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THE DIAGNOSIS OF CHRONIC AFFECTIONS OF THE LIVER.

BY CHARLES SHEARD, M.D., M.R.C.S., ENG.

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The diagnosis of chronic affections of the liver is always a matter of great interest and often of obscurity. The most common chronic affections of the liver met with in Canada are : 1. Carcinoma; 2. Hepatitis from obstruction to the egress of bile; 3. Cirrhosis.

Carcinoma.—The form of carcinoma which most frequently affects the liver is medullary cancer, although scirrhus is occasionally to be met with. It frequently invades the liver from contiguity of tissue from the pyloric end of stomach or may begin in the liver, in which latter case its diagnosis is more difficult. The commencement of the disease is usually at the transverse fissure, when it appears in the fibrous tissue of that locality, or from disease of the lymphatic gland or glands, which are usually to be found there, and from this point the disease may extend on the under surface of the liver into the right or left lobe, deeply into the parenchyma of the organ without causing any pain or even much constriction of the bile ducts. I think it will be generally conceded that pain in any viscus is largely proportionate to the degree of involvement of the peritoneum, and this fact is often misleading. We often see extensive and active inflammatory disease of the liver without pain, and in the kidney the same thing may occur to a greater and more remarkable extent ; in such cases the disease usually begins at the hilus of the organ, thence invading the parenchyma and leaving the peritoneum comparatively free from involvement. In such cases, of growth involving the portal fissure of the liver, that organ may be displaced upwards and show by palpation and percussion considerable enlargement, without nodosities or much irregularity of surface, because of the seat of the disease, and in this we have a most confusing condition ; soon however the hepatic duct becomes involved, and often the cystic duct and common bile duct as well, giving us one of the main, and most important symptom of carcinoma, viz., persistent jaundice. Murchison, in his able treatise on diseases of the liver, remarks, (page 210), "The co-existence of enlargement of the liver with persistent jaundice ought always to raise the suspicion of cancer." This jaundice is the result of direct pressure upon the duct or ducts by a carcinomatous growth, and consequently the appearance of a distended gall-bladder is not, as some hold, very strong evidence *against* the diagnosis of cancer. I have seen several cases of persistent jaundice occurring in patients above the age of forty years, and in most of these, where a post-mortem was obtained, carcinoma was present. In all such cases it is necessary to regard very carefully the history of the patient, especially as to his having had attacks of hepatic colic, for in the condition of hepatitis from destruction of the bile ducts, jaundice may be so severe, and the attacks so frequent, that it is practically persistent, and there may at the same time be great enlargement; in all such cases there will be a clear history of hepatic colic, and often, whilst the patient is under observation, an attack may occur, and the passage of a gall-stone be verified.

Next to jaundice the most important symptom is the presence of enlargement, with irregularities or nodosities upon the surface, so that hard and painful lumps may be easily made out ; the presence of such places the diagnosis of carcinoma beyond dispute, often, however, the development and the rapidity of the new growth is at one principal seat, and though the remaining portions of the liver may be affected, these portions of new growth are comparatively small, often not larger than a split pea or bean, umbilicated in their centre and such as could not easily be discerned with certainty by palpation through the abdominal wall, but the method of enlargement, the greater growth of the right lobe which is in almost every case noticeable, and the marked irregularity of the edge

of the liver are valuable diagnostic points in favor of carcinoma.

Ascites is also an important symptom, and be gins early; the involvement of the main trunk of the portal vein in the growth leads to obstruction in the mesenteric veins, and hence ascites is usually marked. This serves to a certain extent to distinguish carcinoma from hepatitis, from obstruction in which latter case there is little or no ascites, although the intestines may become greatly distended by gas, and gas being also in the peritoneal cavity might, to a careless observer, present a condition very similar to ascites. Ascites, whilst of value in helping one to come to a diagnosis is not of unmixed value inasmuch as the fluid in the abdomen sometimes renders palpation and percussion of the liver difficult, and so many are the conditions of the liver which produce it that in cases of carcinmoia it is not wise to lay too much value upon it. Hæmatemesis from obstruction of the gastric vein is less frequently seen in carcinoma than in cirrhosis, and is usually a later symptom. Soon the patient becomes markedly emaciated, and with the extension of the growth to the peritoneal surface of the liver or into the peritoneum lining the abdominal wall, the pain becomes the severe and most distressing symptom, revealing very plainly at a later stage the nature of the disease.

Softening and suppuration of a carcinomatous mass, producing hectic symptoms, is occasionally seen, and such have been tapped, when the grumous bloody fluid which escapes shows but too clearly that the case is one of carcinoma.

II. *Enlargement of the liver associated with obstruction, or catarrh of the bile ducts.*—In these cases the liver is the subject of attacks of temporary engorgement which are attended by hepatic tenderness, slight peri-hepatitis, and jaundice often severe and oft-recurring, so that it may be said to be all but continuous. Here there is enlargement of the entire organ, the bile ducts are distended, the larger of which form sac-like dilatations, containing bile which may be seen throughout the liver. I remember in one case where a post-mortem examination of the liver substance showed numerous deposits of the size of a sixpence, and filled with caseous matter, and in some a few drops of pus were to be seen, giving to the whole liver the appearance of its having been affected with multiple abscesses from obstruction of the bile ducts, and which abscesses had undergone caseous degeneration; such cases so far as they have been verified by post-mortem examination are undoubtedly rare, but I am of the opinion that in a less advanced state they are comparatively common. Such cases are, of course, entirely distinct from "biliary," "hypertrophic," or "monolobular" cirrhosis, in which latter condition hypertrophy of the bile ducts and increase in their number constitutes the chief pathological change, and such occurs apart from any obstruction to the egress of bile; on the other hand enlargement from obstruction has its most common cause in gall-stones, or catarrh of the bile ducts from continued over-engorgement, and from syphilitic disease; such cases occur in patients past thirty-five years of age, they are attended with jaundice, show a history of attacks of hepatic cholic; the abdomen is distended and tympanitic in character; there have been attacks of severe pain referable to the region of the liver (peri-hepatitis), with severe constipation. On palpation the liver may be found considerably enlarged and its surface smooth, the gall bladder distended and tender to pressure. The diagnosis of this condition can rarely be made with certainty; it can be distinguished from carcinoma by its smooth surface, by the absence of ascites, and the even manner of the progress of the hepatic enlargement, and attacks of hepatic colic; there is gradual progression, the patient getting constantly weaker, the liver constantly enlarging without at any time presenting a distinct tumour, death occurring from inanition. From amyloid disease it can be distinguished by the painless nature of the latter, by the absence of the common cause of amyloid disease, viz., prolonged suppurative discharge, and by the rapid and enormous amount of enlargement which is so remarkable a feature in the amyloid change. From fatty disease of the liver it is easily differentiated; rarely does a fatty liver extend below the umbilicus, and in fatty livers attacks of pain are not usual.

III. *Common Cirrhosis.*—This is in the main one of the simplest affections to diagnose, occasionally however it presents peculiarities in its course and developement which are very misleading, one of which is enlargement. Theoretically and pathologically it is true that enlargement precedes

contraction in cirrhosis, but cases in which marked enlargement of the liver is to be noticed as a precursor to its contraction are rare; ordinarily the enlargement is so very slight in degree that it cannot be positively determined, usually fatty degeneration precedes contraction causing slight enlargement, such a liver may be attacked by a more active inflammatory change causing acute symptoms which will be followed by rapid contraction.

In cirrhosis of the liver the chief and permanent pathological change consists in a growth of fibrous tissue throughout the organ, which like cicatricial tissue subsequently undergoes great contraction and exerts its evil influences principally through pressure; bearing this fact in mind, the clinical interpretation of any symptom occurring in the course of cirrhosis should be comparatively simple.

Pressure symptoms referable to the portal vein or its tributaries are the most prominent. Ascites, early in occurrence, persistent after its first appearance, and severe in degree, is the most distressing and also the most suspicious symptom of cirrhosis; the portal vein becomes early occluded and such occlusion obstructing the messenteric veins leads to their dilatation and to constantly increasing ascites.

Hæmatemesis from obstruction to the egress of blood from the gastric vein assisted by associated cirrhosis in the gastric mucous membrane or acute inflammation of that membrane, together with occasional hæmorrhages from the bowels are serious symptoms.

Hæmorrhoids from pressure upon the lesser hæmorrhoidal veins, and enlargement of the superficial abdominal veins resulting from the same pressure, furnish a chain of symptoms the links of which are always more or less perfect and constant.

Together with the pressure from the growth and development of fibrous tissue within the organ, there is atrophy of the parenchymatous elements and the secretion of bile is more or less interfered with. Jaundice in cirrhosis is not usually a marked sympton, but may appear late in the disease, when it is apt to be persistent. During the so-called "congestive stage" of cirrhosis, attacks of jaundice may appear, when, if of long duration or very severe, they constitute a very unfavorable symptom. Severe jaundice occurring in a patient who has been for many months the subject of cirrhosis, may be regarded as an alarming symptom, and such attack is often attended by acute delirium or by low muttering delirium, in which condition death occurs. It must not, however, be forgotten that true jaundice, *i.e.* where bile-coloring matter stains the skin and conjunctiva, and escapes with the urine, is not a common feature of cirrhosis. The sallowness of the face, and the dull dark skin which is so commonly seen in old drinkers, is not jaundice, nor is it at all certain that hepatic disorder has anything to do in producing this condition.

It is common enough to rely upon the history of the patient's habits, to determine the existence of cirrhosis, but nothing can be more misleading, whilst it is established that the abuse of alcohol is the common and potent cause of this condition, it is also established that cirrhosis may occur apart from alcoholism, and the differences of opinion regarding the form of beverage most liable to induce cirrhosis are endless.

And there can be no doubt that whilst many old topers escape, after years of hard drinking, without any or with very slight disease, in others, very much smaller quantities of alcohol will produce very rapid and very serious tissue changes in the liver.

Many German authorities believe that malt liqnor is as apt to induce cirrhosis as the strong spirits, and it is very probable that in individual cases they act as powerful factors. I think we must recognize the fact that the tendency to sclerosis of all organs is greatly predisposed to in some, and apt to follow upon trifling inflammations or slight congestions and if such be a fact, it is wrong to trust too much to the patient's history as proof of the impossibility of cirrhosis.

I would here submit a very excellent comparison, given by Woodhead, of the pathological changes between "common" and "biliary" cirrhoiis.

In Common Cirrhosis.	*In Biliary Cirrhosis.*
1.—The bile ducts are but little involved in the growth of connective tissue, there is little or no jaundice or bile staining of the liver tissues, and no new bile ducts are found on microscopic examination.	1.—The bile ducts are the first structures involved the jaundice and bile staining of the liver substance is, as a rule, well marked and there is a new formation of bile ducts.

2.—In consequence of the new growth of tissue along the course of the portal veins, especially the medium sized branches, ascites is a very common complication in this form, as are also hæmorrhoids, varicose conditions of the veins of the œsophagus, congestion or even hæmorrhage in the gastro-intestinal tract.	2.—The portal veins are not involved in the change and ascites and the rest are rare.
3.—In the early stages, in consequence of the increased amount of young connective tissues in the portal spaces, there is enlargement of the organ, but in the later stages where this tissue is becoming fibrous and cicatricial and is contracting, there is as a rule a considerable decrease in the size of the liver.	3.—In consequence of the large amount of new tissue diffused throughout the organ, it is considerably increased in size.
4.—The liver is rough, with projections about the size of a hobnail on its surface. The capsule is thickened and opaque, especially at the bottom of the fossæ which surround the projections.	4.—Surface is smooth (morocco leather feeling) and the capsule is not thickened.
5.—The masses of liver cells vary very much in size, some consisting of several lobules, whilst others are smaller than a lobule. Each of these masses forms a distinct area, having a rounded outline surrounded by a fibrous, zone and from the fibrous capsule the mass of liver cells can be easily turned out.	5.—The masses of liver cells consist of single lobules, which are, however, considerably diminished in size and the cut surface has a more or less uniform and finely granulated appearance.
6.—On microscopic examination it is seen that the process is going on chiefly at the periphery of the lobules, but that groups of lobules are affected.	6.—The single lobules above mentioned are surrounded by bands of fibrous tissue, which bands, however, are not confined to to the periphery, but invade the substance of the lobules.

HYDROPHOBIA.*

BY CHARLES W. DULLES, M.D., PHILADELPHIA.

Since I first began to make the disorder called hydrophobia the subject of special study, nothing has given me more encouragement than the request of this Society at its meeting in Williamsport in 1886, that I continue my study and report its results to the Society. This request was the more welcome, because it seemed to furnish a confirmation of my hope that it might prove useful for one to make a serious matter the subject of continous investigation, and to lay before his professional brethren, from time to time, the results of his studies.

A year ago, I gave you a brief statement of the developments in regard to hydrophobia during the year then completed, and this required me to devote considerable space to the progress of the method of Pasteur. To-day I can spare you any long presentation of this part of the subject, for the reason that Pasteur's method hardly attracts any attention now, and seems to be in a fair way to die a natural death. The result of his operations may be gathered from a report of Dr. Dujardin-Bearumetz on the subject of hydrophobia in Paris, during 1887, published in the *Gazette Hebdomadaire* of March 9, 1888.

According to this report, there were nine deaths from hydrophobia in Paris during that year, which was *more* than in 1880, 1883, 1884, or 1886. Five of these deaths were of persons less than fifteen years old. In one of the cases the patient was not bitten at all, but was simply licked on an abraded spot. Eight of the patients were bitten by dogs, and one by a cat. Two of the nine patients had been treated by Pasteur; and their death is explained by Dujardin-Beaumetz on the ground that his method was not thoroughly carried out. The total number of persons treated by Pasteur was only 306 persons from Paris, bitten by dogs supposed to be rabid, as against about 300 a month when I last addressed you.

This statement shows two very important things: One is, that the application of Pasteur's method has had no effect in reducing the usual mortality from so-called hydrophobia in Paris—which confirms the opinion in regard to its merits which I have repeatedly expressed; the other is, that, in spite of the artifical stimulus furnished by the French reception of Pasteur's method, the number of those who fall into the terror of hydrophobia is diminishing in France, and this leads to the hope that before long France will compare favorably with Germany and America, which have refused to be carried away by the false notions in regard to hydrophobia put forward by one who knows

*From the Medical Transactions of the Medical Society, of Pennsylvania.

nothing about it but what he has manufactured in his laboratory.

It must impress you, I think, as it has impressed me, that there is a great significance in the fact that disbelief in the theories of Pasteur, which some of his partisans have stigmatized as harsh or unscientific, has been found to go with a singular immunity from the ravages of so-called hydrophobia. This holds true to such an extent, that one may safely say that the degree of acceptance of Pasteur's theories in any country will furnish a measure of the number of cases and deaths from hydrophobia. In Germany, these theories have never obtained a foothold, and hydrophobia is almost unknown; in America, the attempt to import them ended in speedy failure, and here hydrophobia is almost equally unknown.

You may, perhaps, be interested to learn that in our State of Pennsylvania, not one case, even of suspected hydrophobia, has occurred since we met a year ago. And, from the whole of the United States, I have gathered only fourteen deaths (about one in each 4,000,000 inhabitants) from hydrophobia—credible or incredible—during the year since we last met.

I have carefully studied the details of these cases and have prepared an epitome of the history of each one for your study and reflection. You will see that only a few have been reported in the medical journals, and the majority of the accounts are derived from daily newspapers. This fact is to be regretted, and I would be glad to give you more reliable data than can be gained from secular papers; but my attempts have been almost fruitless, when I tried to get precise histories of the cases; and I regret this the more, because, when I succeeded in getting more accurate accounts, the cases lost many of the features of hydrophobia.

The following are the histories of these cases as I have been able to obtain them:

CASE I.—Man (Gurnee, Haverstraw, N.Y.). Bitten on thumb by pet dog, May 25, 1887. Dr. W. B. Bailey called, and "dressed" the wound. Dog died in a fit two days later. The patient was alarmed. June 20, had pain in same hand and side. June 22, could not drink or wash. Drs. Bailey and House called and agreed that he had hydrophobia. He had violent spasms, and was kept under the influence of anodynes, atropia, and morphia administered hypodermically. Dr. W. A. Hammond, of New York, was called in the evening and confirmed the diagnosis, and endorsed the treatment. The patient grew steadily weaker, and *died* June 23, 1887, at 10 a.m.—*Med. and Surg. Rep.*, June 23, 1887.

