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THE ETIOLOGY OF SYPHILIS.*

By H. A. BEATTY, M.B., M.R.C.S., Eng.
Surgeon to Toronto Western Hospital and to the Canadian Pacific Railway, Ontario Division.

THE investigation as to the etiology of syphilis has recently made two notable advances,—the demonstration by Metschnikoff and Roux, in 1903, that apes are subject to inoculation with the syphilis virus, and the discovery by Schaudinn and Hoffmann, in 1905, of the spirochæta pallida as the probable cause of this infectious disease.

The work of Klebs, in 1879; Martineau and Hamonic, in 1882; and Sperk, in 1886 and 1888; and also the experiments of Maurice and Charles Nicolle, proved the occasional transmissibility of human syphilis to the macac species of monkey, but their results, though interesting and important, were too imperfect and irregular to be of much assistance in the study of the pathology of the disease, and it remained for Metschnikoff and Roux to demonstrate conclusively that the higher or anthropoid apes are subject to syphilitic inoculation, the disease manifesting itself in the form of primary lesions which, after an interval of time, are followed by adenitis and a distinctive papular eruption.

Metschnikoff and Roux selected the chimpanzee for their experiments and this species proved to be readily susceptible to inoculation with the virus of syphilis, and to react in a constant and characteristic manner.

The first ape inoculated was a female chimpanzee about two years old The virus was taken from two sources, (1) serous fluid was taken from a chancre and inoculated on the prepuce of the clitoris; and (2) material from a mucous patch was inoculated on the border of the eyebrow. Five days after the first inoculation, a second one was made with virus from a chancre.

The original scarfications soon healed and no visble lesions appeared until the twenty-sixth day after the first inoculations. At this time, a small vesicle which later increased in size and became indurated in character was noted on the prepuce. The fully developed lesion was examined by Fournier, duCastel, Hollopeau and Marc See, who pronounced it a hard chancre. It had been noted at the time of inoculation that the lymphatic glands of the groin and elsewhere were not readily palpable, but with the appearance of the local lesion the lymphatic glands

* Read at the Toronto Medical Society.

of the groin could be easily felt, and some days later they had increased still more in size, those on the side of the ulcer being the larger.

One month later, that is fifty-six days after the first inoculations, papules were noted upon the thighs, abdomen and back. They were fifteen in number, round, and of the diameter of a ten-cent piece. The peripheral zone was at first red, and later became pigmented; the middle zone was paler, while the center came to be covered with a scaly crust. On scratching, serum was exuded.

The papules endured for a month and then began to heal; but they were still visible some weeks later at the time of the death of the animal, which was caused by the pneumococcus, to which micro-organism the chimpanzee in confinement is peculiarly susceptible.

Metschnikoff and Roux also showed that the syphilitic virus was transmissible from ape to ape without undergoing alteration of quality as measured by the effects produced. Forty-five days after the appearance of the primary lesion in the first animal, a second was inoculated from the first, both from the primary and secondary papular syphilides. Lesions regarded by Fournier as syphilitic developed from both inoculations, and were followed by adenitis.

In a later report, another important experiment on the chimpanzee is described. Eighteen days after the appearance of the primary lesion which was located on the eye-brow, small persistent erosions appeared on the tongue, and three weeks later still other lesions appeared there and on the lower lip. These erosions were regarded as mucous patches. At about the same time, this animal developed a paraplegia lasting more than a month, which it was suggested was of syphilitic origin.

It has also been ascertained by these two observers that the syphilitic virus is easily injured or destroyed by low degrees of heat. Particles of chancres and condylomata suspended in salt solution are rendered inactive upon the chimpanzee after heating for an hour at 51 degrees C. or half an hour at 60 degrees C.

The experiments of Metschnikoff and Roux have been confirmed by those of Lassar and Neisser, and Neisser seems to have discovered an interesting gradation of susceptibility to syphilitic infection in the ape, depending upon the exact position held by different species in the zoological series.

It has also been shown by the studies of Becker and Mayer, and Arnal and Salmon, that the experimental syphilides agree histologically with the corresponding lesions in man.

The discovery of the spirochæta pallida in the lesions of syphilis by Schaudinn and Hoffmann announces a very definite advance in our studies of the etiology of the disease, and the evidence seems conclusive

that the primary and secondary syphilitic lesions contain this organism either constantly or in the majority of cases.

The spirochæta pallida is described by its discoverers as measuring in length from 4 to 10 microns, the average length being 7 microns. In width it varies from unmeasurable thinness to ½ micron. It possesses from three to twelve, sometimes more, curves, which are sharp and regular and resemble the curves of a corkscrew. The poles are sharpened, and the organism is motile, the motions consisting of rotations on the long axis, forward and backward movements, and bending of the entire body. The organism has also been shown to be flagellated.

The spirochæta pallida stains with difficulty and is seen only with the highest powers of the microscope. A second form of spirochæta, called by Schaudinn and Hoffmann the spirochæta refingens, has been described several times, especially in inflammatory venereal processes. It is a larger spiral with fewer curves, more wavy than corkscrew in shape, more refractile, and stains more distinctly than the pallida. This second form occurs in decomposing secretions about the genitals and is saprophytic in character like the smegma bacillus.

