain, but which will penetrate right into the heart of solid matter. This substance must be of a nature to withstand fermentations and all transformations experienced by the solids contained in the cesspool, as they are always, in such media, of ammoniacal and reductive nature. These reactions show that it is useless to employ sulphate of iron, sulphate of copper, etc., for although in the beginning these metallic salts might have some effect, they would subsequently become changed by fermentative influences and lose their efficacy. The first trials made showed that ordinary soda, mixed with ordinary chloride of zinc (in the proportion of 5 kilogrammes of each to every cubic meter of matter), was quite sufficient to kill the larvæ and prevent the hatching of further eggs laid in the same place during the season. This process could, if necessary, be used for stationary, hermetically closed cesspools, but it would not do for movable closets, sewage tanks, or open drains. Petroleum was then tried by the author of the pamphlet in question, in the proportion of one liter to every superficial meter; but in a short space of time—due, probably, to the slight rise in temperature, caused by fermentative processes—the petroleum disappeared. This was verified by putting a stick into the cesspool; if petroleum had still been present, it would have left traces thereon. Coal tar was then tried with much better results, although they were still not all that could be desired. The most satisfactory results were secured with raw petroleum or raw schist oil (residue of distillation). Two liters per superficial meter were mixed with water, the whole being well stirred up with a piece of wood. This, on being poured into a drain or closet, will form a stratum of oil which will destroy all the larvæ, while, even should flies not be prevented from entering the drain, at least all the eggs they may deposit will be prevented from hatching. This oil is sufficiently consistent and tenacious to adhere to the walls of drains, to form a coating over solids, and remain attached thereto for a long time. This protective layer

of oil also facilitates the development of anærobic bacteria which cause the rapid liquefaction of solids, thus rendering them quite unsuitable as a breeding ground for Diptera. In the case of manure heaps this oil may be mixed with earth, lime, and fossil phosphates, in which state it is sprinkled (preferably in the spring) over all sources likely to tempt young couples of the Diptera family to start housekeeping and the rearing of a family.—*Sc. Am.*

A FEW months ago attention was called in these columns to a method of producing anesthesia by means of blue light. It was not claimed for the method that it would answer for any but minor surgical operations; still it seemed sufficiently promising for the painless extraction of teeth. The patient was submerged, as it were, in a bath of blue light. The rays, it was thought, influenced the brain through the optic nerve. Perhaps there was also something of hypnosis in this supposed effect.

Dr. J. C. Watkins, a southern dentist, has conducted some experiments which have certainly added much to a true conception of the cause and effect of bluelight anesthesia. He used the blue light, not for the extraction of teeth, but for "the reduction of swelling and the alleviation of pain." The system that he advocates is simple. It consists merely in applying the blue rays directly to the part affected.

The apparatus which he employs comprises a sixteen-candle-power blue electric light globe arranged in a funnel-shaped tin shield, which at its mouth is about four inches in diameter. This is extended about four inches, and has at its end a ground blue glass and convex lens. The ground blue glass is used to disseminate the blue rays so that the patient may not know the simplicity of the apparatus; no especial virtue is to be attributed to the lens.

A clinical history of cases which he has treated and which he has enumerated and discussed in the Dental Cosmos more than bear out the doctor's claims for the anesthetic effect of blue rays.

Still another method of producing anesthesia is that of Prof. Leduc, whose studies with electric currents of low tension have attracted not a little attention. Dr. Louise G. Robinovitch, of New York, one of his assistants, has continued his work and has recently published the results of her investigations. Thus far chiefly animals have been used for experimentation. With 110 interruptions per second, the animal receiving about 1.3 milliamperes, at 5 1-2 volts, complete anesthesia results. The

preliminary contractions seem to be painless. General and special sensibility and consciousness are soon abolished. When fully under the influence of the current, the animal may be picked up by a fold of its skin, turned from side to side, pinched or pricked without provoking any reaction of its heart. Hearing and sight are lost. The animal remains limp and senseless so long as the current is kept up, sleep being immediately interrupted by the opening of the circuit. Once awake, the animal shows no untoward symptoms. A large number of these experiments made in Prof. Leduc's laboratory were accompanied by no objectionable manifestations. In some instances the same animal has been subjected to the experiment several times during the same day, without causing the animal any apparent discomfort or fatigue. Prof. Leduc, Prof. Rouxeau, and Dr. Robinovitch subjected one animal to electric sleep during a period of three hours and ten minutes, without having caused it any discomfort. Prof. Leduc has himself performed the experiment on dogs over one hundred times and on rabbits a good many times, obtaining good results in all the cases. He has studied the current in its various phases, and cautions against its application for the purpose in question with a lower frequency of interruptions. A higher frequency is also useless.