CASE II.—Woman, twenty years old (Delia Bentcliff, near Bridgeton). Attacked and severely bitten on back and shoulder, in March, 1887, by a large bulldog, which on account of his bad temper had been chained for several months. "The terrors of hydrophobia were constantly pictured to her," and she became ill *with symptoms of typhoid fever*. Dr. Currie, of Beverley, saw her in the beginning of July. He diagnosticated typhoid fever. This was followed by blood-poisoning. She now refused food and had convulsions, and "positive" signs of hydrophobia. She raved and frothed at the mouth. *Death* from exhaustion occurred July 20, 1887.—*New York World*, July 25, 1887.

CASE III.—Man (Hannibal Crosson, Faircloth, Georgia). Bitten slightly on the hand in March, 1887, while driving off a strange dog which had attacked two of his own dogs. Both these dogs subsequently died. July 17th, he failed in an attempt to drink water and developed a dread of water. A physician diagnosticated hydrophobia, and had four men to hold the patient while a tablespoonful of water was administered as a test. Horrible convulsions followed. The patient "snapped, growled, and whined." *Death occurred* July 22, 1887.—*New York World*, July 24, 1887.

CASE IV.—Man (James P. Cody, Peoria, Illinois), twenty-three years old. July 3, 1887, a cat endeavored to pass him, struck against a gate-post and fell. The man picked it up, and was bitten in the left hand near the thumb. The cat had to be choked off. August 12, he was indisposed. The next day he swallowed water with difficulty, and had a "thrill" when he placed his hand in water. Hydrophobia was diagnosticated, and the man was transferred to a hospital at Sedalia, Missouri. Remedies for quieting him were given. August 15, he was restless, and an attempt to drink water caused convulsive movements. *Death occurred* at midnight.—*Philadelphia Inquirer*, August 19, 1887.

CASE V.—Man, seventy-eight years old (Cedar Springs, Mich.). Bitten, in 1839(!), on hand by a dog said to be rabid. Wound sucked and next day excised and cauterized. Two men bitten same day by same dog, one said to have died of "hydrophobia" in four weeks, and one of "blood-poisoning" in a few days. *Thirty-eight years later* the patient had horror of water, inability to drink, incessant spitting, paroxysms of violence caused by pouring or dripping water in his hearing. He tried to bite and tear his attendants. Dr. Fred. R. Boyd, who reports the case, gave him large doses of morphia hypodermically, five grains at a

time until twenty grains were given in a short period, and chloral hydrate. *Death occurred* September, 18 (?), 1887. (The dates are mixed in the report.) He had had an attack of hydrophobia ten years after being bitten.—*The Medical Age*

CASE VI.—Man (Charles Cavanan, New York), twenty-seven years old. Bitten October 8 in little finger, by a bull-dog which he separated from another dog with which it was fighting. The wound was cauterized at Chamber Street Hospital and healed well. November 11, the man had a spasm of the throat when drinking beer at a bar, began to froth at the mouth, and became cross and sleepless. November 14, he went to the same hospital, where he had profuse salivation and convulsions, followed by delirium. Hypodermics of curare and morphia were used. He said he "knew he was going to die." A strait-jacket was put on him, and he was held by a strong nurse. *Death occurred* November 16, 1887.—*New York Herald*, November 17, 1887.

CASE VII.—Man (Samuel J. Foster, Sedalia, Mo.). No history of a bite. He came to the hospital in Sedalia, November 23, 1887, with pain of stomach. He "showed symptoms of hydrophobia" at 2 p.m., and was tied hands and feet, and bound to an iron bedstead. Soon after he had violent spasms. Hypodermics of curare were given, and then hypodermics of morphine. *He died at* 7.25 p.m. the same day. —*New York Tribune*, November 25, 1887.

CASE VIII.—Man (Marshwald, New York.) Bitten September 8, 1887, by a Newfoundland dog, kept as a watch dog. No evidence that the dog was rabid or sick, but it was killed at once. The man was greatly alarmed, and went to a hospital every week to have the wound examined. He was a hard drinker, and was treated for *delirium tremens*. November 27, he went to the hospital saying he had hydrophobia. He was treated with brandy, chloral, digitalis, and hypodermics of curare. He was confined in a strait-jacket, and several men were employed to hold him. *Death occurred* November 29, 1887.—*Med. and Surg. Rep.*, December 31, 1887.

CASE IX.—(See case XII.) Man (George Norman, New London, Mo.). Bitten by dog last summer, but he paid no attention to it. No history of dog. November 28, he awoke from a dream that he was dying of hydrophobia, and told his friends of it, and immediately had symptoms. Six men struggled with him for twelve hours. He begged his friends to kill him; and finally *died in convulsions* November 29, 1887.—*Chicago Tribune*, December 1, 1887.

CASE X.—Man, fifty-two years old (Stephen Dietrich, Cincinnati, Ohio). October 17, 1887, his pet Scotch terrier returned after a few days' absence from home, and when playing with his master struck his lower lip so that it bled. (Not clear that it was not a wound made in lip by man's tooth.) The dog died four days later. December 1, while the man leaned over a vat of scalding hot water, he had some difficulty in breathing. His friends told him that hydrophobia began that way. Dr. Andre called in the evening, and at once discovered symptoms of hydrophobia, and took him from his home at Camp Creek to the Good Samaritan Hospital at Cincinnati, after he had prepared to die and bade farewell to his wife. He arrived December 2, and came under the care of Dr. Whittaker, who regarded the case as one of hydrophobia, and lectured on the patient at a clinic. The man was tested with water His treatment included chloral and morphia by the rectum and hypodermically, and cocaine and curare by the mouth, and chloroform by inhalation. The patient never slept; he spit incessantly, and insisted he would die of hydrophobia. *Death occurred* December 3, 1887. (See *Med. and Surg. Rep.*, December 17, 1887, and *Cincinnati Enquirer*, December 4, 1887.)

CASE XI.—Woman (Mrs. John Loughran, Hot Springs, Ark.). Bitten about October 15, by a vicious dog which had attacked her children. "A madstone was applied and no serious results were apprehended." December 2, she had a chill, and afterwards dread of liquids, and convulsions. She *died* December 4, 1887.—*Chicago Tribune* December 6, 1887.

CASE XII.—(See Case IX.) Man, eighteen years old (George Norman, St. Louis, Mo.). Bitten on the nose about November 30, 1887, by a strange dog, to which he gave a bone. The dog ran away and nothing was thought of the bite. January 24, 1888, said he had hydrophobia. Dr. Dunlap was summoned. Chloroform given; tests with water caused spasms; but he could and did not drink water and milk. Had a "fit." Morphine given hypodermically. Became enraged at the doctor and was bound, but broke loose and became violent. In his nightgown rode a distance, yelling loudly; calmed down, and said "he had hydrophobia and must die." January 25. *died* in convulsions.—*New York Herald*, January 27, 1888.

CASE XIII.—Man (William Bowen, Atlanta, Ga.), twenty years old. About December 1, 1887, savagely attacked, and hand and arm badly lacerated by a large dog. (No history of dog.) The wounds healed rapidly. January 28, the young man had nausea, spasms, and delirium. At the sight of water he howled, whined, and frothed at the mouth. *Death occurred* January 29, 1888.—*New York Herald*, January 31, 1888.

CASE XIV.—Girl (Mary Riley, West Chester, New York), nine years old. Bittten badly about December 18, 1887, on the leg by a large Newfoundland dog (no suspicion of rabies). Wound

healed rapidly. About February 8, 1888, she was bitten in the face and neck by the same dog, which was then killed. About March 1, she began to behave strangely, and Dr. McNichol "at once discovered that she had symptoms of hydrophobia." March 7, she began biting like a dog, and became frantic at the sight of water. She tried to bite the doctor and had to be tied down. Opiates "had no effect upon her." *Death occurred* March 8, 1888.—*Philadelphia Evening Telegram*, March 10, 1888.

CASE XV.—Boy (Arthur Tates, near Carthage, Illinois), eight years old. Bitten March 27, 1888, on the face, by a large shepherd dog, which afterwards attacked a man and escaped. The wound was carefully cauterized. April 26, he acted strangely, and soon had spasms and snapped and bit and went into convulsions at sight of water. Physicians were called and said he had rabies. The boy was tied to the bed and held by three men, and was given "powerful opiates, which did not allay the awful spasms." *Death occurred* April 29, 1888.—*New York Herald*, May 1, 1888.

The tabular statement of the foregoing cases, which I have prepared, will spare me the trouble of a detailed analysis. But, I would call your attention to a few points which have impressed me in studying it.

1. *The effect of anticipation of hydrophobia.*—This is said to have been present in seven of the fifteen cases, and may be suspected in more.

2. *The lack of evidence of rabies in the animal which did the biting.*—Not one of the animals furnished more than ground for a suspicion that it was rabid. The fact that a fighting dog bites a man who interferes with it, is no evidence that it is rabid, nor is the manifestation of a vicious temper a good evidence of rabies. The same may be said of death in a fit.

3. *The effect of a diagnosis of hydrophobia.*—In ten of the fifteen cases it is stated that the physicians made an early diagnosis of hydrophobia, and presumably they failed to conceal the fact from the patient.

4. *The effect of applying the test of the water.*—This is said to have been done in seven of the fifteen cases, and it was probably done in almost all of them.

5. *The assertion that canine symptoms were present.*—Five of the patients are said to have whined, or howled, or snapped, or bitten at their attendants.

6. *The frequency of forcible restraint.*—This is said to have been employed in eight of the cases.

7. *The uselessness of administering narcoties.*—Powerful narcoties are said to have been used in ten of the cases; and they were probably used in all. Curare is said to have been used in four cases.

You will, I trust, permit me to think that my prolonged study of hydrophobia has produced something which may be called an opinion—not prejudice—in regard to its nature and treatment; and I should be a coward if I hesitated to express my opinion for fear that I should once more be accused of prejudice. I have on several previous occasions declared my belief that hydrophobia is not a specific inoculable disease. I believe this more firmly to-day than ever before. I do not deny that men and women and children sometimes fall into a peculiar state after a dog-bite, and die in due time. But I do deny that this is attributable to any specific virus in the dog's saliva. The same thing has occurred too often from other causes, to justify one in charging it to a specific virus when it follows a dog-bite. And, I believe that rejection of the specific theory will do more to banish hydrophobia from the world than anything which we have ever heard of.

The word "hydrophobia" should be used only to describe a condition—and not a disease—as we use the word "convulsions," and it should be remembered that this condition may be present in a great number of diseases, as I tried to show you when you last met in this city, in 1884.

I firmly and honestly believe that if this view of what is called hydrophobia were generally accepted, the disorder would shrink and disappear as the genie is said, in the tales of the "Arabian Nights," to have shrunk and disappeared when the right word was spoken. And, I call your attention to the fact that hydrophobia is now almost unknown in our own State of Pennsylvania. Not a single case has occurred in our State since we last met, and I cannot but attribute this fact partly to the extent to which your judgment confirms the opinions to which my studies of hydrophobia have led me.

I do not despair of seeing the belief in hydrophobia follow the belief in witchcraft, which once had the support of Church and State, of the medical profession and the laity, but which now, thank God! torments our fellow-men no more. So long, at least, as Pennsylvania presents the spectacle of freedom from the thraldom of ancient superstition, in regard to hydrophobia, and freedom from its curse, I cannot but think that the former has some causal connection with the latter.

TABLE OF CASES OF SO-CALLED HYDROPHOBIA IN THE UNITED STATES FROM JUNE 1, 1887, TO JUNE 1, 1888.

CASE No.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	XV.
Male	1	....	1	1	1	1	1	1	1	1	....	1	1	....	1
Female	....	1	....	....	....	....	....	....	....	....	1	....	....	1	....
Age (years)	Adult	20	Adult.	23	78	27	Adult	Adult	....	52	Adult	18	20	9	8
Incubation (days)	26	105	90	40	38 years	35	....	49	90	45	49	55	60	75	30
Species of animal	Dog	Dog	Dog	Cat	Dog	Dog	*	Dog	Dog	*Dog	Dog	Dog	Dog	Dog	Dog
Location of bite	Thumb.	Back and shoulder	Hand	Hand	Hand	Little finger	....	....	....	*Lip	*	Nose	Hand and arm	*Leg face and neck	Face
Wound cauterized	*1	....	....	....	1	1	....	....	....	....	....	....	....	....	1
Dog died soon	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Dog savage	....	1	....	....	....	....	....	....	....	....	1	....	1	1	1
Dog fighting at time of bite.	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....
Dog said to be strange	....	....	....	....	....	....	....	....	....	....	....	1	..	....	....
Patient said to have anticipated hydrophobia	1	....	....	....	....	1	....	1	1	1	....	1	....	....	....
Hydrophobia diagnosticated	1	....	1	1	1	1	1	1	....	1	....	....	....	1	1
Horror of water stated	1	1	1	1	1	1	....	....	1	1	1	1	1	1	1
Patient tested with water	....	....	1	1	...	....	....	....	...	1	....	1	1	....	1
Dog-like symptoms.	....	....	1	....	....	1	....	....	....	....	....	....	1	1	1
Forcible restraint used	....	....	1	....	....	1	1	1	1	. ..	....	1	.. .	1	1
Powerful narcotics used	1	....	....	1	1	1	1	1	....	1	....	1	....	1	1

*Case I. Wound said to have been dressed.
Case II. Said to have had typhoid fever.
Case VII. No history of a bite.
Case X. By no means clear that he was bitten at all
Case XI. Said to be bitten severely, but not where.
Case XIV. Bitten on leg about Dec. 18, 1887, and on face and neck about Feb. 8, 1888.
Case I. Morphia and atropia.
Case IV. Quieting medicines.
Case V. Morphia in 5 gr. doses.
Case VI. Morphia and curare.
Case VII. Morphia and curare.
Case VIII. Chloral and curare.
Case X. Morphia, curare, chloral and chloroform.
Case XII. Morphia.
Case XIV. Opiates.
Case XV. Powerful opiates.
Case X. A "mad-stone was applied to wound.

Correspondence.

OUR NEW YORK REPORT.

From our own Correspondent

NEW YORK, April 25th.

RECENT METHODS OF TREATING RETROFLEXION OF THE UTERUS.

The treatment of this important affection of the uterus during the last few years has undergone a complete revolution. The pessary seems to be on the eve of discardment, for one will see many cases of this displacement at the hospitals and clinics before he will have the opportunity of seeing a pessary introduced for the relief or cure of it.

The shortening of the round ligaments or Alexander's operation, and the more recent one of hysterroraphy have taken its place.

The main pathological lesion of retroflexion is now regarded as a lengthening or stretching of the round ligament which holds the uterus in its normal position of slight anteversion and anteflexion. If this view be correct it is obvious that the pessary can no longer be regarded as a curative measure, and some plan must be adopted which corrects the pathological lesion itself and thus at once effect a complete cure.

As to the correctness of this view there can now be but little doubt, for it has been demonstrated time and time again, both on the living subject and the cadaver, whereby from the simple process of shortening the round ligaments, the retroflexed uterus has been made to occupy its normal position.

Gynæcologists now believe, that in the operations of Alexander and hysterroraphy, they have at once found a rapid and rational method of cure.

To Prof. Polk is due the credit of having first performed and demonstrated the advantages of Alexander's operation in America. Hysterroraphy was first suggested by Marion Sims; Sänger of Leipsig advanced the technique of the operation to its present status, and finally Dr. Kelly of Philadelphia, gave it the name which it now bears. From different and varied sources the following appears to be the limitations of each operation. Alexander's operation is to be preferred in all those cases in which the uterus is retroflexed and can be readily replaced by the sound or fingers, and in which no adhesions are found to exist, if there are adhesions it is worse than useless. It can also be performed for retroflexion of the uterus accompanied by prolapse of the ovaries and prolapsus uteri.

Hysterroraphy is to be preferred in those cases where the uterus is bound down and adherent, and especially in those most intractable cases in which the retroflexion is accompanied by prolapse of the ovaries and tubes, and the whole adherent and matted together. In such cases the adhesions must first be separated, and then the uterus secured in position; if the tubes and ovaries are much diseased they had better be removed before the uterus is fixed.

In cases of prolapsus uteri the general opinion is that it is to be preferred to Alexander's.

The following is the method in which Professor Polk performs the Alexander's operation, and which your correspondent had the opportunity of seeing:

The patient is placed on the back, lower part of the abdomen is washed with soap and water, shaved, then douched with 1-2000 bichloride, and finally washed with ether. The incision Prof. Polk prefers is one just above the spine of the pubes, and extending for 1½ inches on either side of the median line; all the tissues are then carefully dissected with a scalpel, so that the external inguinal rings on both sides are displayed. Another method of making the incision is to start just above the spine of the pubes, and to run upwards and outwards parallel to Poupart's ligament to the extent of two inches on either side; this, however, necessitates two incisions, and has no advantage over the single one.