In examining for the spirochæta pallida, a number of staining methods have been used, but those most usually employed are Giemsa's method as used by Schaudinn and Hoffmann, Oppenheim and Sachs's method, and DeMarino's method.

Giemsa's Method.—The slides are fixed in absolute alcohol for half an hour, and are then immersed for twenty-four hours in the following solution:—

1. Twelve parts of a solution of eosin (2.5 c.c. of a one per cent. solution of eosin in 500 c.c. of water);

2. Three parts of Azur 1 (one part of Azur 1 dissolved in one thousand parts of water).

3. Three parts of Azur 11 (a solution containing 0.8 parts of Azur 11 per one thousand parts of water).

The stained preparations are washed in water, dried in the air, and examined with the highest power available (1-12 or 1-16 oil immersion lens of Leitz).

Oppenheim and Sachs's Method.—The slides are dried in the air and then placed in the following solution without fixation:

1. One hundred c.c. of a five per cent. solution of carbolic acid in water.

2. Ten c.c. of a concentrated alcoholic solution of gentian violet.

The slide is then dried slowly by very gently heating it over the Bunsen flame until it begins to steam. Some writers advise that the stain be heated on the slide until it begins to boil.

With this method the spirochæta pallida appears stained very distinctly blue, and seems larger than when stained by Giemsa's method.

This stain has the advantage of rapidity, taking only a few minutes, and is perhaps the best thus far suggested for clinical purposes.

DeMarino's Method.—This consists in staining the slide without fixation with one c.c. of Marino's blue (1-10 c.c. of Azur blue and fifty c.c. of methyl alcohol). The stain is allowed to remain on the slide for ten minutes, then, without washing, one c.c. of a watery solution of eosin (one part in fifty) is dropped upon the slide, and allowed to remain two minutes. The slide is then washed, dried in the air, and examined. The spirochæta is stained a faint orange pink. This method has also the advantage of rapidity.

The material to be examined under the microscope must be carefully obtained, and it is most important that the smears on the cover glasses be spread as thinly as possible. If it is desired to study ulcerative lesions, the surface should first be cleansed, after which the raw surface exposed should be gently rubbed with a platinum loop in order to secure a few drops of serum. The skin lesions—papules, pustules, and roseolous areas—are often rich in the organism. After cleaning the surface, a superficial incision is made with a scalpel or sharp needle and a drop or two of blood and lymph expressed.

In the case of mucous patches, the double sharp spoon may be used, removing with one spoon the superficial necrotic tissue and saprophytic organisms, and with the other scraping lightly the denuded surface—the deeper scraping will always be found to be of the most advantage, as it will often show a complete absence of all micro-organisms excepting the spirochæta pallida. The mucous patches of the mouth and throat would seem, from reported examinations, to contain the spirochæta pallida in good numbers, and thus to be especially suitable for demonstrating the organism.

In the deeper organs, the spirochæta pallida has been demonstrated less frequently, and while Hoffmann has succeeded almost constantly in finding the organism in the juice aspirated from enlarged lymphatic glands, others have been less successful. By using a needle of good calibre and moving it slightly to and fro in the massaged gland, and using a syringe of 5 to 10 cubic centimeters' capacity, so as to secure strong suction, a few drops of blood-stained gland juice can be obtained. Hoffmann suggests that this aspirated juice be ejected into a porcelain dish, preferably at two or three points, and the small whitish, rather than the reddish drops, chosen for examination, since they will contain the gland tissue in greater amounts. Hoffmann has obtained the organism from the aspirated juice of an enlarged submental gland in a case

in which a chancre of the lip existed, and Schaudinn has found it once in aspirated splenic juice from a case of recently acquired syphilis.

The circulating blood has been studied by several investigators for the spirochæta pallida, but with few successful results. Reckzet was the first to report the organism in the blood, but the forms which he saw were not typical. Raubitschek reports a positive finding in a woman who dated the infection three months before the examination. Noeggerath and Staehlin report three successful observations. They used centrifugalized blood diluted 1 to 10 with 0.3 per cent. acetic acid, and employed 1 cubic centimeter of blood for the test.

It also appears from tests made by Levaditi and Petresco that vesication is accompanied by the escape of the spirochæta pallida into the visicular fluid. Cantharides plaster was used, and the vesicant was kept applied for eight hours, after which time many organisms were found. The largest number were found in vesicles directly over papular syphilides, a smaller number in the skin immediately surrounding the lesions, and none in the distant healthy skin.

The spirochæta pallida has also been found in the late secondary lesions. Sobernheim and Tomasczewski report three cases of syphilis in which infection occurred in 1898, 1900 and 1901, respectively, and in which, in 1905, secondary lesions re-appeared, chiefly on the face, nose, lip and eye. In one case an ulcerating condyloma alone was present. In all the cases the spirochæta pallida was found in the ulcers, though not in large numbers.

A small number of gummata and other tertiary syphilides have been studied for the spirochæta pallida, but with almost constant negative results. Schaudinn thinks it probable that the organism may occur in the late lesions in a resting form of different appearance. Finger and Landsteiner report a successful transmission of syphilis to the monkey by means of inoculation with a large amount of gummatous material.