Prof. Leduc submitted himself to experiment, and the description he gives of his sensations during this sleep is interesting:

"Although disagreeable, one can readily stand the sensation produced by the excitation of the superficial nerves, as this sensation gradually dies away in the same manner as does the sensation produced by a continuous current; after reaching its maximum, the disagreeable sensation commences to wane, although the potential is still increasing. The face is red, and slight contractions are visible upon it, as well as on the neck and even the forearms; there are also some fibrillary twitchings, and tingling sensations extend to the hands and tips of the fingers as well as to the feet and toes. As regards cerebral inhibition, the center of speech is first to be affected, then the motor centers become completely inhibited. There is impossibility of reaction even to the most painful excitations. At this stage it becomes impossible to communicate with the experimenter. Without being in a condition of complete resolution the limbs present no rigidity. Some groans are emitted, but not on account of any pain; excitation of the laryngeal muscles seem to cause the sound. The pulse remains unaltered, but respiration is somewhat disturbed. The current was gradually increased to 35 volts, and

its intensity in the interrupted circuit was 4 milliamperes. When the maximum of the current was turned on I could still hear, as if in a dream, what was being said by those near me. I was conscious of my powerlessness to communicate with my colleagues. I still retained consciousness of contact, pinching and pricking in the forearm, but the sensations were stunted, like those in a limb that is "asleep." The most painful impression was that of following the gradual dissociation and successive disappearance of the faculties. This impression was similar to that experienced in a nightmare, in which one feels powerless to cry out for help or to run away when facing great danger."

Prof. Leduc regrets very much that his colleagues did not increase the current sufficiently for complete suppression of sensibility and inhibition of consciousness. The experiment was performed twice, lasting twenty minutes each time. In both instances awakening was spontaneous, with a feeling of well-being.

As the experiment on Prof. Leduc was not complete, it may be of interest to remark that anesthesia is absolute when a current of sufficient potential is used. Dr. Robinovitch experienced herself complete anesthesia of the forearm, hand and fingers from a local application of the forearm of this current, 25 volts being used. Anesthesia was perfect.—*Sc. Am.*

News Items.

DR. H. H. CHOWN, Winnipeg, is in New York.

DR. WALKEM, of Fernie, B.C., has removed to Vancouver.

DR. GEO. W. BADGEROW has been in Toronto, from England.

WINNIPEG, at the present time, is practically free of typhoid fever.

DR. CHARLES O'REILLY has returned to Toronto after a year abroad.

DR. A. WATSON, Aberni, B.C., died there on the 24th of March.

DR. H. E. TREMAYNE, Toronto, has removed to British Columbia.

DR. LITTLE, Cookstown, has sold his practice to Dr. Grain, of Everett.

THE typhoid fever outbreak at Fort William, Ont., is now under control.

DR. LEADER, of Everett, has sold his practice to Dr. Jackson, an old Adjala boy.

THE number of smallpox cases in Ontario in February were 55, with no deaths.

THERE were 330 patients in the Toronto General Hospital on the 29th of March.

THERE were 422 cases of typhoid fever in Ontario in February, with 45 deaths.

THERE were 2,173 deaths in Ontario in February, a death rate of 13.0 per 1,000.

MR. DAN'L. D. MANN has contributed $10,000 to the Toronto General Hospital.

ON the 1st of March there were five cases of smallpox in the Province of Quebec.

DR. DOUGLAS, Montreal, has had charge of the typhoid outbreak at Fort William, Ont.

THE Manitoba Government proposes to erect a Provincial Sanitarium for Consumptives.

MR. W. J. ROBINSON, M.D., of Guelph, has been appointed a coroner of Wellington County.

DURING the month of February the Victorian Order of Nurses made 1,762 calls in Montreal.