The external rings having been displayed, the round ligament is carefully sought for in the mass of fat occupying the opening of the ring, picked up with a pair of forceps and carefully drawn out to the extent of two inches on both sides. If the finger is now introduced into the vagina the uterus will be found to occupy its normal position. The ligaments are stitched with catgut to the edge of the external rings and pubes, and the superabundant two inches may be cut off with scissors, or else interlaced and stitched to the same portion of the opposite ligament. The wound is then irrigated with 1-2000 bichloride, a small drainage tube inserted, stiched with catgut and dressed with iodoform and Theirsch gauze.

Prof. Lusk performs hysterroraphy as follows:—

Patient is placed in the dorsal decubitus, abdomen carefully washed with soap and water and shaved. Then it is douched with 1-2000 bichloride and finally cleansed with ether to remove all oleaginous material. An incision is then made in the median line about two inches in length, just above the pubes, and the tissues carefully cut through until the peritoneum is reached. All hæmorrhage is then arrested with clamps, etc., the peritoneum picked up between two artery forceps and incised. The finger is then introduced into the peritoneal cavity and the position of the uterus made out. If there are no adhesions it is simply brought up to the abdominal wound, and a curved needle armed with silk is then passed through the broad ligament just external to the cornua, so as to include only the round ligament, (this point is not essential, as the round ligament may be secured at any point in the broad ligament and at a considerable distance from the uterus). The needle is then passed through the anterior abdominal wall at the side of the incision, just above the pubes, to the extent of one quarter inch in depth and then tied.

The other side is treated in a similar manner; thus we have the uterus firmly held upwards and forwards by the round ligaments being firmly fixed to the anterior abdominal wall. The peritoneum is then sewed up with medium-sized catgut, and the remaining tissues with silk, and the wound dressed antiseptically. If there are adhesions between the posterior surface of the uterus and the peritoneum, they are broken up with the finger; if the tubes and ovaries are found sufficiently diseased they are removed, the uterus secured as above and all hæmorrhage checked with hot water, (115°).

The peritoneal cavity is now sponged dry and closed. If, however, there is considerable oozing, a glass Bantock drainage-tube is inserted well down into the pouch of Douglas and left there for forty-eight hours, and the peritoneum and other tissues sewed up in the same manner. The glass tube is exhausted every one or two hours, as may be necessary, until the oozing has stopped, when it is removed.

Alexander's operation is the more popular, for the simple reason that it is extra-peritoneal and as devoid of danger as the simple operation of trachelloraphy. Hysterroraphy is attended with all the dangers of a laparotomy, and although these have been reduced to a minimum by the specialist, still it will be doubtless some time before the general practitioner performs it for simple retroflexion.

The interesting question has been raised that, should patients on whom these operations have been performed become pregnant and subsequently be delivered, what would be the position of the uterus after delivery? Alexander's operation has been performed on patients who subsequently were delivered of children, and the uterus was found to be in good position. As yet no such report has been made on a hysterroraphy case.

OUR LONDON LETTER.

To the Editor of the CANADA LANCET.

SIR,—I think that the discussion which took place at the meeting of the Royal Medical and Chirurgical Society on Tuesday evening last, may be of some interest to your readers, as it touched upon a point which, as far as I am aware, has not hitherto been suggested by any English writers, and has only been hinted at by one continental author, viz., the clinical significance of clay-colored stools, unaccompanied by jaundice, in their connection with diseases of the pancreas. Dr. T. J. Walker, the author of the paper read before the Society, just referred to the hitherto universally accepted view that the presence of clay-colored stools always indicated some disorder of the liver. He then cited two cases which he had had under observation through several years of their lives, and on which subsequently, necropsies had been made; in both of which large, greasy, clay-colored stools had been continuously passed for some years, and in which no symptoms of biliary derangement were present; on *post-mortem* examination both cases were found to have occlusion of the pancreatic duct accompanied by fatty degeneration of the pancreas. The liver and biliary apparatus in both cases were healthy.

From these cases he suggests the theory, that the formation of the coloring matter of the fæces, hydrobilirubin, depends not upon the bile alone but upon the mutual reaction of the bile and pancreatic juice upon each other in the intestinal canal.

Secondly, that a deficiency of pancreatic juice

will equally with a deficiency of bile, produce clay-colored stools. Thirdly, that, as hydrobilirubin is that part of the biliary products excreted in the fæces, and that as its formation depends on the pancreatic secretions, so the pancreas plays an important part in the excretion and absorption of bile in the intestinal canal.

Dr. Walker then pointed out that these views if accepted, would explain the hitherto inexplicable cases where there was no evidence of arrest of the bile secreting functions of the liver, and where no obstruction to the outflow was present, but when clay-colored stools persistently existed. It also served to explain, if accepted, the discrepancies between the clinical observations that certain drugs, calomel, for instance, produce bilious stools, and the physiological observations that these drugs have no influence on the secretion of bile by the liver. In the discussion which followed Dr. Harley drew attention to the fact that several well-authenticated cases of colorless bile had been reported, and that the cases reported might depend on this fact. Dr. Walker, moreover, pointed out, that at the necropsy, in both cases, ordinary bile was found in the gall bladder. Dr. Walker's paper certainly opens up a new field for clinical observation; but I think that two cases, however well marked, scarcely furnish sufficient foundation on which to base so radical a change in our views on the pathology of clay-colored stools. Still, an important point has been raised, which, I feel sure will be well worth receiving some attention at the hands of our Canadian practitioners.

R. Adam Walker.

34 Harrington Square, N. W.,
London, April, 10th, 1889.

Selected Articles.

COMPLETE OBSTRUCTION OF THE COLON SUCCESSFULLY RELIEVED BY USING SENN'S PLATES—A PROPOSED SUBSTITUTE OF CATGUT RINGS.

BY ROBERT ABBE, M.D.

It has been with pride and gratification that surgeons here and abroad have watched the zealous and tireless energy of our countryman, Dr. Nicholas Senn, in his experiments to determine the value of certain expedients in rendering safe and sure the repair of injuries of the intestines.

After reading the published account of his experiments detailed in the "Annals of Surgery" for the current year, I doubt not most of us felt convinced that an important help had been rendered to the understanding of the action of repair and the assistance we might advantageously give. Without making extravagant statements, Dr. Senn offered one device for use in the restoration of the intestinal canal when complete obstruction had occurred that, it may be hoped, will replace the tedious, difficult, and frequently fatal operation of circular enterorrhaphy—namely, the approximation plates of decalcified bone. Whether it be in chronic obstruction, from neoplasms or stricture of the bowel, or in acute injury of the

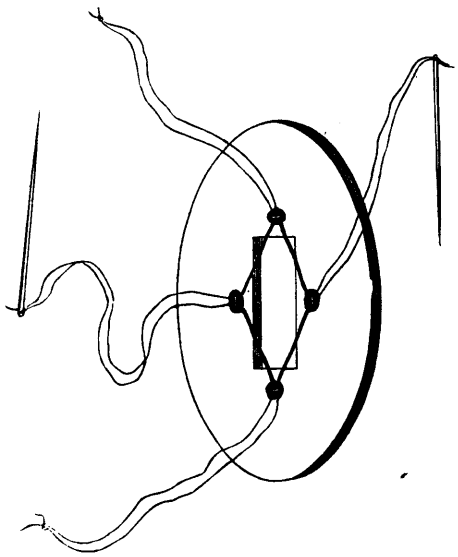

Fig. 1.—Senn's approximation plates.

intestines from laceration with its accompanying shock, the vital condition of the patient is never so good that one does not fear for the result, especially if the shock of an operation is added, which in most experienced hands, cannot be completed in less than from an hour and a half to two hours and a half.

We welcome, then, a method that with greater certainty and less shock completes, in from a quarter to a third of the time, the coaptation of openings made in the bowel on either side of the obstruction, and establishes a continuous intestinal canal. Such a work is accomplished by Senn's plates. The principle is not entirely new, but its successful application had not been demonstrated until his experiments upon dogs put it upon a working basis. How far it can be relied upon in man has yet to be proved.

The principle, briefly stated, is to substitute for the tedious stitching of the lips of two longitudinal

openings in adjacent portions of intestine a compression of those edges between two discs of bone placed within the bowel and tied tightly to each other, thus bringing about adhesion by approximation. The bone plates dissolve away in the course of time.

He found, in repeated circular suturing of the divided bowel in dogs, that a large proportion of them died from accidents to the sutures or from shock, while with approximation plates the results were uniformly safe, speedy and successful. The method appeals to one's mechanical sense, if I may so speak, as eminently rational.

The patient whose case I will now narrate illustrated strikingly the adaptability of this method to certain cases:

He was a man, sixty years of age, of large build, though not fat. He had always followed the sea.

In November, 1887, I operated on him for three large hæmorrhoids, which had followed an increasingly constipated habit resulting from his abandoning the sea and leading a more sedentary home life. For four months prior to this operation he had much abdominal distress, flatulence, and distension, which occasionally culminated in severe cramps, followed by offensive fæcal discharges and relief. Such attacks occurred about monthly.

The last attack produced severe syncope. He had a fair appetite, but a heavily coated tongue. Urine, 1·023; no albumin; no sugar.

A free purgation brought away large fæcal movements, and the abdomen became flaccid.

In April last, four months after the operation for hæmorrhoids, he returned to the medical service of St. Luke's Hospital. Masses of a solid nature could be felt through the abdominal wall, slightly raised and shifting position from time to time. No immovable or very hard masses could be distinguished. The lower portion of the abdomen was prominent while the upper was relatively flat. The superficial abdominal veins were enlarged. Glands could be discerned in the right groin. There was some œdema of the legs, with varicose veins. Up to the time of the operation for hæmorrhoids he had been having a movement of the bowels of fair size on alternate days. Of late this interval had increased to four or five days, and then a movement took place only after violent cathartics.

In spite of physic, he became restless, vomited, had foul breath, and grew weaker; the voice became very faint, and the abdomen showed dullness and resistance down the right side over the cæcum and colon.

Some days later a sharp colic was followed by a stool with some relief. Then, after the use of podophyllin for some days, he had large movements and felt well again, so that he was discharged cured in June last.

He was again admitted September 5th, in a worse state than before. He was treated by Dr. Kinnicutt for three weeks. The obstruction had become complete, and, though many of the severer purgatives were given, no movement was brought about except what was brought away by enemata. The abdomen was greatly distended and getting worse daily. Dull masses were felt in several

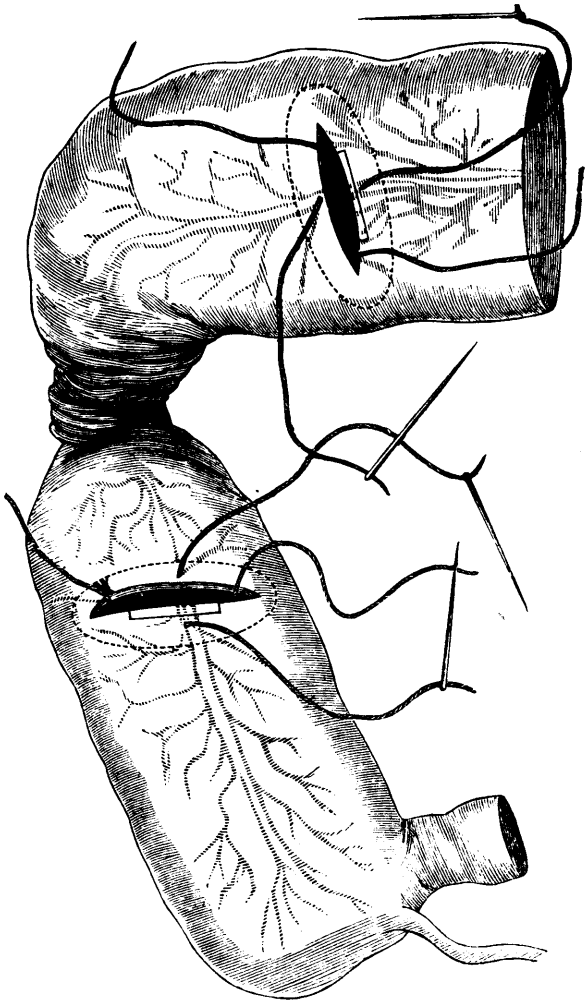

FIG. 2.—Senn's bone plates applied to colo-colostomy before tying together.

places. Intestinal colic was severe. He grew apathetic, lost appetite, and became sallow. His pulse grew weaker and prostration greater. Partial syncope occurred from time to time.

The obstruction had become absolute, and when he was transferred to my care he was wasted away in face and body, but presented a very large abdomen. A few hours before operation he suffered complete syncope from pain and exhaustion, and it was thought by some who saw him that he would scarcely endure transfer to the operating-room. Judging from his thready pulse, shallow

breathing, and complete exhaustion, it appeared to me that he could not have survived many hours without relief.

Under these circumstances, I opened the lower part of the abdomen, November 14, 1888, under cocaine anæsthesia, by a four-inch incision above the pubes, the patient seeming almost moribund, but feeling no pain. A pint of clear fluid escaped from the abdomen, and I found, on exploration with two fingers, an enormously distended intestine occupying the right half of the abdomen, which I judged to be not less than eight or ten inches in diameter, and which could be nothing else than the cæcum and ascending colon. Other coils of intestine within reach were distended to their utmost and felt semi-solid with fæces. None that I could touch seemed less than two inches and a half in diameter.

I at once decided to relieve the bowel through the wound, and therefore sutured the surface of the cæcum to the parietal peritonæum in the centre of the wound and closed the abdominal cavity by suturing the ends of the incision. Then passing two loops of heavier silk through the entire thickness of the presenting portion of gut, I cut between them a free opening, and by these loops dragged up the cut edge and held it firmly during the subsequent evacuation, and ultimately stitched it thereby to the skin. A torrent of liquid and solid fæces and gas continued to pour out of the opening for ten minutes or more. The stuff had mingled in it innumerable foreign articles, such as fish-bones, some of them an inch and a half long; cherry-pits, grape and melon seeds by the hundreds, and large fragments of bones of the size of one's finger nail; also scraps of oakum and yarn and some wood shavings and calculous masses. All of these were blackened by long residence in the bowel. I supposed these must have been swallowed to overcome constipation, but this he denies, and it must be supposed that they were swallowed in the ordinary habit of rapid eating.

As soon as the over-distension with gas and fluid had been relieved, the man began to rally from his shock. His deep breathing, restored pulse, brightened countenance, and lively interest in the procedure assured us of his recovery. A loose receptive dressing was applied, and fæces continued flowing for hours. A moderate estimate of the amount passed would be twenty-five or thirty pounds.

His convalescence was immediate and complete. His temperature record ran but little above normal. He soon began to eat ravenously, and in two weeks he had a manageable artificial anus through which he had two daily movements. A rectal enema was now given to locate the stricture. Three quarts of warm milk could be introduced, but none appeared at the wound. An enema-tube could be passed up to the left hypochondrium. By an injection downward through the artificial anus not more than three pints could be introduced; the inference was, therefore, inevitable that the obstruction was somewhere near the hepatic flexure of the colon. No hardness could be felt in the abdomen to locate the trouble.

Six weeks after this relief he was ready to have an operation done to overcome the stricture. On November 14th, having prepared him by preliminary catharsis and restricted fluid diet, I operated with the assistance of Dr. B. Farquhar Curtis. The artificial anus was closed by a plug, and rubber cloth secured over it by a broad adhesive strip. An incision was made in the right hypochondrium four inches and a half long parallel to and a hand's

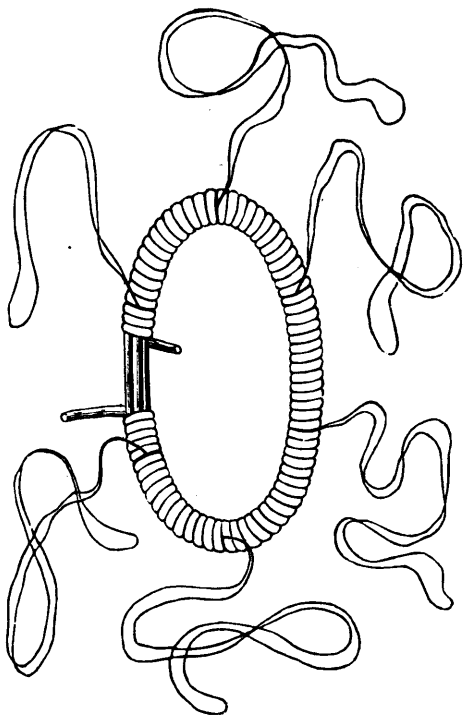

FIG. 3.—Apposition ring of catgut.

breadth from the median line. The ascending colon appeared and was traced down to the lower wound, thus identifying the site of the artificial anus in the caput coli. Tracing it upward, the obstruction was at once felt and seen. It was a hard mass, apparently a neoplasm, not larger than a small egg, which took in the whole circumference of the colon at its hepatic flexure. It was fixed in the loin so that it could not be raised. To have attempted its removal would without doubt have been fatal. I therefore brought together the ascending transverse colons, as they lay very naturally side by side, and selected a point favorable for junction about four inches from the stricture. I then surrounded the gut a short distance beyond

this by a strip of iodoform gauze passed through the mesentery and tied. A cut was then made an inch and a half long across one of the longitudinal bands of the colon, and into the bowel was slipped the bone plate, the needles holding the side sutures of silk piercing the entire wall of the gut at the longitudinal band. The same being repeated in the opposing gut, the parts were cleansed with boro-salicylic solution. The four sutures were then tied tightly and, as sugsested by Dr. Senn, about four additional Lembert sutures of fine silk were taken in the serous coat just outside of the edge under pressure between plates. The coaptation seemed quite perfect without these, but, as the surface of the colon was not absolutely smooth, I thought it best to take them. The parts were again cleansed and returned to the cavity and the abdomen was sutured.