In congenital syphilis, the results of a number of examinations of infants, the subjects of congenital syphilis, show that the spirochæta pallida regularly occurs in the disease. The micro-organism has been detected in the lesions of the skin and internal organs, sometimes in large, sometimes in small numbers. In several cases studied after death, a general infection with the spirochæta pallida could be demonstrated. Babes and Panea were able to demonstrate the organism in the pharyngeal and conjunctival secretions of a congenitally syphilitic child. In a child born prematurely to a mother who showed unmistakable signs of syphilis, Flexner was able to find the spirochæta pallida quite numerous in the skin lesions, in small numbers in the bile, and only after long search in the liver.

In experimental syphilides, Metschnikoff has demonstrated the spirochæta pallida in a non-ulcerated lesion in the macac species of ape, and Kraus, of Vienna, has since followed the micro-organism through two monkeys, the second animal having been successfully inoculated with the virus from the first.

In conclusion, while further investigation will doubtless give us much more information regarding the spirochæta pallida, it seems certain that after long search the micro-organism that is the cause of syphilis has been at last discovered.

GASTRIC ULCER.*

By JOHN FERGUSON, M.A., M.D., Physician Toronto Western Hospital, &c.

I. HISTORICAL.

GASTRIC ulcer is no new disease, nor is its recognition of recent date. Hippocrates treated Pericles for gastric pain, and speaks of black vomit and other symptoms that point to the fact that he had met with cases of gastric ulcer, though he did not recognize the ulcer as the cause of the pain, vomiting and hæmorrhage. The same can be said with regard to Galen. Many centuries elapse before there are any positive statements of the recognition of gastric ulcer. When the sixteenth century, however, is reached some very clear and specific records of cases are to be found.

During that century John Bauhin mentions the case of a young woman who died of a perforated ulcer, the stomach after death containing blood, and the abdominal cavity gas, fluids and remnants of food. Another case is recorded by Donatus to the effect that the coats of the stomach were eaten through near the pyloric opening. There are other instances of ulcer with perforation, callous cicatrices, hæmorrhages, and one with a fistulous opening, found in the writings of that period; and also several instances of deformity of the stomach, such as transverse contraction, attributed to gastric ulcers. Among the writers who have handed down to us descriptions of such cases may be mentioned Sömmering, Morgagni, Mangold, and others who practised and made dissections during the seventeenth and eighteenth centuries.

Voigtel gave a very careful account of the disease in the early part of the eighteenth century. He states that these ulcers may be surrounded by hardened edges, but at other times such a condition is absent; there may be a perforation, and the stomach walls look as if a piece had been cut out. At times the gastric tissue is contracted and condensed. Such language approaches very closely in accuracy to that employed by modern pathologists. Towards the close of the same century Matthew

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Baillie gave an excellent account of gastric ulcers with many well arranged clinical observations, and some good illustrations, drawn from his own postmortem investigations. About the same time the Italian physiologist, Spallanzani, advanced the view that ulceration of the stomach was due to a process of self digestion. This view was also urged by the celebrated John Hunter, who held that they were due to erosion of the stomach walls by the gastric juice.

But this view fell into disfavor, and many crude theories were offered to account for the ulcerative process. In the early years of the nineteenth century Carswell and Morin again took up the question and urged that the disease was the result of chronic inflammation of the stomach, derangement of the circulation in its walls, and the action of its own secretations. One of the most interesting events in the history of the subject is the report of a case in 1818, when Chaussier proved that a death was due to perforation after chronic ulceration, and not to poison as alleged. In the second and third decades of the eighteenth century, four names stand out very prominently as having added much to our knowledge of gastric ulceration, namely, Lainé, Rauseh, Cruveilhier, and Abercrombie. In the writings of these observers it is apparent that simple ulcer was sometimes confused with malignant disease, but we also learn from their writings that care should be taken to clearly differentiate death by perforation from death by poison. This was a distinct advance in our medico-legal knowledge. In 1829-35 appeared the volumes of Cruveilhiers' pathology. They contain an amount of material of an anatomical, pathological and clinical character which place him in the very front ranks among the great medical names of the world. He points out acute and chronic ulcer, cicatrisation, contraction, perforation, hæmorrhage, malformation of the pylorus, and many other facts now well known and admitted.

This brings the historical study of the subject down to the time of the later pathologists, such as Rokitansky, Virchow and Trousseau. The first of these gave a description of the anatomical appearances that must ever remain as models of their kind. In 1885, Virchow announced his famous views on the necrotic origin of ulcers caused by hæmorrhages into the mucous membranes. This view was taken up by many others and much experimental work was performed to prove that ligation of the portal vein and the various gastric arteries caused ulceration of the stomach walls; and here the names of Müller, Pavy and Ebstein are worthy of special mention. Before passing from this brief review of the historical study of gastric ulcer, it is only fair to state that the term *ulcus ventriculi* was first employed by Peter Frank about 1800. Surgical intervention for gastric ulcer dates from Rydygier's operation in 1881.