THE Ontario Government promises a grant of $4,000 for a consumption sanitarium at Hamilton.

PROF. STARKEY, of McGill University, investigated the typhoid outbreak at Fort William, Ont.

DR. CASSIDY, of Moorefield, has been appointed an Associate Coroner for the County of Wellington.

DR. F. J. SHEAHAN, M.B. University of Toronto, and Hospitals, Toronto, has opened an office in Delhi, Ont.

DR. D. J. MCCOLL, Strathroy, expects to leave for Saskatoon, Sask., where he intends making his future home.

SIX hundred in-patients were treated in the Winnipeg General Hospital in February; out-door consultations, 424.

DRS. A. S. LOCKHART, of Barrowsmith, and C. W. Thompson, Clinton, Ont., have been appointed associate coroners.

DR. CL. T. CAMPBELL, London, Ont., has been appointed post office inspector for London district, at $2,500 per annum.

MONTREAL General Hospital for February admitted 250 patients. The out-door consultations were 3,957. The deaths were 14.

TORONTO General Hospital has now a new department for neurasthenics, with 12 beds, under the charge of Dr. D. Campbell Meyers.

DR. A. T. HOBBS, of the Homewood Sanitarium, Guelph, has been elected Supreme Medical Examiner of the Canadian Order of Home Circles.

THE first wedding in Daysland, Alta., took place on Friday, when Dr. R. W. Halliday, of the town, and Miss Edith Moysey, of Toronto, were married.

A NEW semi-public ward department has been created in the Toronto General Hospital at $7.00 per week; semi-private pay $10.50; public ward, $3.50.

THE Christian Scientists of Winnipeg are asking the Manitoba Legislature for exemption of C. S. treatment from the provisions of the Medical Act.

DR. MURDOCH MCGREGOR died at his home in River Port, N.S., on March 6th. Deceased was 70 years of age. He was a surgeon in the Union army.

ACCORDING to Dr. C. J. Fagan's report for B. C. in 1905, there were 146 cases of diphtheria in British Columbia, with 9 deaths, a death rate of 6.1 per cent.

THE Royal Victoria Hospital, Montreal, admitted 250 patients in February, and discharged 245; fourteen died; 2,125 consultations in the out-door department.

THE total number of patients treated in the Winnipeg General Hospital during the week ending March 24th was 351: 197 men, 95 women, 59 children, and 116 out-patients.

DR. GEO. DEVEBER, Lethbridge, Dr. Philip Roy, Edmonton, and Dr. Douglas, member of the Federal Parliament for eight years, for East Assiniboia, have been appointed Senators.

THE undergraduates of the Faculty of Medicine in the University of Toronto honored Prof. A. B. Macallum on the 9th of March by presenting him with an illuminated address.

DR. E. A. HAIST, Credition, has sold out his practice to Dr. P. J. McCue, of Shelbourne, who takes possession the latter part of this month. Dr. Haist intends moving to Hamilton.

DR. OLIVER, of Stayner, formerly of Meaford, who left the former place a couple of years ago, to take a Government position at Cardston, Alta., has been transferred to Nelson, B.C.

PROF. ALEXANDER MCPHEDRAN, Prof. Wm. Oldright, of Toronto University, and Dr. W. H. B. Aikins, Toronto, are attending the Fifteenth International Medical Congress at Lisbon.

DR. ROY NASMYTH, of Stratford, has left for Fleming, Sask., where he will take charge of a doctor's practice for a few months. Dr. Nasmyth may locate in the West, but as yet has not definitely decided.

DR. A. THOMPSON, Strathroy, Ont., died of heart failure on the first of April. He was 69 years of age, a graduate of the University of New York, and a member of the Ontario Board of Health.

DR. F. X. PERRAULT, formerly superintendent of the St. Jean de Dieu Insane Asylum, at Longue Pointe, died on the 6th of March, at the Hotel Dieu Hospital, Montreal. He was born in Montreal in 1825.

DR. PELLETIER, the Secretary of the Quebec Board of Health, states that in the town of Granby, where every one was vaccinated at a time when there was a lot of smallpox in that part of the Province, not one took the disease.

DR. W. H. GODFREY, one of the staff of the hospital, was presented at Grace Hospital with the medal of the Canadian Humane Society for conspicuous bravery in the rescue of Gladys McKibbon, in Toronto harbor, in June, 1904.