The patient's recovery was uninterrupted by pain or fever. On the third day a little wind passed the bowel. On the eight a small piece of fæces of the size of a peanut escaped, greatly to the delight of the patient. Some fæces were allowed to come out of the artificial anus daily, but some came from the bowel also. On the tenth day a good, consistent movement took place *per rectum*—of small caliber, however. At two weeks a much better one occurred. The artificial anus was now completely plugged, and everything passed by the bowel. For the first month every movement but one was scrutinized for traces of the plates. That one was urgent, and the patient went to the water-closet unattended. Nothing has been seen of plates or threads. It is nearly eight weeks since the operation. The patient is already growing more fleshy than for years past, has good daily stools, and has been free from pain in his convalescence.

There remains yet a small fæcal fistula into the cæcum which can be plugged by a lead-pencil, the pad on which is changed twice each week, and from which nothing escapes as he walks about. I shall soon close this by dissecting it out, suturing the inverted edges, and dropping it back into the abdominal cavity.

I should have mentioned that before the recent operation, the patient had five per cent. of albumin in his urine, and it was specially desirable not to subject him to a long operation.

The bone plates that one can secure from the makers seem to be limited in size, so that an aperture between two intestines of an inch and a half is about the largest that can be obtained. While this may suffice for operations on the small intestine, it would seem desirable that the larger should have an aperture proportioned in some degree at least to its diameter to insure its not being blocked.

On endeavoring to obtain larger plates from Dr. Senn's instrument-maker, I found it took many days to prepare them, and that the largest scarcely made more of an opening than the smallest, while the disposition to warp and not coaptate so well seems to increase as the plate is made larger. It occurred to me that a ring might be composed of the heaviest catgut quite as absorbable and as firm as the softened bone. It can be made in a few minutes of any desired size, as shown in the cut, and thus are obviated the serious delays of sending to cities or special instrument-makers for the bone plates.

The preparation of decalcified bone plates involves two or three days' maceration in dilute 10-per-cent. hydrychloric acid, then washing half a day, and compressing between blotting pads with flat pieces of tin on either side until quite dry, which is a slow process at best. They warp if not tightly compressed. An oval opening has then to be cut or drilled in the plate, as well as openings for threads. Finally, threads have to be secured, by a scheme not easy to carry out, which connect each with the other.

If the plates are not at hand for use, the making of them would be a serious delay, and any effective substitute easily made will be welcome. The rings which I recommend for this purpose are made of the heaviest catgut softened in hot water until it ceases to twist upon itself. It is then formed in a ring of four strands on the ends of three fingers, and wound over and over with the same sized gut tightly applied. When completed, it is, as you see, stiff and flat, with no disposition to curl. The threads are quickly and simply adjusted around the ring and insure its making a firm pressure until it has dissolved in the bowel. The ring, if made to encircle the ends of four fingers, will be competent to establish a large opening in the colon. Such a ring will need more threads attached, and to this I can see no abjection. Six threads for the largest ring would give an intervening space of three-quarters of an inch. (See Fig. 3.) Each thread can be armed with its own needle, or a cambric needle threaded with a loop of silk can be used to pull each successive thread through the intestinal wall about a quarter of an inch from the margin of the opening. There is every advantage in thus giving each thread a secure hold on the margin. The elasticity of the ring, resuming somewhat its oval shape and holding the edges of the wound apart during healing, insures against two accidents which in experiments have occurred with plates: 1st, the partial closure of the orifice, and 2d, the blocking of the opening in the plate. This is directed to be made only five-eighths of an inch long by a sixth of an inch wide, though in one set furnished me it is three-quarters of an inch by a quarter of an inch—a size still too easily obstructed. In three of Senn's experimental cases this aperture was found to have been blocked by food or hair or a fragment of bone, which would not have occurred had a ring been used.

To prove the efficiency of this catgut apposition ring, I operated on January the first on a large dog. Having divided the gut and sutured the inverted ends to complete closure (thus imitating stenosis), I re-established the canal by lateral apposition with rings.

I inserted four additional Lembert sutures to re-enforce fixation. The dog continued as lively after this as if nothing had happened, ate well, and defecated often. Nine days later I etherized him and excised two feet of the bowel to include the operated part, and then reapplied plates after suturing the ends as before. The anastomosis was perfectly established and the rings had been dissolved away.

The intestine was pervious to water, but there occurred a matting together of adjacent coils that was reparative to an extreme degree. The involved parts were securely buried in the mass. On the proximal side the gut was distended to nearly twice its calibre, owing to the partial obstruction of the twisting coils, as well as to the smallness of the aperture. I confess to a little disappointment in finding such an amount of contortion of the gut, and think it might have been better had I laid the gut not side by side with ends together, but with ends looking in opposite ways. Then the peristalsis would have been in the same direction for both parts.

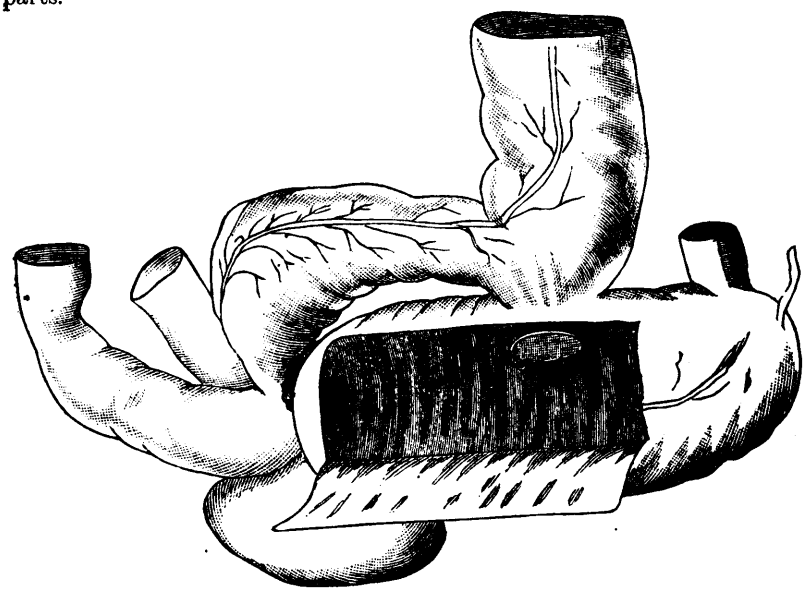

FIG. 4.

Nine days after the second use of the catgut apposition rings, the dog having enjoyed excellent health and defecated freely, I killed him, and found the second beautiful specimen, which I show here with the first. The anastomosis between the laterally apposed gut is perfect, the union very solid, the rings dissolved and gone. Two of the silk ligatures still clung to the edge of the orifice, but would soon have worked out as the others had. The function of the gut was therefore restored admirably by this simple and quick procedure.

The cementing of apposed serous surfaces by plastic exudation during the first six or eight hours is, as Senn has shown, sufficient to hold the parts together, but at forty-eight hours union is so firm that severe internal pressure will not part the wound. The scratching of apposed serous surfaces with a needle-point before approximation, while not essential, is, as he has shown, the best method of promoting speedy organic union between them. I resorted to this in the second experiment. Senn has recently put on record four successful cases of gastro-enterostomy by plates, done by him within a year past. He writes me that there are a few other instances of its application by Dr. Fenger, Dr. Hunter, and others, but these are, I believe, not on record. It is evidently a method that appeals to the practical surgeon, and will unquestionably find greater favor every day.

My experiments indicate that the apposition rings of catgut may prove a valuable substitute. They are quickly and easily made, readily applied, and have the advantage of encircling a much larger aperture than the bone plates. This last feature obviates the distrust one feels in a small aperture of anastomosis, which must inevitably contract somewhat as time goes on.

As advocated by Senn, a few Lembert sutures should be applied outside the plates. This rule applies to the use of the rings also, and by the combination the apposition is proof against internal pressure.

NOTE.—Just before the publication of this paper the patient died of a peculiar accident, and has given an early display of the efficacious work of the plates. More than three months after the operation he had reached the height of convalescence, having better health than for many years, his movements being regular and his appetite hearty. He was suddenly seized with a painless diarrhœa that baffled treatment. For three weeks he became emaciated with unusual rapidity, and died exhausted. The post-mortem examination (see Fig. 4) revealed an adhesion of the duodenum, four inches from the pylorus, to the small knot of cancerous stricture of the colon, and secondary ulceration through it; so that all food passed directly from the

duodenum into the colon, thus excluding the entire small intestine from its function. The artificial aperture shown in the cut still had the tangled threads attached firmly. The bone plates had long been dissolved away. The pelvis of the kidney was adherent to the hepatic flexure of the colon at the diseased point.—*N. Y. Med. Jour.*

ON THE MECHANISM OF THE CARDIAC BRUITS OF CHLOROSIS.

We have now to consider a murmur long familiar to clinicists, but of which a new interpretation has of comparatively recent years attracted attention. I refer to a systolic murmur heard in the second left interspace. The old belief is that such a murmur is formed in the pulmonary artery as a result of anæmia. Certain it is that such a murmur is of common occurrence in anæmic cases, that it is the predominant or only murmur present, and that it in no way indicates structural disease of the heart or its vessels. The new interpretation of this long familiar murmur is that it is really the murmur of mitral regurgitation, the incompetence resulting from impaired nutrition of the heart-muscle. Anatomically, we know that the appendix of the left auricle curves round the left side of the pulmonary artery to reach the front in the second left interspace. In cases of mitral stenosis in which great dilatation of the auricle had taken place we admitted that a systolic murmur was rarely to be heard over a pulsating area to the left of the sternum in the second interspace. But "in the absence of any great or well-marked auricular dilatation," such as one expects in mitral stenosis, it is alleged that a murmur audible in the second left interspace may own a mitral reflux origin. This view was set forth by Naunyn in 1868, and in confirmation of it he stated that the maximum intensity of the murmur was not over the pulmonary artery, but "an inch, or an inch and a half, or more, to the left of the left edge of the sternum," over the situation of the appendix of the left auricle. It seems to me that "an inch and a half, or more," is too far out for the situation of the appendix of the auricle, especially when it is dilated, and possibly partly covers the pulmonary artery. Dr. Balfour's statement seems to be more in accordance with anatomy, if the murmur is auricular, when he speaks of there being "a space between the stethoscope resting on the position of maximum intensity (of the murmur) and the left edge of the sternum equal to at least, the breadth of the tip of the middle finger." Granting, for the moment, that the maximum intensity of the murmur is outside the pulmonary artery, and therefore, presumably, over the auricular appendix, it has still to be associated with the familiar forms of mitral regurgitation, revealed by a systolic apex-murmur. It is alleged that when the ordinary apex-murmur exists, it is frequently accompanied by a similar murmur in the second left interspace, usually, however, of less intensity but occasionally of greater. We are next asked to believe that a reflux mitral murmur may be audible only in the second left interspace in the situation of the left auricular appendix, and finally, that the murmur which has so long been familiar to us as occurring in cases of anæmia, is not produced in the pulmonary artery, but is, in short, a murmur of mitral reflux mechanism, the incompetence of the valves depending on defective muscle-adaptation, the result of malnutrition of the cardiac substance.

Let us turn, for a moment, to the natural history of the old-fashioned murmur of anæmia, leaving the question of its precise position of maximum intensity out of consideration. Before the occurrence of this murmur, venous hum in the neck has usually been present; probably, in all cases. Again, after the development of the second left interspace murmur a similar murmur becomes audible over the aorta.

Finally, but only when the anæmia has reached a very high degree, a murmur is developed at the apex of the heart. On recovery, it is known that the abnormal soniferousness of the circulation disappears in exactly the reverse order when all the murmurs have been present. Thus the apex murmur first disappears, then the arotic murmur, next the murmur in the second left interspace, and finally the venous hum in the neck. This is the statement of clinical experience, although it must be admitted that there seems to be some other factor in the production of the murmurs in question than the mere degree or duration of the anæmia; for two cases of apparently equal severity may differ greatly in the readiness with which they develop murmurs.

I have chosen this place to make a few remarks on the causation of murmurs, without some ideas on which the interpretation of these signs would, of course, be impossible. The theory which of late years has received most acceptance is that originally advanced by Sir Dominic Corrigan, in 1829. He showed that "when an artery is pressed upon . . . . the motion of the blood in the artery immediately beyond the constricted part (looking from the heart) is no longer as before. A small stream is now rushing from a narrow orifice into a wider tube, and continuing its way through surrounding fluid. The rushing of the fluid is combined with a trembling of the artery, and the sensation to the sense of hearing is the "bruit de souffle." Till lately, Corrigan's views gained little ground, the friction theory which explained the production of murmur by friction "between the blood and the surface over which it passes" being generally received. In 1858, however, Corrigan's theory was again advanced by Chauveau of Lyons, who experimentally

proved that roughness of the surface over which the blood flowed would not account for murmur production. He confirmed Corrigan's theory, stating that the "bruit de souffle" is produced by the vibrations of the "veines fluides," which are always formed when the blood passes into a part of the circulatory apparatus actually or relatively dilated. We have here to do only with mitral murmurs, and for the obstructive kind of these the theory answers admirably, accounting well for the conduction of the presystolic and diastolic murmurs to the apex. In the case of the regurgitant mitral murmur, we can readily understand "veines fluides" being produced in the left auricle, but some additional explanation is needed to account for the transmission of the murmur to the apex. The late Dr. Hilton Fagge gave a most satisfactory one in the following words. Speaking of the experimental researches of Bergeon, he says: "One has only to provide the tube at the seat of constriction with a lip or rim projecting backward into the stream, and a second murmur is at once generated, which is heard behind the obstruction. A cul-de-sac is formed, and the fluid which occupies this receives the shock of the onward current, and is thrown into sonorous vibrations." He adds: "The incompetent valves project backward into the blood stream, exactly like the lip or rim employed by Bergeon."