II. Etiology.

In 1786 John Hunter taught that the gastric juice did not attack the healthy mucous membrane, because of a specific property of the living cells which he called "The vital principle." No better explanation for the immunity of the mucosa of the stomach to the action of its own secretion has ever been offered. Bernard held that the non-digestion of the mucous membrane was due to the property in the epithelium that prevented the absorption of the gastric juice. Stricker thought that the mucus formed in the stomach protected its surface. Pavy claimed that the alkaline blood prevented the digestion of the stomach tissues. Hunter's and Pavy's views are the only ones that have the weight of clinical and physiological evidence in their support.

In the great majority of cases of gastric ulceration there is a state of hyperchlorhydria on the one hand, and anæmia and reduced blood alkalinity on the other. It is quite true that there are cases of gastric ulcer in which the amount of hydrochloric acid is below normal; but there must be present some offsetting condition that enables such a type of gastric juice to act upon the gastric mucosa.

From clinical observation, post mortem investigation, and experimental research, it has been accepted as established that the following conditions play the most important part in the etiology of ordinary ulceration of the stomach:

1. Hyperchlorhydria, hyperacidity, or hypersecretion of the gastric juice.

2. A reduced vitality, or lowered resistance of the mucous membrane.

3. Changes in the blood, such as reduced alkalinity in chlorosis.

4. Some form of local bacterial infection, causing thrombosis, embolism, or necrosis of tissue.

Under one or other of these headings almost every case of gastric ulcer can be classified. Instances of the disease due to the swallowing of some corrosive chemical or overly hot liquid, or to injury from a spicula of bone, a blow from without or certain occupations causing pressure, would come under the division of reduced vitality or lowered resistance on the part of the mucous membrane, which would permit of the self digestion of the enfeebled portion of the mucous surface by the contained gastric juice.

Some authors contend that many instances of gastric ulcer are due to infection by some microörganism. The methods by which these organisms act are now much better known than was the case a few years

ago.' It is admitted that they may cause thrombosis or embolism of the vessels, or establish a local inflammation in the glands of the stomach, with far reaching consequences on the vitality of the part affected, and the readiness with which it may break down into an open ulcer. Robson and Moynihan are of the opinion that most cases of ulcer of the stomach are of septic origin, a view that is likely to gain in favor.

Age and sex are potent factors in the etiology of gastric ulcer. It is a matter of common clinical knowledge that women suffer most frequently and during the menstrual period of life. This may be due to their occupation in domestic capacities for servant girls often suffer; or it may be caused by the chlorosis so common among young women. giving rise to an altered condition of the blood, wth a lowering of its salts and an increase of the hydrochloric acid in the gastric juice; or it may, again, be brought about by the periodic conjestions of the abdominal viscera before, and their depletions after each menstruation. The decaying of the teeth, the changes constantly going on in the pelvic organs, the events incident to childbearing and nursing, all open up many avenues for sepsis, as well as for changed states of the blood and the gastric juice. This is the period of life in which Virchows' theory that thrombi and emboli are principal causes, n fairly be admitted as having a large measure of truth in it.

At a later period of life, but in a very different way, the vascular system may play a very important role in the causation of the disease. As the result of "the strenuous life," alcoholism, lead poisoning, syphilis, gout, auto-intoxications, and the many infections, the arterial system begins to undergo degenerative changes. Arterio-sclerosis is now no longer regarded as a condition affecting the radials and a few of the peripheral arteries. It is admitted to play an important part in the concausation of many visceral affections. The brain, the kidneys, the digestive organs, all may suffer. In this way may readily be explained the blocking up of of some of the channels of blood supply to the stomach, and a local lowering of the vitality and resistence that ends in the formation of ulcers, such as we know to occur in men who have passed mid life.

Whatever views may be held on the resistence of the tissues in the etiology of gastric ulcer, and how this lowered resistence may be brought about, there can be no two opinions on the part played by the gastric juice itself. It has long been recognized that true gastric ulcer only occurs in such parts of the alimentary canal as are reached by this fluid, namely, the lower end of the œsophagus, the stomach, the duodenum, and the small intestine in the case of a gastro-enterostomy. With truth these erosions have been called peptic ulcers.

Speaking more specifically with regard to age, the following table from Welch is very instructive:

Age	1–10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90–100	over 100
No. of Cases..	1	32	119	107	114	108	84	35	6	.....	1
Totals.	33		226		222		119		7		

In the matter of sex and location, it has been noted that ulceration of the stomach is twice as frequent among women as among men, whereas in the case of duodenal ulcers four males suffer to one female.

III. Varieties and Site.

It has long been known that gastric ulcers assume a variety of clinical forms, each with its characteristic anatomical features. W. H. Welch has classified them thus:—

1. Latent ulcers without symptoms and discovered only at an autopsy.

2. An acute form of ulceration which ends in speedy perforation, with few symptoms or none, preceding the fatal attack.

3. The hæmorrhagic form, in which, after a brief course, and, perhaps, with few symptoms, there is a severe loss of blood.

4. The gastralgic form, in which there is dyspepsia with pain and vomiting as the leading symptoms.

5. A chronic hæmorrhagic form with recurrent attacks of bleeding, accompanied by pain, vomiting, and other symptoms.

6. A form in which there is severe cachexia. This is usually the terminal stage of one of the other forms, but may come on rather acutely, as if the disease was a rapid cancer of the stomach.