DR. W. J. DOUGLAS, Cobourg, Ont., died suddenly on the morning of the 29th of March. He was a graduate of Trinity Medical College, Trinity University's representative on the Medical Council and a member of the Ontario Board of Health.

DR. F. HALSTEAD was the first medical doctor to locate in Teeswater. Dr. Halstead left the village in 1867 or 1868, soon after Drs. Fleming and Gillies went there, and for a number of years has been in the West. A few days ago friends received word of his death, which took place on March 3rd, at Winnipeg.

DR. DUGALD STARK, M.D., C.M., of Oxford, England, whose death occurred at Torquay, Devonshire, England, on March 6th, was well known in Toronto, being a medalist of Trinity College. He was a member also of the Royal College of Surgeons, London, and a licentiate of the Royal College of Physicians, Edinburgh.

THE annual meeting of the Canadian Association for the Prevention of Tuberculosis, met in Ottawa on the 28th and 29th of March. Sir James Grant read a paper on the relation of school children to tuberculosis, and Dr. A. J. Richer, Montreal, delivered an illustrated lecture. The Hon. Senator Edwards was re-elected President.

DR. J. M. DUNSMORE, JR., of St. Joseph, Mo., son of Dr. J. M. Dunsmore, of Stratford, Ont., paid a short visit to his father recently. Dr. Dunsmore, Jr., is an old Stratford boy. He has been practising medicine in the western city the past five years, and speaks very highly of the country. He was on a visit to his friend, Dr. H. D. Livingstone, of Rockwood.

DR. MATTHEW WALLACE, Toronto, died on the 3rd of March, aged 55 years. Dr. Wallace was a graduate of Toronto University, a physician to St. Michael's Hospital, and a physician well beloved and esteemed by his confreres. He was an assiduous devotee to the cause of medical charity, and rain or shine always saw him unostentatious, jovial and friendly.

DR. CHAS. E. DOHERTY, Medical Superintendent at the British Columbia Provincial Hospital, at New Wesminster, reports 123 admissions during 1905; of these ninety were males and thirty-three were females. During the year seventy-six patients were discharged, forty-three of whom had recovered. There were 402 patients, 304 males and 98 females, in the institution on the 1st of January, 1906.

A HANDSOME life-size portrait of the late Dr. T. G. Johnston, former M.P. for West Lambton, in Knights Templar uniform, has been hung in the Masonic Hall, Sarnia, by St. Simon of Cyrene Preceptory, of which Dr. Johnston was the first Presiding Preceptor. The portrait is done in India ink, is handsomely framed, and is a striking likeness of deceased. The picture was made by Charles McArthur.

THE Protestant Hospital for the Insane at Verdun, Que., after 16 years of usefulness, is making an appeal for a larger endowment. The cost per patient per day in 1905 was 55 1-2 cents; at the Royal Victoria Hospital, Montreal, $1.74; Montreal General, $1.35; Notre Dame, $1.12. The Quebec Government grant for all these institutions is 34 cents per day for each patient. Verdun Hospital has a deficit of $20,000.

THE medical men in Regina (Sask.) have as a body declared against in future entering into any contracts with friendly and benefit societies and lodges by which the members of such lodges shall receive medical attendance in return for a per capita fee paid by the society to the doctor under contract. The decision has caused some consternation among the organizations affected, involving, as it necessarily does, a substantial increase in the sick benefits paid, in lieu of the free medical attendance which has hitherto in most cases been provided.

AT the last regular meeting of the Winnipeg Medical Association, the following resolution was unanimously adopted: "Whereas we have watched with interest the efforts of the Board of Health in the education of the public on the question of tuberculosis, and whereas we are of the opinion that the same form of sanitorium treatment should be established in the Province; that therefore be it resolved that we, the members of the Winnipeg Medical Association, of the City of Winnipeg, hereby endorse the action of the Provincial Board of Health in this matter and give our approval of the plans they have already formed in accordance with the Act of the Provincial Legislature, passed in February, 1904, an Act respecting a sanitorium for the consumptives."

Correspondence.

VANCOUVER, B.C., March 17th, 1906.