To return now to the murmurs met with in anæmia, we have found that there may be (1) a continuous hum in the veins of the neck; (2) a systolic murmur heard in the second left intercostal space; (3) an aortic systolic murmur; and (4) an apical systolic murmur. They develop in the order mentioned, and disappear in the reverse order. How shall we interpret these murmurs? The venous hum is no doubt produced by the formation of "veines fluides," for, as Dr. Fagge wrote, "The lower ends of the jugular and subclavian veins on each side are adherent to the deep cervical fascia, and therefore cannot collapse, so that this venous ampulla, as it has been termed, affords the conditions necessary for the generation of 'veine fluide,' whenever the blood stream in the jugular vein above is narrowed, whether by simple adjustment of its calibre to the diminished volume of the blood in anæmia or by pressure of the stethoscope, or by both." With reference to the second left interspace murmur of anæmia, I have found its position of maximum intensity to correspond with the situation of the pulmonary artery rather than with that of the appendix auriculi, supposing the latter to approach the surface which it very seldom does, and I adhere to the old view, that the murmur is produced in the pulmonary artery. No doubt "veines fluides" are formed at or rather beyond the pulmonary orifice, as in the venous ampullæ at the root of the neck, although the mechanism of their formation is not very clear. If we evade the difficulty of the explanation by accepting the auricular regurgitant theory, we have still to reckon the aortic murmur, which it seems to me that the advocates of the auricular view of second left interspace murmur rather ignore. On the other hand, if we hold that the murmur is produced in the pulmonary artery by the formation of "veines fluides" the explanation is as applicable in the case of the aorta, as of the pulmonary artery. For some reason, however, the condition necessary for the formation of "veines fluides" arises in anæmia more readily in the pulmonary artery than in the aorta, but the two phenomena are no doubt essentially the same in kind. The apex-murmur must, I think, be placed in a different category. I believe it to be a murmur produced by mitral incompetence from muscle failure, and we must bear in mind how the anæmic state intensifies murmurs, even of organic origin. There can be no question of the fact that anæmia not unfrequently gives rise to very considerable dilatation of the heart. In explanation, it has been supposed that there is high arterial tension. This may be so in some cases, but in a larger number the blood tension is low. Even if high arterial tension did exist, it would not account for dilatation of the left ventricle, provided that this chamber was habitually able to complete its systole, and the mitral valves remained competent. On the other hand, we know that organic lesion of the mitral valves, rendering them incompetent, induces enlargement of the left ventricle, and the reason, of course, is that the intra-ventricular pressure is increased during diastole. With each contraction of the ventricle blood is driven backward into the auricle, as well as forward into the aorta, but if the circulation is to go on as before the lesion, the auricle must pass on to the ventricle the regurgitated blood, as well as its normal delivery. There must follow excess of intra-ventricular pressure during diastole, and consequently enlargement of the chamber. If, then, we regard the apex-murmur of anæmia as a mitral regurgitant murmur (and I think we are bound to do so), the significance of the murmur becomes immense, for not only do the dyspnœa on exertion, the palpitation, and the dropsy of the lower extremities characteristic of anæmia acquire a fresh interest, inasmuch as it is impossible to determine how far mitral reflux is a factor in their production, but we know by its presence that the condition which makes cardiac dilitation sooner or later inevitable is established. I plead, therefore, attention to the heart in anæmia, and I would urge the importance of rest in the treatment of all severe cases

Accentuation of the pulmonary second sound and tricuspid regurgitant murmur occur in cases of mitral regurgitation as in those of mitral obstruction, but as they present no special features,

I have not thought it necessary again to allude to them.—Dr. Graham Steele, M.R.C.P., in *Med. Chron.*

MEDICAL NOTES.

In a case of *post-hemiplegic chorea*, Prof. Bartholow directed five drops of the fluid extract of gelseminum *ter die.*

The long-continued *use of hot water* as a drink is injurious, bringing about atrophy of the gastric glands. (Prof. Bartholow.)

In the treatment of the *laryngeal complications of phthisis*, Prof. Da Costa advises the insufflation of iodoform or application of cocaine.

In the treatment of *fetid bronchitis*, Prof. Da Costa recommends full support, cod-liver oil, and carbolic acid, both by inhalation and internally.

Never give *mercury in syphilis* before secondary symptoms occur; you only mask these symptoms and are unable to ascertain the severity of the case. (Prof. Gross.)

In a case of *inflammation of the patellar bursa*, with accumulation of fluid, Prof. Gross tapped the sac by a trocar, removed the fluid and injected twenty drops of pure carbolic acid.

When ordinary remedial measures fail to arrest *hemorrhage of the lungs* in a reasonable time, Prof. Da Costa recommends sulphate of copper in $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ gr. doses, or tinct. matico, f℥ ss-j every four hours.

When using the alkaline treatment for *acute rheumatism*, during which anæmia or relapses are liable to occur, give quinine from the middle of the attack and during convalescence to obviate these conditions. (Prof. Da Costa.)

In the case of a lady having *pseudo-angina pectoris*, Prof. Bartholow directed the administration of trinitrin (nitro-glycerine); cut off alcohol and fat-forming foods from the diet, and also ordered liquor potassii arsenitis, gtt. ij. t. d.

For *after pains* of labor, Prof. Parvin advises, if treatment be necessary, the following:

℞ Opii pulv., ... gr. ss
Camphoræ, ... gr. j. M.
Ft. pil. j.
Sig.—Every hour till relieved.

In the treatment of *chronic alcoholism*, Prof. Bartholow says: For the disorders of digestion, morning vomiting, loss of appetite, accompanied by wakefulness and nervousness, the appropriate remedies are abstinence, careful alimentation, and such tonics as quinine, nux vomica, and the administration of bromide of potassium to procure quiet sleep. In the more chronic cases, where degenerative changes may be expected to have taken place, arsenic in small doses, hypophosphites and cod-liver oil are recommended, and should be given for several months. Chloride of gold and sodium or corrosive sublimate will retard changes taking place in the connective tissue, if given early enough.

As an application to *papular eruption of syphilis*, which is often prominent on the face, Prof. Gross directed the following on exposed parts of the body:—

℞. Hydrarg. oleat., 5 per cent., . ℥ j.
Ol. rosæ vel gelsemii, . . . gtt. j. M.

As a stimulating wash to *chancroids*, the following may be used:—

℞. Acid. tannic.,
Extract. opii aquos., . . āā gr. ij.
Cupri sulph., ... gr. $\frac{1}{8}$
Aquæ destillat., ... f ℥ j. M.
Sig.—Apply locally. (Prof. Gross.)

As a *covering for small wounds*, Prof. Forbes uses at the Jefferson clinic:—

℞. Olei ricini, ... ℥ iv.
Collodii, ... ℥ j.
Hydronaphthol, ... 10%. M.
Sig.—Apply locally.

For *secondary syphilis* in broken down subjects, Prof. Gross advises:—

℞. Pil. Hydrarg., ... gr. ij.
Quiniæ sulphat., ...
Ferri sulph. exsiccat., . āā gr. j.
Pulv. opii, ... gr. $\frac{1}{4}$ M.
Sig.—One to be taken after each meal.
—*Col. and Clin. Record.*

THE ETIOLOGY OF CRUPOUS PNEUMONIA.

In a paper read by Dr. Geo. M. Sternberg, on the above subject, before the Med. Soc. of the State of New York, he brought forward the following facts:—

Acute pneumonia is now considered by the best authorities as an acute specific disease, one in which there is something special in the inflammatory process. The object of the author is to bring forward the history of the experimental evidence which bears upon this view of the etiology of the disease. The microörganism of the disease is widely diffused and is probably not acquired by personal contact. The disease may occur, however, as an epidemic in prisons or barracks, in villages or in single houses, just as is the case with cholera or yellow fever. The cases may bear no special relation to each other, however, but simply have a relation to a common environment, like exposure to cold, alcohol, etc. The disease prevails over a wide area of the earth. Its direct transmission to those who are brought in contact

with it, as attendants upon the sick, is probably of very rare occurrence The specific microörganism is found in the buccal secretion of healthy individuals. It might be objected that this makes the argument concerning its pathogenic character untenable, but with our present knowledge this does not follow, for pus cocci, also the cocci of tetanus, are found among the healthy, but produce disease only under certain conditions. Traumatism is one of the essential factors to the production of this disease, the bacillus being also a component factor, and it is necessary that it be introduced into a favorable location, there being a wide difference in the susceptibility of the tissues to invasion. Other factors may be reflex vasomotor paralysis of a part of the lung, which enables the microbe to do its work, also many changes in the cocci themselves which may change their pathogenic activity.

The coccus of pneumonia was described in 1882 by Friedländer, and the same year by Leyden and Gunther. Matri published observations in 1883; and the same coccus was also found by him and others in different diseases. In 1882, Friedländer described the results of his experience with blood cultures, upon which the fact of the oval pneumococcus was established. Talamon also described to the Anatomical Society of Paris, in 1883, a few days after Friedländer's paper was read, a lanceolate coccus which he obtained from pneumonic exudate after death, or from blood drawn during life. He produced genuine lobar fibrinous pneumonia with pleuritic and pericardial complications with it in rabbits. This coccus is not identical with that which was discovered by Friedländer, but with one which was discovered by the reader from his own buccal secretions in 1880, and which was named by him *micrococus Pasteuri*. He inoculated rabbits with it at that time with fatal results, but did not discover that his coccus differed from that of Friedländer until 1885. Fränkel found that the coccus of saliva (M. Pasteuri) more frequently caused pneumonia than that which was obtained from rusty sputum.

Weichselbaum's *diplococcus pneumonia* is also found to be a more frequent cause of pneumonia than is that of Friedländer. Gamaleia concluded from extensive experiments in mice, and also from a review of the entire subject, that pneumonia is *usually* caused by the *micrococus Pasteuri*. The author believed that many reports concerning the micrococcus of Friedländer should be credited to the *micrococus Pasteuri*; for the two are entirely dissimilar as is shown by staining, Gram's method resulting in a discoloration of the former, but not of the latter.

Experiments which have been performed with the *micrococcus Pasteuri* upon dogs and sheep were also described. The disease which was produced in them was far less fatal than in mice, showing far less susceptibility to its virulence. In this respect pneumonia in dogs and sheep is similar to that disease in human beings. The probability is that in these higher animals the coccus does not invade the blood extensively. The author's early experiments, which were abundantly verified and published before those of the others mentioned, entitle him to the credit of the discovery of this microörganism.

Pulsating Pleurisy.—Forty-two cases of this extremely rare condition have been collected. It is almost invariably met with on the left side. In only three instances was the fluid on the right side. Empyema existed in all the cases with the exception of one, in which the fluid was serous. There was pyopneumothorax in five cases. Two groups may be recognized. (1) The intra-pleural pulsating pleurisy. (2) The pulsating empyema incessitatis, in which there is an external pulsating tumor. The latter condition occurred in twenty-five of the forty-two cases. The external tumor is usually single, but in five cases there were two, and in one case, three tumors. The perforation of the pleura usually occurs on the anterior aspect of the chest, from the second to sixth rib, sometimes close to the sternum. In three cases the tumor appeared posteriorly at the spine, at the angle of the scapula, and in the lumbar region. The pulsation in the intra-pleural cases is usually in the antero-lateral region of the affected side, and is only evident on palpation. Pulsating pleurisy usually occurs in cases where the fluid has existed for some time. Various explanations of the phenomena have been offered. Broadbent believed it to be due to adhesions between the layers of the pericardium, and between the pericardium and chest wall, but this explanation cannot hold good for those cases, which showed the non-existence of adhesions at the autopsy. Traube regarded the destruction of the costal pleura and paresis of the intercostal muscles as the conditions necessary for its occurrence. Bouveret, in a recent monograph, maintains that the pulsation is met with wherever the resistance of the thoracic wall is greatly reduced, or when the resistance on the part of the diaphragm is heightened, as by a deposition of a thick layer of fibrin. A certain degree of pressure is necessary, inasmuch as the pulsation will at once cease, when only a small quantity of fluid is removed. Comby believes that the pulsation only occurs when the lung is compressed, and adherent to the pericardium, thus allowing the cardiac movements to be communicated to the thoracic wall. Cases of pulsating pleurisy have been mistaken for aneurism, and the situation where the pulsation usually develops, renders the error pardonable. A fine hypodermic needle will readily make the differen-

tial diagnosis. The prognosis of this affection is not very favorable. Of the thirty-eight cases collected by Keepler, seventeen died. It must be remembered that most of these cases occurred before the days of safe operations upon the chest wall. Complete evacuation of the fluid with free and permanent drainage, meets the indications for treatment.—Prof. Osler, in the *Am. Jour. of Med. Science.*

ACUTE GONORRHŒA TREATED BY A NEW METHOD WITH SUCCESS.—H. J. had impure connection four days before he applied to me for relief. His symptoms were those of acute gonorrhœa, the disease having been considerably aggravated in consequence of his having been drinking heavily both before and since he contracted it. The yellowish-green discharge from the urethra was abundant, he suffered severely during micturition, and there was great tenderness along the whole course of the penile urethra. The night before he came to me he was obliged to rise five times to pass water. He had the disease seven years ago, and was then under treatment for about two months with a medical gentleman in this town, who gave him copaiba. The line of treatment adopted in this case was by the introduction into the urethra of medicated bougies, and the medicament consisted of sulphate of thallin of five per cent. strength.

Before introducing the bougie I made the patient micturate, in order to clear the urethra of discharge, and I then passed the bougie up to the ring, and directed him to hold the meatus quite close, so that none of the application could flow out as it melted. I kept him lying on his back for twenty minutes, at the end of which time I withdrew the spring and closed the meatus with cotton-wool. During the time the bougie was in the urethra he complained of smarting pain, but after I withdrew the spring he said the pain ceased entirely, and he expressed himself as feeling comfortable. He introduced one every evening after this, following carefully the directions I gave him; and on the third day after he had been with me he called to say he was quite cured, having no discharge of any kind, and no pain on passing water. The day following happened to be his busiest day in the week, as he had to work to 12 o'clock at night, and be on his feet the greater part of that time. In consequence of this he could not use his bougie that day at all, and on the next morning there was a slight return of the former symptoms; but he began anew his treatment, and after using two more bougies, was again perfectly cured. He has remained so since, although he has undergone the heavy day of the week which caused him to relapse before, and this time with impunity. No bad after-effects of any sort resulted from the treatment.—Dr. McCaw in *Dub. Jour. Med. Sci.*

JABORANDI IN ERYSIPELAS.—The treatment of erysipelas by jaborandi leaves nothing to be desired. Jaborandi is as much of a specific as quinia in malaria. I have tried it in three cases this winter, all of them severe. In one complicated with implication of the buccal and naso-pharyngeal mucous membrane in a pregnant female, where abortion was threatened, its effects were prompt, and the reduction of the temperature and all alarming symptoms immediate. In this case, its alkaloid were given hypodermically with morphia.

I also used it in a case of puerperal peritonitis, where I had reason to believe that erysipelas was the infective principle. The temperature came down very slowly, but the typhoid symptoms were improved immediately. The slow fall of the temperature I attributed to the excessive pelvic exudation, which bulged the posterior wall of the vagina, and pressed the upper part of the rectum firmly against the sacrum. I know the exudation was peritoneal, because in the sitting posture there was dulness and the impulse of fluid given to the hand in the lower part of the abdomen, above being tympanitic, and the dulness changing with posture. It was a primipara, with no history of ascites or œdema previous to her confinement.

Her attendant, a very intelligent practitioner, informed me that there was no fluid to be detected during, or shortly after, her delivery, except what was contained in the uterus.

Of course jaborandi was not the only drug used in this case; morphia, whisky, digatilis, turpentine stupes, hot vaginal injections, and abundance of milk made up the treatment.

I visited her yesterday, March 11, three weeks after her confinement and sixteen days from her first illness, and find all trace of exudation gone, but some tenderness about one of the broad ligaments yet. She is only taking a general tonic now (iron, quinina and strych.) and will soon be able to do her work.—A. G. Osterman, M.D., in *Phila. Med. Times.*

A STUDY OF ANEURISM.—In view of theories as to the causation and origin of aneurisms the clear statement of facts by Dr. Hermann M. Biggs in the *Am. Med. Jour. of the Med. Sciences* in his observations on aortic aneurism is particularly valuable. From an examination of thirty-four cases which came up in a period of eighteen months, he found that this pathological condition is more common than is generally supposed. The general condition as to age, sex and position of aortic aneurism (at the point of greatest strain) agreed with former statistics, but in only five could a syphilitic history be found and only six were alcoholic. In the 28 cases of thoracic aneurism, only 11 had shown a history suggestive of aneurism.

Death was generally instantaneous, in a few cases hæmoptysis had occurred a few days before, simulating lung trouble. Death occurred not only after exertion but at times during sleep. In 17 of these 28 cases, there had been no symptoms in life marked enough to attract the attention of the patient or to cause them to consult a physician.

The author thinks that too much emphasis has been laid on endarteritis and atheroma as a cause of aneurism. This however, seems very natural judging from former post-mortem examinations. Pathologists agree that it is in the middle or strongest coat of the artery that the first changes may be noticed and the dilatation of the vessel may be gradual or sudden as after a sudden and violent exertion. Syphilis seems to be the most active agent in producing aneurism and this, of course, accounts for the good effects of the iodides. From an examination of the cases Dr. Biggs concludes:—

1. That aortic aneurisms are more frequent than is usually supposed.

2. That rupture of aortic aneurisms and rupture of the aorta together form one of the most frequent causes of sudden death occurring without previous symptoms.

3. That very frequently indeed aortic aneurisms give no signs of their existence, or at least, very indefinite ones until rupture occurs.

4. That the comparative frequency of rupture of aortic aneurism as a cause of death has largely escaped notice, because in this country this class of cases does not often come under observation on the post-mortem table. Death occurs suddenly without previous symptoms, and, without an autopsy, is charged to heart disease or cerebral apoplexy.

5. That syphilis forms a larger and, perhaps, the largest factor in the production of aneurism of the aorta. This disease of the middle coat is perhaps often secondary to disease of the vasa-vasorum.