7. That form which runs a very chronic course with periods of apparent recovery, only to be followed by relapses, or the formation of new ulcers.

8. Those cases in which there is the formation of much cicatricial tissue, causing stenosis of the pyloric opening, or contortion of the stomach, such as hour-glass contraction.

In addition to the foregoing clinical types there are the anatomical characteristics which belong to the acute and the chronic forms. In the acute gastric ulcer the lesion is usually small, and it presents a clean cut, funnel-shaped appearance, as if the tissue had been punched out. There is no induration and the surrounding parts are smooth and normal. The chronic ulcer, on the other hand, is usually larger and generally

presents indurated edges which have lost the clean cut, sharply-defined appearance of the acute ulcer.

Ulcers may vary greatly in depth, from the merest superficial erosion to those which spare only the peritoneal layer, or effect a complete perforation of the viscus.

In about 20 per cent. of all the cases there are more than one ulcer. With regard to location they may be divided thus: 37 per cent. on the lesser curvature; 30 per cent. on the posterior wall; 12 per cent. on the pylorus; 9 per cent. on the anterior wall; 6 per cent. at the cardiac end; and 7 per cent. on the fundus and greater curvature. About 5 per cent. of all alults show, by autopsy, to have had gastric ulceration.

IV. Course and Sequels.

The course of gastric ulcer is very varied, from the most acute to the very chronic types. Statistics show that about 75 per cent. of all the cases recover. The actual death rate has been variously estimated by different writers. Leube admits a death rate of 25 per cent.; Lebert, 10 per cent.; Welch, 15 per cent.; Fenwick, 20 per cent.; and Bulstrode, 18 per cent. Hæmorrhage causes death in from 3 to 5 per cent. of the cases, and perforation in from 6 to 10 per cent., according to the investigator.

Apart from hæmorrhage and perforation, gastric ulcer may give rise to a number of very serious sequels, such as cicatricial stenosis of the pylorus, hour-glass contraction of the stomach, the occurrence of cancer on the site of ulcer, the formation of chronic abscess, and the development of a progressive form of anæmia. It is not known how often these sequels follow ulceration of the stomach. In the case of cancer, however, considerable thought has been given to the subject; and with the result that cancer is found to occur generally in the same parts of the stomach as do ulcers. In very many of the cases of cancer of the stomach, there is the history of a precancerous period, which most clinicians regard as indicating the presence of an ulcer. Some writers, particularly Talma, contend that at least 13 per cent. of the cases of ulceration of the stomach become malignant. Chronic deep ulcers in the posterior aspect of the stomach may form adhesions prior to the occurrence of perforation, and thus give rise to an abscess, the usual subphrenic variety. Such adhesions may form when the ulcer is otherwise located than on the posterior wall, though very much less frequently.

Stenosis of the pylorus and hour-glass contraction of the stomach are among the most common and troublesome of the sequels of ulceration. The pylorus, though not actually involved in the diseased process,

is usually found contracted, but the stenosis, which is a sequel to ulceration, is the true organic narrowing of the passage, due to the shrinkage of scar tissue. This narrowing may be very extreme and practically prevent the passage of the contents of the stomach, except its more liquid portions. A second effect of this stenosis is a gradual dilatation of the stomach, with all the digestive disturbances that such a misfortune brings in its train.

With regard to hour-glass contraction, it must be admitted that the condition is much more common than was at one time thought to be the case. This condition was formerly regarded as of congenital origin, but it is now known to be almost invariably caused by ulceration of the viscus, or by malignant disease, the result of such ulceration. The constriction is usually about the middle of the stomach, but there may be more than one contracting band. The disturbances to digestion caused by this condition are very distressing. The normal peristalsis of the stomach is seriously interfered with, the cardiac pouch, not emptying itself properly, the products of digestion in it undergo decomposition, and this portion of the stomach becomes dilated. In that portion of the stomach between the constriction and the pylorus there is often an accumulation of the most foul character imaginable, which frequently regurgitates into the cardiac pouch and may then be vomited, or keep up a state of fermentation and the eructation of offensive gas.

Another sequel to gastric ulcer is the occurrence of a severe and pernicious form of anæmia. This may be due to chronic sepsis from decomposition of the stomach contents, to frequent loss of blood, to faulty digestion and malassimilation, to the development of malignant disease where an ulcer had been, or to the train of nervous disturbances that may follow ulceration and their effects upon metobolism and nutrition.

V. Symptomatology.

The symptons of gastric ulcer vary very much, but there are a number which are sufficiently constant to enable a diagnosis to be made with a strong probability of accuracy.

1. *Hæmorrhage*: This is a very constant symptom of ulcer of the stomach and occurs in a large proportion of the cases. The amount lost may be slight, or profuse; and may occur once or be repeated many times. It has been estimated that 3 per cent. of all patients who suffer with gastric ulcer die of hæmorrhage; and that according to different authors from 50 to 80 per cent. vomit blood. Probably every case of the disease is accompanied by more or less hæmorrhage, either vomited or passed by the bowels, giving rise to the melæna stools. This table

from Hemmeter gives the distinguishing features between hæmorrhage from the lungs and the stomach.