To the Editor of DOMINION MEDICAL MONTHLY:

Sir,—The Vancouver Medical Association, at its regular meeting of March 12th, 1905, resumed the discussion of Patent Medicines. There was unanimity in the conviction that laws should be enacted to eradicate the existing evils. It was pointed out that in their promiscuous sale there exists a real danger to the public and that gross frauds are being perpetrated and that in their advertisements morally dangerous literature is being circulated.

As is well known, the drugs that are commonly used in patent medicines are opium or its derivatives, as found in consumption or colic cures and soothing syrups; cocaine in catarrh mixtures, acetanelid in headache powders, chloral hydrate in drink cures; belladonna, ergot and cotton root in preparations recommended as abortafacients; and alcohol which is used in medicines represented to cure all diseases. Most of these are poisonous and so immediately dangerous to life; opium in any form is so particularly dangerous to children. On the other hand, all are even more objectionable if taken for any length of time. At first they relieve symptoms or supposed symptoms or create pleasant feelings. This impels the user, who is unconscious of what he is taking, to continue their use until a habit is acquired, which eventually leads to the ruin of his mental, moral and physical nature. Yet these are the drugs which are sold in a secret way and without license.

The majority of these preparations, as well as being dangerous, are fraudulent, because the vendors of them, in their advertisements, claim to cure many diseases which scientists know are incurable. But there is another class of preparation which is absolutely fraudulent. They contain no drug of any medicinal value, but depend for their sale entirely upon the extravagant and false claims of the manufacturer. Thus the despairing chronic of the imaginative neurotic is preyed upon.

Then again in the advertisements which appear in our periodicals, both religious and secular, very corrupting literature

is constantly being circulated. This cannot but have a debasing effect upon some and is disgusting to all others.

The secrecy which the existing laws allow in connection with the so-called patent medicines, is mainly responsible for all these evils. If persons knew, as they should know, what is offered them, they would be able to discriminate between the beneficial and harmful and between the honest and dishonest.

Many of the worst of the Patent Medicines are distributed through His Majesty's mails, which, it seems, should not be allowed.

At the close of the discussion, the following resolution was unanimously adopted:

"Whereas, in the opinion of the Vancouver Medical Association, there exists a real menace to the community in connection with the sales of Patent Medicines. And

"Whereas the evils are so complex that a proper solution can be arrived at only by competent disinterested persons.

"Be it resolved that the Dominion House of Commons, now in Session, be petitioned to appoint a commission to investigate this whole matter with a view to enacting laws which will eradicate these evils."

Respectfully submitted and signed on behalf of the Vancouver Medical Association.

H. McTavish, M.B., M.R.C.S.
William Stephen, B.A., M.D.
William D. Keith, M.B., M.R.C.S.

Publishers' Department

ACUTE GASTRIC CATARRH.—This is a common disease, and is caused usually by the action of improper and irritating food on the gastric mucous membrane. Any local irritant may, of course, excite inflammation of this membrane if brought in contact with it, and acute gastric catarrh is an almost invariable result of the action of an irritating poison; but the common and familiar forms of this disease are most frequently the result of improper feeding. Some poisons are, however, much more predisposed to suffer from this disease, from comparatively slight causes, than others. It is a fact that too scanty a secretion of gastric juice, by retarding digestion and favoring abnormal decomposition of food within the stomach, predisposes to this calamity, and hence it is necessary in febrile states, when, owing to the high temperature, there is much loss of food from the skin and lungs and therefore diminished secretion of gastric juice, to diminish the quantity of food accordingly. The common custom of urging such patients to take more nourishment than they wish is often injurious, unwise, and unphilosophical. Generally, anemic and feeble persons, convalescent from acute diseases, are also liable to attacks of acute gastric catarrh from taking more food than their gastric juice is capable of dealing with, so that some of the undissolved ingesta decompose and set up irritation of the gastric mucous membrane. Overloading the stomach with food, even in healthy persons, is a common cause of acute gastric catarrh, owing to the abnormal decomposition which the excess in ingesta undergoes. This is a frequent cause of gastric catarrh in young children, and especially in children at the breast, who are allowed, for the sake of quiet, to nurse until they overload their stomachs. Imperfect mastication also may give rise to gastric catarrh, as the food then reaches the stomach in a comparatively undivided state, so that the gastric juice comes in very imperfect contact with it, and hence portions remain undissolved and undergo decomposition. Rich and fat sauces and too much meat eaten may lead to the same results. Food eaten when it is already in a state of decomposition may similarly give rise to gastric catarrh, and this is especially noticeable in delicate and sensitive persons. Game and fish kept too long, entrees made of meats that are not perfectly