6. That when dilatation of the aorta occurs, in the larger proportion of cases it follows disease of the middle coat, which is in the nature of a degeneration, and not an inflammation.—*Maryland Med. Jour.*

LARGE DOSES OF CALOMEL IN PNEUMONIA AND CROUP.—In the winter of 1885 and 1886, I was led by an editorial in *The Medical Record*, to try large doses of calomel in croupous pneumonia. The results were so good that I have continued to use it, the number of my cases being now about twenty. All were in the stage of exudation, with high or rising temperature. In age they ranged from eight to over sixty-years. In severity from cases which would have recovered under any treatment, to those that I considered desperate. In every case there was immediate improvement in temperature, respiration, and heart's action, subsidence of the disease in twenty-four hours, and, with one exception, rapid recovery, little or no stimulating or medication being needed. The exception was under most unfavorable surroundings, but was apparently convalescing, when purpura hemorrhagica set in, and the patient died from nasal hemorrhage. My usual and smallest dose was twenty grains every three hours, in most cases continued twenty-four hours. In one case, which I believed would be fatal, the patient took an initial dose of sixty grains, and thirty grains every three hours, until she had taken three hundred and sixty grains. There was no ptyalism in any case, and but moderate catharsis. One of the most remarkable features in every case was the rapid improvement in the heart's action.

I tried the same plan in three cases which I diagnosed as membranous croup. In two, the diagnosis was confirmed by expectoration of shreds of false membrane. In one of these, patches of exudation were visible. In the third, an infant of nine months, I was unable to confirm the diagnosis.

All were reported as improving in breathing before the second dose, and all made a rapid recovery. I gave to an infant eighty grains in ten-grain doses; to a boy aged six years, one hundred and sixty grains, in twenty grain doses; and to a boy of twelve years, only eighteen grains, in four doses. I never before had three consecutive recoveries from croup.

These few cases are not enough alone to prove the utility of the remedy, but at least they have convinced me that I can safely give, in similar conditions, doses that a few years ago I should have thought reckless.—Dr. Strong in *Med. Rec.*

THE ACID PRINCIPLE OF THE GASTRIC JUICE.—Dr. V. Poulett has conducted a series of experiments with a view to obtain a better knowledge of the gastric juice. His conclusions are given as follows, by the Paris correspondent of the *Therap. Gaz.*

1. The gastric juice of adult omnivorous animals, healthy man, for instance, contains in the first part of digestion hippuric acid alone. Near the end of digestion tartaric acid also makes its appearance. As an exception the two acids may be found, in dyspeptic subjects, present together, from the beginning of the digestive process. 2. The stomachs of all young animals before weaning, contain almost no other acid than tartaric. 3. All adult carnivora, dogs included, have free tartaric acid in their stomachs. Hence dogs should not be chosen for comparative gastric juice investigations and experiments; but pigs should be preferred, owing to the similarity of their dental and digestive system. 4. The gastric juice of man, sick or well, never was found, in the experiments tried, to contain lactic or sarcolactic acid; the

same was true of animals. 5. Hippuric acid extracted from the gastric juice possesses all the chemical properties of the same acid found in the urine of herbivorous animals. But tartaric acid of like origin somewhat differs from the vegetable acid. It will, for instance, effervesce with sulphuric acid, when heated, and present otherwise some of the racemic acid (para-tartaric) characteristics. 6. The behavior of dyalyzed gastric juice with colored re-agents is not at all that of free muriatic acid, but that of hippuric and tartaric acid or their acid salts. 7. The intestinal secretion helping to complete the digestive process is invariably acid, and is rendered so by a tartaric acid of the variety already noticed.—*Cincinnati Lancet-Clinic.*

THE DREAD OF DEATH.—Sir Lyon Playfair, in a letter to Junius Henri Browne, author of a paper in the New York *Forum*, under the above title, says: "Having represented a large medical constituency (the University of Edinburgh) for seventeen years as a member of Parliament, I naturally came in contact with the most eminent men in England. I have put the question to most of them, 'Did you, in your extensive practice, ever know a patient who was afraid to die?' With two exceptions, they answered, 'No.' One of these exceptions was Sir Benjamin Brodie, who said he had seen one case. The other was Sir Robert Christison, who had seen one case—that of a young girl of bad character who had a sudden accident. I have known three friends who were partially devoured by wild beasts under apparently hopeless circumstances of escape. The first was Livingstone, the great African traveller, who was knocked on his back by a lion, which began to munch his arm. He assured me that he felt no fear or pain, and that his only feeling was one of intense curosity as to which part of his body the lion would take next. The next was a Rustem Pasha, now Turkish Ambassador in London. A bear attacked him and tore off part of his hand and part of his arm and shoulder. He, also, assured me that he had neither pain nor fear, but that he felt excessively angry because the bear grunted with so much satisfaction in muching him. The third case is that of Sir Edward Bradford, an Indian officer, now occupying a high position in the Indian Office. He was seized in a solitary place by a tiger, which held him firmly behind his shoulders with one paw, and then deliberately devoured the whole of his arm, beginning at the end and ending at the shoulder. He was positive that he had no sensation of fear, and thinks that he felt a little pain when the fangs went through his hand, but is certain that he felt none during the munching of his arm."—*Scientific American.*

MALE STERILITY AND GYNÆCOLOGY.—Dr. Fürbringer, of Berlin, has written some important observations on this in the *Deutsche Med. Wochenschrift.* He believes that sterility in the male is far more frequently the cause of barren marriages than is generally believed to be the case. Aspermatismus is associated with complete impotence, but azoospermia, or absence of spermatozoa in the semen, a condition by no means rare, may exist with perfect potency, and on that account is very easily overlooked. With few exceptions, azoospermia is caused by obliteration of part of the seminal ducts. This condition is generally caused by double gonorrhœal epididymitis, or inflammation of the vas. After that malady, the chances are, Dr. Fürbringer has calculated, nine to one that azoospermia will follow. Prognosis appears to be hopeless when the condition in question is not discovered till three or four months after the onset of the local inflammation. The chief importance of the manage ment of the case lies in accurate diagnosis. True aspermatism is traced by Dr. Fürbringer to arrested developement of the ejaculutory ducts. He declares that in several cases of sterile mar riages under his own observation the unfortunate wife had been sent from physician to physician, or from hospital to hospital, and her cervix divided or her endometrium scraped, until a glance at the microscope proved that nothing was wanting to ensure the blessing of children, excepting spermatozoa. Dr. Fürbringer's observations are worthy of consideration. No doubt the increase of temperance involves the relatively greater frequency of those forms of gonorrhœa where the early symptoms are very mild. Hence the first stages may now be as much neglected by patients as they have ever been wont to neglect later stages. The more a case of gonorrhœa is neglected, the greater will be the chance of serious secondary complications.—*Bri. Med. Jour*

THE TUBERCLE BACILLUS.—A French contemporary gives a vivid description of the vitality of the bacillus of tubercle. Of all mico-organisms it is one of the most refractory to the action of the most destructive agencies. It maintains its virulence after lying for forty days in putrid sputum, and for 186 days away from contract with air. It can live at temperatures between 86° and 104° F. The most unfavorable conditions, though affecting its activity, do not compromise its existence, for it resumes its virulence whenever its surroundings become suitable. To render it inactive it is necessary to have recourse to violent means, such as ebullition, steaming, or prolonged contact with antiseptic substances, such as ammonia, concentrated salicylic acid, abolute alcohol, or a strong solution of carbolic acid. Corrosive sublimate itself is said to be powerless to disinfect the sputum. The bacillus acclimatizes itself amid the most unfavorable surroundings. It complies

with the exigencies of its condition, and even alters its shape, but without losing any of its virulence, of which it gives ample evidence whenever fortune favors it. Its polymorphism is not the least curious point in the life-history of this organism. Thus it is sometimes a short rod, sometimes a line —occasionally it splits and forms spores—but it always returns to the bacillus in its complete form, with its virulence intact, whenever circumstances become favorable. "It knows how to suffer, but it never loses sight of its claims."—*Cincinnati Lancet-Clinic.*

BROMIDIA AS A HYPNOTIC.—The success which this drug has achieved in France is somewhat remarkable. The French as a nation are remarkably conservative in everything save their politics, adhering tenaciously to the ideas and objects with which they are familiar, and regarding with corresponding suspicion all novelties and innovations, especially those coming from abroad. Hence it is that the materia medica of France has not marched *pari passu* with that of its neighbors The bromidia (Battle) at once attracted the attention of French physicians, and their experience with it so developed their confidence in it as a prompt, reliable and harmless hypnotic that, in utter disregard of all that they had been taught and believed respecting the danger and unreliability of alien products, they promptly accorded it a place in their repertoire of remedial agents, and are now using it as freely as any medicinal preparation included in the Codex. In no other country, in fact, does it enjoy a larger measure of popularity than in France, and so great is the demand for it that it has been found necessary to manufacture it here in large quantities, in an establishment especially arranged and orgaznied for that purpose.

To those familiar with the use of bromidia (Battle) no argument like this is necessary, for it speaks for itself by fulfilling the indications for which it is administered with a certainty, efficiency and harmlessness which elicit at once the delight of the prescriber, and give to the profession the assurance of possessing one remedy, at least, which approximates so near to infallibility of action as to justify the title of *specific.—Medical Press and Circular.*

ELECTROLYSIS IN STRICTURE.

(OPEN LETTER TO DR. NEWMAN.)

THROUGH THE EDITOR OF THE MEDICAL RECORD TO

DR. ROBERT NEWMAN.

SIR: In the recent discussion as to the merits of electrolysis in the radical cure of urethral stricture, it is possible that the failures of Professor Keyes may be attributed to faulty methods, while your own failure, in the case reported by Professor Keyes, is only conclusive as a single case.

It seems to us to be a comparatively easy matter to settle the disputed point (as you are aware, one of the greatest interest to the whole surgical world); *i.e.*, whether electrolysis is of any value whatsoever in the treatment of organic urethral stricture.

We would, therefore, be pleased to provide ten patients, subjects of organic stricture, as determined by a committee of competent surgeons, with a request that you will choose five from this number, and demonstrate the advantages of your method upon them. In the meantime we shall be glad to treat the remaining five by dilating urethrotomy. After treatment, we would request that there be no instrumental interference, of any kind, for a period of at least one month, when they shall be re-examined by the original examiners, and the condition of their urethras reported on, said report to be sent to every medical journal in the United States, and, as far as possible abroad, with a request for publication.

Feeling you will kindly accept this proposition to vindicate the merits of your methods, we remain,

Sincerely yours,

GEORGE E. BREWER, M.D.
WILLIAM K. OTIS, M.D.

VANDERBILT CLINIC, GENITO-URINARY DIVISION,
NEW YORK, February 6, 1889.

PHYSIOLOGICAL ACTION OF SULPHONAL.—(1) It does not effect the irritability of the motor nerves.

(2) It does not alter the muscle curve.

(3) The sensory nerves are left intact.

(4) It depresses reflex activity mainly by an action on Setschenaw's centres, occasionally it exalts reflex excitability.

(5) It acts as a narcotic.

(6) The pulse is usually somewhat accelerated.

(7) The arterial tension, after a temporary fall, is considerably increased.

(8) Respiration is depressed, section of the vagi does not alter the effect.

These facts lead me to believe that sulphonal will replace choral to a considerable extent. The well known dangerous action of chloral as to heart and respiration is avoided with this drug, and if the narcotic effects are equal, sulphonal should have the preference. Whilst I have seen the heart paralyzed by the drug in a few minutes, yet it was due to the sudden action of the drug by the jugular and perhaps partly to some of the drug being thrown down on account of its insolubility, for the solution was somewhat warmer than the temperature of the blood.—Dr. Shick in *Jour. Nervous. and Mental Disease.*

CANADIAN MEDICAL ASSOCIATION.

The twenty-second annual meeting of the Canadian Medical Association will be held at Banff, N. W. T., on the 12th, 13th and 14th of August next. The Canadian Pacific Railway Company has agreed to carry members and delegates with their wives or members of their families at the following rates: From points in Ontario or Quebec, to Banff, and return at $95.00 each, including a double berth in sleeping-car for each person, and meals in the dining-cars on the way west from Montreal or Toronto and back, and four days living at the Banff Hotel. The passage tickets will be made good from and to any points on the Canadian Pacific Railway, in either Ontario or Quebec, to Montrael or Toronto, but berths and meals will begin at these two places only. From other points in the Dominion the rates will be as follows: From Halifax to Banff and return $110, from St. John, N. B., to Banff and return, $100, but the tickets from these points will not include sleeping-car accommodation nor meals east of Montreal, in either direction. From Port Arthur to Banff and return, the rate will be $60; from Winnipeg or Brandon $50.; from Regina, $35, including meals and berths from all these points. From Calgary, the rate will be $4.50, without meals or berths. From Victoria and Vancouver to Banff and return, including meals in dining-car and double berth, in both directions, $30. exclusive of hotel accommodation at Banff, or $40, including four days hotel accommodation at Banff.

Owing to the provisions of the Interstate Commerce Law, it will be impossible to get reduced rates from points in the United States, with the exception of St. Paul, Min., from which the following rate is offered: $60, to Banff and return, including meals and sleeping-car accommodation between Winnipeg and Banff only. Delegates from the United States, are therefore requested to make their own arrangements between their homes and Montreal, Toronto, St. Thomas or other points on the C. P. R. An effort is also being made to secure special rates from Liverpool to Montreal by the Canadian Steamship Lines, for trans-atlantic delegates,

It is intended that the party shall leave Montreal on the evening of the 6th of August, by the regular Pacific Express, and arrive in Winnipeg on the 9th, and stop over one day there, leaving Winnipeg on the 10th of August, they will arrive at Banff early on the morning of Monday, August 12th. The meeting of the Association will then be held in the hotel (*accommodation being provided by the C. P. R. Co.,*) on the 12th, 13th and 14th, after which the members of the party can either return at their convenience or take a trip to the coast, leaving early the following morning (August, 16th), for which special terms have been arranged as follows: From Banff to Victoria and return, not including meals or berths, $20, or $30, including meals in the dining-car, and berths. The tickets for this excursion will be on sale at Banff, to members and delegates and their families only.

The Special Ticket issued by the C. P. R. to Banff and return will be good for 60 days, and the holders will be allowed to stop over, privileges on the Canadian Pacific Line in either direction at pleasure. They will also be exchangeable at Port Arthur and Owen Sound, so as to enable members to travel in either direction by steamer, between these points. Meal and berth coupons will be issued in connection with these tickets, and will be available as part payment of expense of any who wish to make additional stops, and spend longer time on the line. It is considered desirable, however, by the Executive Officers of the Association, that as far as possible, the party should travel together by the all rail route as far as Banff, so that all may be present at the opening of the meeting.

In addition to the members of the Canadian Medical Association, to whom this circular is especially addressed, a cordial invitation is here by extended to all members of the regular profession, in good standing, in the Dominion of Canada, the United States and Great Britain, to whom the necessary certificates will be sent on application to the Secretary.

Members and delegates are requested to notify the Secretary of the points on the C. P. R., from which they intend to start at a sufficiently early date to enable the railway company to forward special tickets to the aforesaid points. It will also be necessary to present a certificate from the General Provincial Secretary to enable members or delegates to secure the above mentioned special tickets. Members who intend to present papers at this meeting are requested to inform the Secretary at as early a date as possible of the subjects which they propose to bring forward.

GEO. ROSS, M.D., *President.*

JAMES BELL, M.D., 53 Union Ave. *Gen. Sec.*

SUPPOSITORY FOR CYSTITIS (Reliquet):—

R.—Iodoform.	0 gr. 10 cent.
Ext. of hyoscyamus . .	0 gr. 07 cent.
Cocoa butter	3 grammes.

Make into a suppository, and introduce into the rectum in cases of cystitis; morning and evening thorough irrigation with luke-warm water. If there is any urethral secretion, take, morning and evening, a pill containing tea cetigrammes of terpine.—*Jour. de Méd.*

YELLOW fever is epidimic at Rio Janiero.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science

Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* DR. C. SHEARD, 320 Jarvis St., Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & CO., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, MAY, 1889.

The LANCET *has the largest circulation of any Medical Journal in Canada.*

IS A SIX MONTHS' SESSION NOT QUITE LONG ENOUGH, FOR BOTH PROFESSORS AND STUDENTS, IN THE MEDICAL COLLEGES?

In all the British as well as in all the Canadian Medical Schools and Colleges, the winter session is practically of six months' duration. The Lectures begin October 1st each year, and go on steadily with the much-needed interruption of about two-and-a-half weeks of Christmas holidays.