Lung.	Stomach.
1. Blood bright red, foaming.	1. Blood is dark red, partly coagulated, frequently mixed with food, sometimes acid.
2. Physical signs point to a pulmonary or cardiac affection, the stomach may be affected secondarily.	2. Physical examination evinces a gastric or hepatic affection, or stasis in partial circulation.
3. Pulmonary hæmorrhages followed by rusty-colored sputa for days (generally), but there is no blood in the stools.	3. Gastric hæmorrhages are frequently associated with tar-colored stools.
4. Physical signs of pulmonary or cardiac disease, moist rales, etc.	4. Physical examination of heart and lungs usually negative.

2. *Pain.* This is a very constant symptom. It is described as of a burning, gnawing, boring, tearing, or pressing character, situated in the spigastrium, or felt in the left side of the lower dorsal region. In some cases the pain is very severe, amounting to the most acute distress. It comes on usually soon after taking food, and gradually increases until the stomach is emptied by vomiting or the usual course of digestion. The pain varies with the character of the food, being usually severer after solid than liquid aliments. In a few cases the pain is lessened by the ingestion of a moderate quantity of food, a result which seems to be due to the neutralization of the acidity of the gastric juice. Mansell Moullin claims that pain is due to irritation of an inflammatory nature affecting the sensory nerves in the peritoneum and induced by the movements of the stomach. The following table from Anders will assist in differentiating ulcer of the stomach from gastralgia.

Gastric Ulcer.	Gastralgia.
1. History of certain occupations:—Anæmia, Chlorosis, Amenorrhœa, Tuberculosis, and diseases of the heart.	1. History of Neurasthenia, Neuralgia and Hysteria common.
2. Most frequent from fifteen to thirty-five years of age.	2. Most frequent before or near the menopanse (in the female).
3. The paroxysms of pain usually come on at a definite period after eating.	3. Paroxysms more frequent when the stomach is empty than soon after meals.
4. Eating rarely relieves the pain.	4. Eating usually brings relief.
5. Tenderness on pressure over a certain limited area in the epigastrium.	5. Tender spot absent. General hyperæsthesia of the skin often present.
6. Pressure usually aggravates, and only occasionally relieves patients during paroxysm of pain, not during the intervals between seizures.	6. Pressure almost always relieves the pain.
7. In the intervals between the attacks gastric disturbances, more or less severe, are present; also tender point frequently.	7 In the intervals between attacks no gastric disturbances present, as a rule.
8. Hæmatemesis present in nearly one-half of the cases.	8. Hæmatemesis absent.
9. General health often much impaired, particularly late in the affection.	9. General health less affected than in ulcer.

10. Physical signs of a mass may be present.	10. Signs of tumor always absent.
11. Dilatation may co-exist in the late stages.	11. Dilatation never present.
12. Hyperacidity of gastric juice usually present.	12. Hyperacidity present only in serious cases of gastralgia with gastric catarrh.
13. Improvement follows rest and regulation of diet.	13. Regulation of diet has no effect.

3. *Vomiting.*—"Vomiting, next to pain, is the most frequent symptom," says Anders. If it contains blood it is of importance as a symptom of the disease. The blood may be so altered by the gastric juice as to appear as the characteristic coffee-ground vomit. Usually the vomiting occurs shortly after taking food up to a period of two or three hours afterwards, and generally brings relief. The vomited matter almost always contains an excess of hydrochloric acid. It is not uncommon for the vomiting to occur at the height of the paroxysm of pain. The vomiting is caused by the irritability of the stomach, stenosis of the pylorus, or hour-glass contraction. Sometimes the vomiting occurs apart from the taking of food, and may come on in the night or early morning. In such cases the vomitus is usually composed of pure gastric juice, highly acid. The persistent vomiting may cause marked emaciation.

4. *Gastric Cancer and Ulcer.*—It is sometimes difficult to distinguish cases of carcinoma of the stomach from those of ulcer. Prof. W. H. Welch gives the following table as an aid in the diagnosis of these two conditions.

Gastric Cancer.	Gastric Ulcer.
1. Tumor present in three-fourths of the cases.	1. Tumor rare but may be present.
2. Rare under forty years.	2. May occur at any age; over one-half the cases under forty years.
3. Average duration about one year; rarely over two years.	3. Duration indefinite; may be for several years.
4. Gastric hæmorrhage frequent but rarely profuse; most common in the cachectic state.	4. Gastric hæmorrhage less frequent than in cancer, but oftener profuse; not uncommon when the general health has got a little improved.
5. Vomiting often has the peculiarities of that of dilatation of the stomach.	5. Vomiting rarely referable to dilatation of the stomach, and then only in a late stage of the disease.
6. Free hydrochloric acid usually absent; lactic acid present.	6. Free hydrochloric acid usually present in excess.
7. Cancer fragments in washings or in vomitus.	7. Absent.
8. Secondary tumors in liver, peritoneum and lymphatic glands.	8. Absent.
9. Rapidly advancing loss of strength and flesh with developing cachexia.	9. Cachectic appearance usually less marked and of later occurrence than in cancer.
10. Epigastric pain more continuous; less dependent upon taking food, less relieved by vomiting, and less localized than in ulcer.	10. Pain is often paroxysmal; more influenced by taking food, oftener relieved by vomiting, and more sharply localized than in cancer.
11. No improvement or only temporary in course of the disease.	11. Sometimes a history of several attacks; usually a marked improvement by regulation of diet.