fresh, new beer and sour wine, and, in young children, milk that is not quite fresh, are favorable sources of gastric catarrh. Too free use of spices, stimulants and condiments, and especially the habit of taking alcohol in a concentrated form, lead to the same result. In severe cases of acute gastric catarrh the indication with respect to food is to so limit it as to quantity and quality that the acutely inflamed mucous membrane shall be spared all irritation or excitement from ingesta, and the whole organ be, so far as possible, put in a condition of physiological rest. Entire abstinence from food, at least from food requiring much digestion and lacking proper elements of nutrition, may often be enforced with the greatest advantage for a period so long as the taking of ordinary food excites nausea or vomiting or severe pain. In my experience, this abstinence is well borne only where Bovinine is used. As a fact it is so, even in cases where the strength has been exhausted by previous suffering and long inability to digest all food matter. In all such cases Bovinine may be given with the assurance that it will secure the rest needed by the hyperæmic and irritated gastric mucous membrane. During convalescence, when there is a great craving as well as a real need for proper food, Bovinine is ideal; it soothes the mucous membrane, gives gentle and proper stimulation, puts the entire digestive tract at rest, and absolutely keeps up nutrition. The following case is submitted:

Mary J. Aged 43. American. Diagnosis, acute gastritis. Patient admitted to hospital Jan. 9, 1906. The condition was at its height, her temperature being 103.50 F. She suffered greatly with nausea and vomiting and much gastric pain. She could not retain food of any kind and was very nervous and almost in a state of collapse. She was given 15 drops of Bovinine in lime water every half hour. The first six doses she vomited. The seventh dose was increased to thirty drops, and this she retained, and evinced great relief from pain. After the eighth dose she fell asleep and rested quietly for two hours, when she was awakened by the pain. The Bovinine and lime water was administered, and immediate relief from pain followed. On January 14th her temperature was almost normal. She had very little pain, and she was much less nervous and stronger. The Bovinine was now increased in quantity to a teaspoonful every hour, in peptonized milk and lime water. From this time on her case progressed without interruption, and on January 21st she was discharged cured. Two days before leaving the hospital she had been on a light general diet, which she had no trouble in digesting.

P. J. Biggs, M.D.

THE MODERN MANAGEMENT OF MALARIAL ANEMIA.—One of the most obstinate forms of anemia with which the physician has to contend is that which succeeds malarial infection. This particular form of anemia is, unquestionably, due directly to the structural changes induced by the protozoon parasite. While a mild form of anemia is a common, if not invariable, consequence of malarial infection, there is a severe type, termed *malarial anemia,* which not infrequently occurs. This latter variety usually responds slowly to curative measures; and, since its existence renders the individual a fit subject for recurring malarial manifestations upon the slightest exposure, the importance of its cure cannot be too strongly emphasized. The doctrine of the latency of malarial poisoning in the human body is rapidly gaining in popularity. Some authorities even go so far as to claim that a person who has once been inoculated with the malarial protozoa never completely recovers. Whether this be true or not, it is certain that the protozoon parasite does exert an influence which tends, for a great length of time, to lower vitality and render feeble the powers of resistance to renewed attacks. This is especially true in the case of women, children and persons of advanced age. Recent investigators unite in ascribing the cause of *malaria anemia* to the liberation of hemoglobin from the red corpuscles in the blood vessels. The pigmentation resulting from this liberation of hemoglobin is one of the characteristic of malarial infection. And while the coloring matter may remain in the blood stream, it usually infiltrates into the cells and neighboring tissues. The deposit of pigment is especially great throughout the tissue of the liver and spleen. The thickening and softening of the mucous membrane of the stomach, which always attends malarial infection, seems likely to contribute, at least to some extent, to the development of anemia. In every instance the degree of the anemia is in direct ratio to the amount of the hemoglobin liberated from the red corpuscles. And this fact explains the philosophy of effecting repair by the administration of iron, the hemoglobin-contributor. Whether or not the protozoon parasite is ever completely eliminated from the economy remains an unanswered question. But it is now universally conceded that the protracted administration of iron does render the individual partly, if not completely, exempt from a return of malaria manifestations of an aggravated type. Far more so, in fact, than does quinine. Indeed, we have good cause to believe that iron does exert a destructive influence upon the malarial protozoa and increases the immunity of the individual. While it is the chief aim of the physician