The Council requires every student to attend four such sessions. During the first, the primary branches are studied. During the remaining two the final work has to be mastered.

The six months' session, without any crowding whatever, admits of full courses of one hundred lectures being delivered on every main subject, primary and final. There is besides this, the practical work, primary and final, at the Colleges, and at the hospital, for every man attending. The work of each day is so arranged as to be over by six o'clock in the evening or thereabouts; this leaves the student his evenings, which, if wise, he will spend largely in study—going over the work done during the day at the college and the hospital. As far as exercise is concerned he has had all he needs for the day in the college gymnasium, or in his walks from his boarding-house to and from the college and the hospital.

In this there is manifestly *no excessive*, but only *regular* work. The student finds his time fully and profitably employed, and if a good, faithful worker, he is not tempted to waste his valuable time by having too little daily work assigned him.

In a short address recently delivered at the special Convocation for conferring medical degrees at the University of Toronto, Dr. T. Aikins suggested that the present six months' sessions were far too short, and that they should be of nine months' duration, so as to give full time for the getting up of the work, and to do away with the need for "cramming" for examinations as at present. He said that in order to do this "cramming," the students drop out of their classes in the middle of February.

Now we submit that to make the sessions last for nine months would be to all concerned unendurable. If the professors and students who work really hard for six months, had to go on for half as long again, most of them would simply break down. But it may be said that "with a longer session, the same amount of work done, would be easier for all parties, because spread over a much longer time." The reply which would suggest itself to nearly all practical students and teachers is this, and to our minds it appears unanswerable. Good lectures, regularly delivered, are far more interesting and useful to those who attend them, when the interval between them is not made needlessly long. At present it is quite easy within the six months, with only five lectures a week, on each main branch, to complete the required hundred, the number laid down in Great Britain and in Canada, and which, if ably and honestly given, ensures a good course. If the course were spread over nine months, the lectures being much further apart, would lose their interest for the student to a large extent, and having fewer lectures to attend in a given time, would in nineteen cases out of twenty, lead the members of the classes not to devote more time to reading, but to be more idle, because with lectures few and far between, there would be no longer any necessity for steady work. And when the nine months' session would be drawing to its close, its advocates would find out that there was just as much and even more cramming done than at present, to make up for the easy-going, low-pressure style of teachers and students, who had dawdled for *nine* months through work which is

now far better, and much more impressively got over in *six*.

We take exception also, to the statement being generally correct, that students "drop out of their classes in February to cram for examinations." We are familiar with a good many classes in several colleges where this is not at all the case—where contrariwise, the attendance continues large to the very last lecture. We believe this to be the case in Trinity Medical College, in the Royal at Kingston, at McGill in Montreal, and in London. Another point struck us as very peculiar in the remarks we have referred to, viz., that the speaker urged the Hon. the Minister of Education and the President of University College to bring all possible pressure to bear on the Medical Council to have that body lengthen the session as suggested. The Hon. Dr. Ross, as well as the worthy President, are too wise men not to see how awkward a position they would occupy in trying to carry out this suggestion. The Medical Council being composed exclusively of medical men and medical teachers fully capable of judging what it is best and most judicious to do in a matter so peculiarly within the special sphere assigned to it by the Legislature. The Council has done very well in the past, and we have full faith in it for the future. To make a summer session of, say, ten or twelve weeks duration compulsory, might be a wise step on the part of the Medical Council, and were this done, some of the minor subjects might be taught during the summer, and thus leave more time during the winter to be devoted to work such as practical anatomy, which can be prosecuted to advantage in the winter months only.

OUR ICE SUPPLY.

The immense importance of the exclusion from food of all possible germs of disease is a matter which has been agitating the mind of the profession ever since clear ideas of disease germs have been advanced. Latterly, as the laity has become more or less enlightened on the subject, and have gained somewhat intelligent ideas regarding the mode of transmission of communicable diseases, great interest has been shown in the prevention of the advent of disease whether by food, water or whatever agent has been supposed active in its diffusion. In all centres of population, not to mention rural districts, very rigorous measures have been adopted in this direction, with the result, that disease and suffering have certainly been lessened, and much wealth saved to the country. If there be one thing, more than another, which characterizes the highest civilization of the present age, and may be universally looked upon as the measure of the civilization of any given community, it is the means adopted by governments, whether municipal or general, to protect the lives and health of the populations living under their jurisdiction. True, large sums of money are annually spent to maintain the necessary machinery by which this safety is procured, but with what true economy such sums are spent, must be patent to every one.

The spread of such diseases as scarlet fever, measles, etc., by communication between persons suffering from such diseases and those who are healthy is evident to the most ignorant; but the more insidious, though equally dangerous agent, water, is not looked upon by the uninitiated with the suspicion its importance as a means of carrying disease and death entitles it to. Our milk, meat, bread and vegetables are inspected with some degree of care in all urban localities, and it may be said that, thanks to the agitation of our Boards of Health, led by medical men, the question of pure water is the sanitary question of the day. Here in Toronto, a city noted among Canadian cities for its progression in all modern ideas of sanitation, we have had "water-works" *ad nauseam*, and it is only in the near past that the question of our immediate future supply has been definitely settled, after infinite trouble and great expense, and by the aid of experts from the United States. But as we have intimated, no amount of trouble or expense can be considered too great, in effecting the perfection of our arrangements for a full and free supply of water, of known and undoubted purity; and true economy points in the direction of making the most supreme effort, if necessary, for the consummation of this most important end. All this machinery and expenditure in the matter of quarantine, food inspection, water supply, are certainly in the right direction, but there is one important article of food which we are of opinion is answerable for a very considerable share of the disease of our cities and towns,

viz., *ice*. In a climate such as we have in Canada, with its almost tropical summer heats, ice is a necessary and almost universal article of food, and is very largely used in the preservation by cooling of various articles of food. An idea has been prevalent until very lately, that the process of freezing water purified it. That idea is now known to be erroneous, very many pathogenic organisms having been demonstrated as unimpaired in their vitality and power for harm, by degrees of frost far lower than the freezing point. So that all idea of safety by the intervention of nature in this direction may be put aside as untenable, and we may look for and confidently expect to find in many cases, the deadly disease-germ lurking in even the purest-looking block of ice our dealers leave on our door-steps on a summer's morning. At a late meeting of the Provincial Board of Health the following questions were submitted to the meeting:—

1. "Is the ice used in the city a source of danger"? The answer was "yes."
2. "Should it be used in Hospitals"? "No."
3. "How far can it be said to effect the general health"? "Its use is attended with danger."

Now the above being established, and no one can gainsay it either as regards Toronto or most other Canadian cities and towns, it seems an unheard of anomaly that we should spend so much money in the warding off of disease by the inspection of meat, milk, vegetables, and in procuring a pure supply of water, and yet allow ice to be supplied, of the purity of which we have practically no guarantee whatever. A want of space prevents our writing anything further in this number; but we shall, in our next issue, deal with the practical side of the question and undertake to show how the present most unsatisfactory state of affairs may be remedied.

THE NEW TREATMENT OF LOCOMOTOR ATAXY.

In our last issue we gave a selection from the *Lancet* on the mechanical treatment of Tabes Dorsalis, which has no doubt been noted by all our readers. The question is so full of interest both from a scientific and clinical point of view, that we make this short note of later developments in this novel method of treatment. Not only tabes but Fredreich's disease, paralysis agitans and various forms of chronic nerve-degeneration are now being treated by the suspension method in the London Hospitals, and apparently with very considerable success. One result of the treatment is the improvement, and in some cases the disappearance even, of the impotence accompanying the disease. It will be remembered that Dr. Motchonkowsky, the originator of the method, believes it is of use in cases of impotence not connected with tabes. Professor Charcot suggests that the improvement may be due to a modification of the circulation in the cord, or to a stretching of the nerves as they leave it. So far as has yet been reported no improvement has been noticed in the Argyll Robertson pupil, or in the reflexes. The method is of course too new to enable any definite conclusions to be drawn, but it appears to promise well. Not only has it been thus far successful at the Salptétrière, but in the clinics of Professors Eulenberg and Mendel the results have been equally as happy. Dr. Charcot is publishing a carefully detailed account of the technique of the treatment, which will be translated into English by Dr. de Watteville in a few days. We hope to keep our readers posted as to the latest known facts regarding this important therapeutical agent.

THE BRITISH MEDICAL JOURNAL.

Some correspondence published in the above journal goes to show that a number of the members of the British Medical Association have become dissatisfied with the manner in which it has been conducted. They have addressed the President of the Association, in a circular, in which, while they state distinctly that the editorial duties pertaining to the Journal have been ably performed, they take issue with the management, arguing that "An opinion has for several years been widely held that the lines on which the Journal is now conducted, which are similar to those of proprietary journals, with anonymous articles and reviews and multifarious advertisements, are not suitable for the organ of our Association, for the sayings and doings of which our members individually are responsible." They recognize the fact that the Association will, by the proposed change, suffer pecuniary loss; but hold that body should now be self-sustaining, and that the individual self-respect of the

members is of more importance than a condition of flourishing finances. The Journal has not always been as particular in regard to the line of advertisements admitted to its columns as might have been expected considering the position it occupies. To cover this point and some others the signers of the circular say—"It is felt that the Journal should be a faithful exponent of the proceedings of the Association in all its departments, whilst presenting a record of contemporary professional work elsewhere; but that anything beyond this, whether articles, reviews, or annotations, should have the authors' signatures appended, as indicating the actual authority of the communications. The character of the advertisements, also, should be more carefully controlled than at present, and especially all announcements of secret remedies should be excluded." Some of the most prominent men in Britain have joined in this movement, which will no doubt take on large proportions, and the result become a precedent for other Journals holding similar positions.

ONTARIO MEDICAL ASSOCIATION.

The following is the list of papers received by the Secretary, Dr. Wishart, up to date:—

Dr. Parke, Buffalo, "Radical Cure of Hernia"; Dr. A. Smith, New York, "Empyæma"; Dr. Skene, Brooklyn, "Intraligamentous Ovarian Cystoma"; Dr. Graham, Toronto, "The Treatment of Eczema"; Dr. Grant, Ottawa, "Transient Albuminuria"; Dr. Mitchell, Enniskillen, "Early Operation in Cases of Abdominal Disease"; Dr. Sweetnam, Toronto, "The Probable Future of Electricity in Gynæcology"; Dr. Ryerson, Toronto, "Some forms of Headache"; Dr. Macdonald, Wingham, "Nerve-stretching in a case of obstinate Sciatica"; Dr. Tye, Chatham, "Prognosis in Albuminuria"; Dr. McPhedran, Toronto, "Abortive Forms of Typhoid"; Dr. Gibson, Belleville, "Interesting cases in Practice"; Dr. Newman, New York, "Electrolysis in Surgery and Gynæcology"; Dr. Dickson, Kingston, "A plea for Electricity in Medicine"; Dr. Smith, Orangeville, "The pathological relation of Spleen and Bone-medulla.

Papers are also to be read by Drs. Adam Wright and Teskey, of Toronto; Drs. Powell, of Ottawa; Dr. Howitt, Guelph; Dr. Ross and Buller, of Montreal, but the subjects have not yet been furnished to the Secretary.

MEDICAL EXAMINATIONS.

VICTORIA UNIVERSITY.

M. D., C. M.—E. Bull, W. H. Groves, J. A. Ivey, D. McLeod, H. Yeomans, J. B. Guthrie, W. Egbert, J. L. Turnbull, S. Rutherford, W. Almas, A. J. Harrington, Halliday, R. G. Howell, D. Henderson, Birdsall, D. Archer, A. A. Smith, H. Wallwin, McPherson, D. McKay, McDonald, J. H. Reid, G. A. Whiteman, J. A. Forfar, J. Greenlaw, F. N. G. Starr, J. Noble, C. Lockyer, F. Preiss, J. M. Harwood, J. W. Cunningham, S. Bates, C. McLachlan, W. Gimby, A. J. Reynolds, T. A. Noble, J. Tweddle, T. L. Stringer.

Primary.—E. P. Gordon, F. H. Sherk, R. J. Chrystal, G. C. Clingan, S. Watt, A. W. Mayburry, F. McConaghey.

TRINITY MEDICAL COLLEGE.

First Year.—Scholarships—First, 1st year's scholarship, $50, Harold C. Parsons; second, 1st year's scholarship, $30, D. Beattie; third, 1st year's scholarship, $20, J. McMaster.

Certificates of Honor—Harold C. Parsons, D. Beattie, J. McMaster.

First Class, 70 per cent. and upwards—C. N. Callendar, A. Quackenbush, W. L. Matthew, J. J. Thompson, D. McEachren, R. G. Wallace, A. S. Tilley.

Second Class, 60 per cent. and upwards—H. J. Watson, H. L. Barber, W. Glaister, W. H. Miller, H. B. Anderson, G. W. Davidson, E. B. Blain, R. M. Curts, W. Northrup, E. O. Bingham, H. Morrell, N. W. Cousens, W. E. Brown, J. A. Mitchell, A. P. Chalmers, W. Potter, R. A. Buck, R. D. McLaughlan, J. P. Trainor, E. F. McCullough, W. E. Ogden, W. M. Robertson.

Pass Men—A. L. Murphy, R. M. Mitchell, F. C. Merritt, W. J. Awty, H. J. Orchard, H. Robins, S. J. L. Alexander, T. M. Allan, H. R. Bidgood, J. W. Brien, R. E. Cooper, A. M. Cleghorn, A. Hath, R. G. Feek, E. W. Goode, L. E. W. Irving. E. N. Wagar, T. M. Williamson, A. S. Wade.

Primary Examination Scholarships—First, 2nd year's scholarship, $50, Jas. Sutherland; second, 2nd year's scholarship, $30, Jas. Third.

Certificates of Honour, 75 per cent. and upwards—J. Sutherland, J. Third, R. Knechtel, D. Johnston, W. W. Herriman, C. A. D. Fairfield, C. McKay, H. W. Porter, C. C. Fairchild.

First Class, 70 per cent. and upwards—J. J. Danby, T. S. Glenn, J. B. Martyn, J. J. Moore, P. Robertson, J. W. Shaw.

Second Class, 60 per cent. and upwards—J. A. Ashbaugh, A. W. Bell, H. J. Crease, J. Crooks, G. D. Farmer, T. Farncombe, A. E. Henry, J. Lockridge, W. Montgomery, A. J. Murray, A. W. Nixon, H. A. L. Reid, W. A. Sherrin, A. A. Sutherland, J. R. Walls, R. H. White.

Primary Pass Men—R. Archer, L. E. Bolster, F. Fenton, H. H. Gray, A. H. Hough, A. C. Hunter, A. W. Quay, C. A. Temple, W. W. Thompson, A. J. Thomas.

Final Examinations.—The final examinations for the Fellowship Diploma of the College resulted as follows:—

Good Medallist—H. W. Armstrong.
First Silver Medallist—J. I. Wiley.
Second Silver Medallist—H. A. Turner.

The Dr. Fulton Memorial prize for the highest standing in surgery, amongst the candidates who have spent four winter sessions at this college—H. W. Wilson.

Certificates of Honor, 75 per cent. and upwards—H. W. Armstrong, J. I. Wiley, H. A. Turner, J. M. Macfarlane, H. W. Wilson, L. W. Allingham, G. K. Crossthwaite.

First Class, 70 per cent. and upwards—G. Hargraves. H. Chapple, F. W. Penhall.

Second Class, 60 per cent. and upwards—T. J. Macnally, A. J. Macnaulay, W. J. Milne, P. Brown, O. L. Berdan, W. W. Birdsall, W. Kerr, F. G. Salter, J. Brown, T. McEdwards, G. S. Rennie, A. M. Spence, Thos. J. Mober, T. H. Johnston, W. A. Dixon, N. W. Nasmyth, T. C. Patterson, D. A. Rose.

Pass Men—N. E. Bateson, M. C. Dewar, A. E. Edgar, F. A. R. Gow, J. B. Guthrie, W. F. H. Newbery, A. G. Patterson, J. T. Rogers, W. W. Thompson, H. J. Mullen, B.A., A. E. Mills.

TRINITY UNIVERSITY

M.D., C.M.—Final Examination.—Gold medallist and certificate of honour, H. W. Armstrong. Silver medallist and certificates of honour, H. Chapple and J. M. McFarlane (æq.).

Certificates of Honour have been won by L. W. Allingham, W. Kerr, Miss J. S. Carson, J. S. Wiley, T. S. McNally, P. Brown, G. S. Rennie and Miss S. M. Taylor (æq.). The following were also placed in Class I.—H. W. Wilson, G. K. Crosthwaite, H. A. Turner, W. A. Dixon and G. Hargreaves (æq), H. A. Stewart, J. R. McCabe and F. G. Salter (æq), H. J. Cummings and P. W. H. McKeown (æq.), W. J. Milne, J. T. McKillop, H. D. Quarry, W. D. Springer.