5. *Physical signs.*—These are few and not very definite in character. Tenderness is generally found on palpation, though it may be absent. In some cases the spot where the pain is felt is excessively tender to pressure, which is a valuable diagnostic sign. In some chronic cases a thickening of the tissues may be felt, especially towards the pylorus. When these indurations become adherent to adjacent organs, the condition may resemble very closely carcinoma of the parts.

6. *Perforation.*—This occurs in from 6 to 7 per cent. of all cases of gastric ulcer, and one author in Wood's Reference Hand book gives 15 per cent. It is therefore of much importance to recognize the condition at once, as it is necessarily a surgical complication and requires immediate attention. The results of operative treatment in these cases being much better when resorted to early after the rupture.

Moynihan divides cases of perforation into the acute, in which the stomach walls give way suddenly and there is a free escape of its contents into the peritoneal cavity; the subacute, where, for some reason, the escape of the stomach contents is more gradual and the symptoms less urgent, due to a very small opening, an empty stomach at the time, or some omentum closing the opening; and the chronic, in which the ulcer has slowly eaten its way through, and a protective peritonitis has formed, with adhesions to surrounding organs or parts, causing a localization of the escaping gastric contents and the formation of abscesses.

The symptoms and signs of perforation are usually sudden. The patient is taken with sudden collapse, though in some instances they can make some exertion. Perforation generally follows some physical effort, vomiting, an injury, or a hearty meal. The onset of the pain is sudden and is refered to the epigastrium, but it soon spreads. Soon there is difficulty in breathing and a deep inspiration may become impossible. As the graver symptoms develop, the face becomes anxious and pinched, and there is usually great restlessness. There is usually accelerated pulse. At first there may be no fever. The abdomen may be flat and tense, or distended, and the muscles are rigid. Tenderness is mostly confined to the epigastrium. There may or may not be dulness in this region, and the liver dulness may not be obliterated. A gurgling sound of the escaping liquids may be heard. Vomiting may occur after perforation has taken place. The pain is constant.

In the Practitioner's Guide, by Carr, Pick, Doran and Duncan, the symptoms of the acute cases are given as "sudden onset of abdominal pain, extreme collapse and sometimes vomiting, the abdomen becoming distended and the breathing thoracic." In the cases of chronic perforation, the same work states that the adhesions localize the symptoms to the upper part of the abdomen, and an abscess may result in the liver, spleen, pancreas, under the diaphragm, or extend into the lungs

or pleuræ. Should the adhesions break down, a general peritonitis follows.

7. *Hour-Glass Contraction.*—This condition is far more common than was formerly thought to be the case. It may be recognized by the following symptoms:—

(1) If the stomach tube is used and the stomach washed out, a certain amount of the fluid may be lost, having gone into the second cavity.

(2) If the stomach be washed out till the fluid returns clear, there may be a sudden escape of foul fluid from the lower cavity.

(3) If the stomach be palpated and a splash obtained, the use of the tube to empty the first pouch does not remove the splashing sound, owing to the fluid that remains in the lower pouch.

(4) By giving a portion of a seidlitz powder the first pouch can be seen to distend, and in a short time the distention passes on into the second cavity.

(5) The sulcus due to the constricting band has been sometimes made out.

(6) Auscultation of the stomach will generally detect the sound of gases and liquids passing from one cavity to the other.

VI. The Mortality.

Wood's Reference Hand book gives the mortality for men at 22, for women at 6, and for both at 8½ per cent. Anders gives the death rate in cases as about 20 per cent.; Bulstrode gives a mortality of 18 per cent.; Welch's cases gave 15 per cent.; Heydenreich's 25; and Fenwick's, 20 per cent. From a large number of cases, Max Einhorn thinks there is only 50 per cent. of permanent cures under medical treatment. G. G. Sears gives 21 per cent. of failures. Greenough found that out of 187 cases only 40 per cent. remained well after a period of five years. These percentages must be increased by those cases which have died of perforation, melæna, or chronic ill health due to gastric ulcers, and in which a diagnosis was never made. It may safely be said that the mortality does not fall under 20 per cent. of all cases. This shall be shown to be of importance when the surgical treatment is considered. Add to the foregoing mortality the chronic suffering, the repeated relapses, the later ill health, and the possibility of cancer, and it will be seen at a glance that the treatment of gastric ulcer on purely medical lines leaves much to be desired.

VII. Treatment.

The treatment of gastric ulcer is now admitted to be both medical and surgical.

1. *Medical Treatment.*—The treatment of ulcers of the stomach in their early stages and when there are no serious complications should be

medical. Cases in the young are more amenable to such treatment than are those in older men and women.

(*a*) The first essential in treatment is absolute rest in bed. The patient should not be allowed to go about the house, and, in most cases, should be enjoined the use of the bed pan. Many cases suddenly relapse by not insisting upon a lengthy enough period in bed. This should be at least two or three weeks, but may require to be indefinitely extended.