to make up the deficiency of the hemoglobin in these subjects by the administration of iron, it is distinctly important, coincidently, to increase the appetite and augment the capacity to appropriate the food ingested. To this end, discrimination in the selection of the form of iron to be employed is vitally essential. The acid solutions of the drug are ineligible because of the fact that they cannot be engaged for a long period without harmfully affecting the secretion of the digestive juices and adding to the morbid state of the mucous surfaces of the alimentary tract. Furthermore, the continued use of acid products of any sort are certain to diminish the alkalinity of the blood, thus depressing, to a very considerable extent, the nutritive processes. Then, too, headache, which is an ever-disturbing factor in these cases, is intensified by all substances of an acid reaction. The strongly alkaline preparations of iron, while less objectionable than the acid ones, are open to fault for the reason that they induce constipation, and in this manner favor auto-intoxication. By far the most effectual form of iron in the treatment of *malarial anemia* is that which is neutral in reaction and available for immediate absorption. The organo-plastic form of iron, as found in Pepto-Magnan (Gude), certainly fulfills the requirements of the physician with greater promptness and uniformity than any other product thus far evolved. This preparation—Pepto-Magnan (Gude)—is by all means the most potent hemoglobin-producing form of iron, and it undoubtedly surpasses other ferruginous products as an invigorator of the digestive and nutritive functions. These assertions are easily confirmed by the microscope. It is also an accepted fact that Pepto-Magnan (Gude) does not induce constipation, and it seems to materially hasten repair of the mucous surfaces of the alimentary tract resulting from the structural changes incident to the malarial infection. In short, Pepto-Magnan (Gude) is of inestimable value in the treatment of *malarial anemia* by virtue of its manifold advantages over other preparations of iron. If this preparation is administered for the proper length of time, the individual gains substantially in strength, flesh, physical and mental energy.

My oldest son was troubled with a skin eruption on his chin and forehead (between the eyes), which he seemed to have caught at school; it resembled a ring-worm in some particulars, but was very stubborn and hard to cure; so I sent to you for samples, believing, through past experience with Resinol, that it would do the work. After the first application I could see the

improvement, and inside of a week his face was clear again. It is one of the greatest remedies I know of for those nasty, inflamed, raw looking and rapidly growing sores so often seen on school children's faces, and will cure them every time. I have prescribed it extensively in my practice for some years past, and always with success.—John Husson, M.D., 418 W. 124th Street, New York City.

THERE is no more important department of medical affairs than that of medical transfer. When a physician desires to sell his property and practice, it is of the utmost importance that it should be done with a minimum of publicity and a maximum of speed. The system adopted by Dr. Hamill, who conducts the Canadian Medical Exchange, is at once efficient and prompt, and offers every possible security to vendors, and we advise our readers to take advantage of his many years' experience when they are thinking of selling their practices. A partial list of the practices he has for sale will be found among our advertising columns every month, the complexion of which, of course, changes from time to time.

BATTLE & CO. have just issued the ninth of the series of twelve illustrations, of the Intestinal Parasites, and will send them free to physicians on application.

PROPER MEDICATION AND CHEERFUL COMPANY.—During the past two months, we have met with more la grippe than anything else, and the number of cases in which the pulmonary and bronchial organs have been very slightly or not at all involved, has been greater than we have noted in former invasions. On the contrary, grippal neuralgia, rheumatism and hepatitis have been of far greater frequency, while the nervous system has also been most seriously depressed. With each succeeding visitation of this trouble we have found it mor eand more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently we have relied upon mild nerve sedatives, anodynes and tonics, rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encouraging skin and kidney action, with possibly minute doses of blue pill or calomel. We have found much benefit from the use of antikamnia and salol tablets, two every three hours in the stage of pyrexia and muscular painfulness, and later on, when there was fever and bronchial cough and expectoration, from an antikamnia and codeine tablet every three