Class II.—R. W. Rooney, W. W. Nasmyth, A. M. Spence, M. C. Dewar, J. B. Guthrie and H. J. Mullen and F. W. Penhall (æq.), W. W. Birdsall, A. E. Wills, R. A. McArthur, W. C. David, D. A. Rose, W. W. Thompson, W. A. Macpherson, A. G. Patterson, O. L. Berdan and R. McGee (æq.), T. J. Moher, T. C. Patterson, J. W. Cunningham, S. Bates and W. E. Bateson (æq.), T. McEdwards, J. M. Henwood, P. Drummond, T. H. Johnston, J. T. Rogers, A. E. Edgar and F. A. R. Gow (æq.), J. Holdcroft and A. McMeans (æq.).

Class III.—H. Mason, M. C. Black, J. A. Gent, E. Sands, N. Walker, W. F. H. Newbery, F. Cloutier, J. F. McCormack, B. Z. Milner.

Primary.—Jas. Sutherland, 1st silver medal and certificate of honour; Jas. Third, 2nd silver medal and certificate of honour. The following were awarded certificates of honour: R. Knechtel, D. Johnson, W. D. D. Herriman, C. A. D. Fairfield, Chas. Mackay, W. G. Sprague, H. W. Porter, J. T. Fatheringham, M. McClelland, C. C. Fairchild. The following were also placed in the first class: J. J. Moore, J. J. Danby, T. S. Glenn, J. W. Shaw, J. B Martyn, P. Robertson.

Class II.—G. J. Teedy, W. Montgomery, J. Lockridge, T. S. Farncomb, Miss M. A. Gifford, H. A. L. Reid and W. A. Sherrin (æq.) G. D. Farmer, A. A. Sutherland, J. A. Ashbaugh, J. G. McGee and J. R. Walls (æq.), A. E. Henry, F. R. McBrine and A. J. Murray (æq.), Jas. McQueen, A. W. Nixon, A. W. Bell and R. A. White (æq.), J. Crooks, Miss L. Graham, H. G. Grease.

Class III.—H. H. Gray and T. C. Irwin (æq.), A. C. Hunter, C. L. Finch, C. F. P. Abraham and McLean Caverly (æq.), A. E. Douglas, Miss L. K. Meade, L. E. Bolster, F. Featon, R. Archer and C. A. Temple (æq.), F. A. W. Quay, W. S. Ferguson, S. B. Elliot, A. H. Hough, A. F. Dixon, W. W. Saulter, A. J. Thomas, W. W. Thompson.

TORONTO UNIVERSITY.

Medals and Scholarships.—The Starr Gold Medal, J. H. Collins. The Starr Silver Medal, G. Chambers. The general proficiency medals were carried off by the following students:—

The gold medal, G. Chambers. The first silver medal, J. H. Collins. The second silver medal, F. E. Godfrey.

The following gentlemen were awarded scholarships:—Third year—1, L. F. Barker; 2, W. H. Philp. Second year—1, W. N. Barnhart; 2, G. P. Macartney. First year—1, T. H. Middlebro; 2, H. A. Bruce.

M.D.—Franklin Burt, W. Burt, J. McCallum, H. G. Lackner, G. G. Rowe. *(Ad eundem gradum)*—W. T. Aikins (Victoria), G. H. Burnham (Trinity), D. Clark (Victoria), E. E. King (Victoria), J. S. King (Victoria), B. E. McKenzie (McGill), R. A. Reeve (Queen's), F. Winnett (Trinity), H. C. Scadding (Trinity), B. L. Riordan (Trinity).

M.B.—W. E. Almas, W. J. Armstrong, G. M. Bowman, J. E. Bowman, J. T. Campbell, G. Chambers, C. P. Clark, J. H. Collins, W. Egbert, J. B. Gamble, M. E. Gillrie, F. E. Godfrey, J. A. Greenlaw, J. S. Hart, J. A. Ivey, A. B. Macallum, H. A. McColl, D. McKay, C. McLachlan, C. J. McNamara, E. Meek, R. H. Palmer, W. R. G. Phair, S. T. Rutherford, W. A. Sangster, G. Silverthorn, F. N. G. Starr, J. R. Stone, T. L. Stringer, J. L. Turnbull, H. Wallwin, J. Webster, T. S. Webster, A. J. Willson, W. McC. Wright, H. A. Yeomans.

Ad eundem gradum, A. Primrose, Edin.

Mr. C. E. K. Vidal passed creditably in all the final subjects, but did not receive his degree yesterday because he is not twenty-one years of age. He will receive the degree of M.B. at the spring convocation in 1890.

TREATMENT OF FISSURE OF THE ANUS.—Dr. Gregney (*Gaillard's Med. Jour.*) believes he has discovered a simple, painless, but effectual method of curing all fissures of the anus without resorting to operation. His method consists in securing a thorough evacuation of the bowels every morning, and then introducing between the lips of the fissure a few shreds of lint saturated with a solution of chloral, 1 in 50. This lint is left *in situ* until the evacuation of the rectum next morning carries it away, when the same dressing is repeated. These

applications are repeated daily until the fissure disappears, which is usually about the tenth day of treatment.

REMOVAL OF A CEREBRAL TUMOR.—Prof. Pean has lately performed (*Gaz. des Hôp.*) the first operation of this kind ever done in France. The patient had suffered from Jacksonian epilepsy, and M. M. Ballet and Gelmeau located the tumor causing it in the upper motor region of the cortex. It is said that the patient has been completely cured.

STILL ANOTHER NEW HYPNOTIC.—A medical student of Bologna, S. Poppi, has lately described (*Br. Med. Jour.*) the effects of a new hypnotic for which he proposes the name *uralium*. It is produced by combining chloral hydrate and urethran. It appears from his report of the drug that it produces sleep more quickly in man and the lower animals than any other known hypnotic, without bad effects of any kind. He states that the happiest results have followed its use in various cases of heart disease, insanity, hysteria and other nervous complaints, even after other hypnotics had failed.

REMOVAL OF CALLOSITIES FROM THE SOLE.—Dr. Jamieson, (*Ed. Med. Jour.*) says :—A ring of glycerine jelly is painted about the lesion, and when dry a circular piece of salicylic acid plaster (salicylic acid 40, creasote 40) is cut to fit within the ring. The jelly is now painted over both the plaster and ring several times, and when almost dry a layer of cotton wool is placed over all. The whole dressing can be kept in place with one turn of a bandage, and should be cleansed once a week or oftener if necessary.

THE LATE DR. MURRAY GIBSON, OF PORTOBELLO, SCOTLAND.—We regret to notice the death of Dr. Gibson, of Portobello. He had practised only five years in that place, but was held in such high esteem that most of the shops closed and the funeral procession was joined by a large body of the public and friends of the deceased, as well as by many lodges to which Dr. Gibson had acted as medical officer. The Canadian students in Edinburgh sent floral offerings. Though a Canadian and stranger in Portobello, until five years ago, he had made a large number of close friends. His death will be mourned by many, not only in Scotland but also in Canada.

MEDICAL EDUCATION FOR WOMEN.—The movement in the direction of providing adequate means for the medical education of women, appears to have taken a hold upon the community. Montreal is now agitating for such an extension in connection with McGill University. It is stated that about $1,200 has been promised by a number of ladies, to form the nucleus of an endowment for such a medical college.

AT the Inter-Colonial Medical Congress of Australia, held in January, 1889, Dr. McLaurin, president of the Board of Health of Sydney, in an address on hygiene, said : Consumption has got a footing amongst us, and is now one of our most important causes of death (as high as 2.39 per 1,000 of population per annum). There is a good deal of trafficking in tuberculous cattle in New South Wales, for slaughtering and dairy purposes. A law is urgently required making it penal to traffic in diseased animals. Among the Jewish population in New South Wales, numbering 4,000, *in three years there was but one death from phthisis.* This is largely due to the avoidance of tuberculous meat, by the Jews.

METHOD OF REMOVING A TIGHT RING.—Mr. Moore, writing to *The Lancet*, gives the following on his "string method." Use the finest silk or thread consistent with strength, (ordinary housewife thread is strong enough). Pass the end between the finger and the ring, keeping the spool or unlimited end at the side next the finger-tip. Then wind downwards towards the tip of the finger for about a quarter of an inch ; then wind off from above by the short end about half this amount. Proceed alternately winding on and off, always leaving about one-eighth of an inch in breadth wound beneath the ring. When the knuckle is passed the ring comes of easily. Oil or soap the thread well, and push up the ring before commencing to wind. This method will, I believe, remove any ring.

A REMARKABLE CASE.—Dr. McLean relates the case (*Am. Jour. Obs.*) of a child crying in the uterus. Air had been admitted to the uterus by the admission of the hand to correct a mal-position of

the head, the water having previously escaped. Dr. MacLean applied the forceps, the child crying loudly during the operation, "the voice sounding as if coming from the cellar." This continued for four or five minutes, till at length the child was safely delivered. Dr. MacLean states positively that the child's head was in the uterus, not in the vagina, while the crying proceeded. Mother and child did well.

ACETANILID IN TYPHOID FEVER.—In the *Prager Med. Woch.*, Haas reports the results of the administration of acetanilid in 104 cases of typhoid fever. He concludes that it does not exert any specific or abortive action on the disease, but that it is an excellent remedy for the treatment of certain symptoms. Its action on the high temperature, and on the nervous symptoms accompanying it, is very satisfactory and certain. More than one gramme a day is seldom needed, which must be reduced as the temperature falls to normal in the evening. It does not disturb digestion, has a favorable influence on the general nutrition, and increases the appetite. The patients assimilate food better, may be fed more freely, lose less weight and become more able to resist the injurious action of the fever. This method of treatment is fully equal to that by cold baths, while it is far less burdensome both to the patient and the attendants. It is contra-indicated only by intestinal hæmorrhage, perforation, and severe pulmonary complications, which demand special treatment. In cardiac weakness and collapse, it should be combined with stimulants.

TREATMENT OF PUERPERAL ECLAMPSIA.—Veil (*Snmm. Klin. Vort.*) relies on full doses of morphia, given hypodermically in eclampsia. He gives an initial dose of $\frac{1}{3}$ of a grain, and follows it when required by half as much more. He finds that from $1\frac{1}{2}$ to 3 grains are necessary in the first four to seven hours, in order to get the narcotic effect of the drug. He does not believe in the benefit of pilocarpine, thinking it favors œdema of the lungs. He relies upon hot baths, followed by packs for relieving the kidneys.

COCOANUT FOR TÆNIA.—Professor Paresi of Athens, (*Lancet*) discovered while in Abyssinia, that ordinary cocoanut posseses vermifuge qualities in a high degree. He took a quantity of the juice and pulp, one day, which caused some gastric disturbance for a time. Subsequently diarrhœa set in, and to his surprise he found in the motion a complete tænia quite dead. After his return to Athens, he made a number of clinical observations, which were very satisfactory, the tænia being always passed and quite dead. He gives the milk and the pulp of one cocoanut early in the morning when the stomach is empty, and as it produces diarrhœa, no purgative is required.

EVIL RESULTS FROM SULFONAL.—This drug has become so popular, and has been so free from any evil effects that the following from the Berlin correspondent of the *Med. and Surg. Rep.* will be of interest:—"The new drug is, however, by no means so harmless as has been hitherto asserted by its manufacturers. Dr. Bornemann has just reported a case of severe poisoning resulting from the administration of the drug. The patient, to whom sulfonal was given for insomnia caused by cerebral excitement, was a physician. The result was a pronounced intoxication showing very complicated symptoms. There was a distinct interference of co-ordination, first in the lower and later in the upper extremities. He could not, for instance, raise a cup of coffee. A very prominent feature of the poisoning was his perverted feelings and illusions. The patient believed he had two heads, four feet and arms, etc.; or he believed he was on a boat or in a railway-car, and that some one was about to kill him. These illusions may be termed reflectory. The ataxia referred to is a central one, as it remained unchanged no matter whether the eyes were opened or closed. This distinction between central and sensory ataxia has been made by Professor Mendel. The drug did not exert any unfavorable influence over the heart and circulation—which appears opposed to the warning of Dr. Schmey not to use sulfonal in angina pectoris and arterio-sclerosis.

YET WE MOVE.—What may be called the "dry treatment" of gonorrhœa has been introduced. The process consists in the application to the urethra of whatever powder the practitioner chooses. A somewhat elaborate instrument, of which we do not know the name, has been devised to carry the powder to the desired situation. The method, though not yet old enough to supply reliable statistics, promises well.

NUX VOMICA IN HEART FAILURE.—Dr. A. Bourie writes to the *Lancet* that he has had excellent results in two severe cases of heart failure, from the administration of small doses of tincture of nux vomica given every half hour for four doses, then every hour. He thinks the drug stimulated the motor centres and the ganglionic system to increased activity, and rescued the patients from the consequences of obstructed pulmonary circulation and engorgement of the right heart.

CODEINE IN DIABETES MELLITUS.—Fraser (*Br. Med. Jour.*) claims that codeine is only a weak morphine, diluted by the addition to it of methyl. He has made several clinical experiments with it in diabetes mellitus, comparing it with the action of opium and morphine, and concludes that it is inferior in its action to either of these drugs.

FEVERS.—Dr. Barnett of Wisconsin, (*Am. Pract. & News*) claims that salicylate of ammonium is almost a specific in typhoid or remittent fevers, while Dr. Jackson, of Virginia, affirms it to be better adapted to malarial fever than to typhoid, and that the nitrate of ammonium is a much better remedy in typhoid troubles.

PNEUMONIA.—Dr. Petresco of Bucharest, (*Am. Pract. & News*) after treating over six hundred cases of pneumonia in the Roumanian army during the last five years concludes :—

(1) Pneumonia may be aborted by digitalis in strong doses ; (2) that this treatment gives the lowest rate of mortality ; (3) the doses from 4 to 8 grains per day, of the leaves in infusion ; (4) the tolerance and non-tonicity of this dose are proved by nearly six hundred clinical observations.

A MUNIFICENT DONATION.—By the will of the late Alexander Murray, of Montreal, the Montreal General Hospital will come into possession of the sum of $750,000. Next to the donation of $1,000,000 made by Sir Donald A. Smith and Sir George Stephen for the founding of the Royal Victoria Hospital of Montreal, that of Mr. Murray is the largest event ever made in Canada for any similar purpose.

REMOVAL.—Dr. Price Brown has removed from the cor. of College St., and Spadina Ave., to 39 Carlton St.

Dr. T. Millman has resigned the position of Assistant Medical Superintendent of the Asylum for Insane, Kingston, Ont. He moves to Toronto, about May 1st, where he purposes to practice, possibly devoting considerable time to nervous affections.

CANADIAN MEDICAL ASSOCIATION.—We beg to call attention to the circular *Re* the next meeting of the above Association on page 280. The circular will be distributed in a few days.

MCGILL UNIVERSITY.—The medical faculty of McGill University has appointed Dr. Craik, dean of the faculty, in succession to the late Dr. R. P. Howard, and Dr. Geo. Ross, vice-dean.

Books and Pamphlets.

A PRACTICAL TREATISE ON NERVE EXHAUSTION (neurasthenia), ITS SYMPTOMS, NATURE, SEQUENCES AND TREATMENT, by George M. Beard, A.M. M.D., Fellow of the New York Academy of Medicine, etc., etc. Edited with notes and additions, by A. D. Rockwell, A.M. M.D., professor of electro-therapeutics in the New York Post Graduate School and Hospital, etc., etc. New York: E. B. Treat & Co., 1889; Pp. 254. $2.75.

This work will be welcomed by the profession as treating of a subject which is too little known. The term neurasthenia is often used, when the physician is puzzled to find a more (to him) specific term for the patients ailment. The present work is the result of the experience and study of an entire professional life, in the subject to which it relates. In these days of mental strain and rapid living, a full understanding of nerve exhaustion is of vital importance to the physician, who would consoientiously treat a large number of his patients suffering from this or allied neuroses. We commend the book as an excellent one.

We have just received from Virtue & Co., of Montreal, a fine edition of Hilton Fagge's Practice of Medicine. As we are just going to press we have no time to give a sufficient review of the work. To all who have read the latest works on medicine any notice will be superfluous, as Fagge is now looked upon as a classic. The present edition is, as before, in two handsome volumes of about 1,900 papes, and will be sold by subscription by Virtue & Co., of Montreal, and by George Virtue, publisher, of Toronto.