(*b*) The second essential in the management of gastric ulcer is the proper feeding of the patient. In some cases the stomach is so extremely irritable that it will not bear any food or even the blandest of liquids In such cases the feeding must be carried on wholly by the bowels. A word of warning must be raised against the custom of allowing the patient too much water or to be given ice to suck. This does not permit the stomach to obtain sufficient rest and frequently induces vomiting. There are cases, however, where the rectum is so unmanageable that it cannot be depended upon entirely. By care, however, much may be done to train it to retain nutrient enemata. The lower bowel should be washed out with a quart of warm water prior to the administration of the nutrient liquid. These injections should contain about four ounces and be composed of peptonized milk or thin gruel to which may be added the yoke of an egg. Peptonized beef-tea or meat extracts are also useful. To these injections may be added occasionally a few drops of liquor opii to lessen the sensitiveness of the rectum. These enemata should not be given too frequently; and sometimes a small quantity of alcoholic stimulant may be added to them.

Any nourishment by the mouth should be at first of the blandest character, such as milk diluted with water or lime water. Raw egg mixture, beef-tea, raw beef juice, or some of the meat extracts may be tried. Some of the lightest of the invalid or infant foods may also be employed. These various nutrients may be peptonized. Leube's meat extract, milk gruel, and butter-milk may suit some cases. In the feeding by the mouth it is of importance not to allow the patient too much at a time, and to make up in quantity by ordering some liquid nourishment often. In cases of extreme irritability of the stomach it may be very helpful to wash out the stomach with a weak soda solution. If a soft tube is carefully employed no harm will come of its use. The utmost care must be taken when the patient is again permitted solid food, and such articles as contain coarse and irritating particles, such as small fruits, must be avoided.

The least amount possible of chloride of sodium should be allowed the patient, as the hydrochloric acid of the gastric juice requires chlorine for its formation. This is important.

(c) The medicinal treatment is of much importance. The bowels should be kept open by means of some mild saline, and one of the best is Carlsbad salts, or its artificial substitute sulphate of sodium, 50; bicarbonate of sodium, 6; chloride of sodium, 3. Many writers attach considerable value to the exhibition of bismuth carbonate, which may be given in doses of 20 to 30 grains every four hours. Fleiner gives 2 to 3 drachms in water in the morning. Nitrate of silver has long held an important place in the therapeutics of this disease. It is of undoubted value in some cases. Carbonate of magnesium and sodium are also useful alkalies for the correction of the hyperacidity of the stomach. Opium or morphine may be required for the relief of the pain and the latter may have to be injected under the skin. Small doses of the extract of belladonna may be used. The hypodermic administration of digitalin, gr. 1-30, and strychina, gr. 1-30, may be called for should the pulse become very weak. To correct the acidity of the gastric contents and prevent auto-digestion of the stomach, Hemmeter recommends magnesiæ ustæ, sodii carbonatis, and potassii carbonatis, of each, grams 5, and sacchar lactis, grains 25. Of this mixture half a teaspoonful is placed dry upon the tongue every three hours.

(d) Hæmorrhage demands prompt and careful attention. A number of remedies have been proposed for this complication of gastric ulcer, but none of them can be relied upon. Tannic acid in 15 grain doses every fifteen miuntes until three or four doses have been administered is highly recommended by some. Others have spoken well of alum, of which a teaspoonful may be dissolved in a glass of warm water, the patient drinking the solution gradually. Drinking half a pint of a 2 per cent. solution of gelatin has recently met with much favor. One of the most recent claimants for attention is adrenalin, which may be given in 5 minim doses of 1-1,000 solution, and repeated as required. Hemmeter speaks highly of the hypodermic use of ergotol in 20 to 30 minim doses, while others advise in the same way 2 or 3 grains of ergotin. If there be pain with the hæmatemesis, morphia gr. ¼ should be given subcutaneously. In addition to relieving the pain, it is an adjuvant to the other means employed. The application of an ice bag over the stomach has found advocates, while others have spoken as strongly of hot fomentations. Tripier has advised copious hot water injections into the bowel. It may be necessary to resort to intravenous or intra-tissue injections of normal saline. Many years ago I recommended the application of elastic bands or a firmly applied bandage high up the extremities, as a means of withdrawing blood from the viscera, and I have still great confidence in the practice in all forms of internal hæmorrhage. During the period of vomiting the patient must be kept absolutely quiet, not being allowed to sit up in bed, and being compelled to use the bed pan and urinal. No food, or liquids should be allowed by the mouth, and the

least amount possible by the rectum in order that the blood pressure may be kept low.

2. *The Surgical Treatment.*—The treatment of gastric ulcer has acquired an added interest of late years, owing to the prominent part taken in it by the surgeon. That he has saved many lives that would have been lost, and relieved many sufferers who could not have been improved without his aid, there is no doubt. While this is true, it is still too soon to determine how lasting some of these cures may be, as we know that an ulcer may remain healed for a long time and then open up again, or a new one form. In like manner after the patient has left the hands of the surgeon, however much benefited, the same conditions may re-appear. The conditions for which the surgeon may be called upon to perform an emergency operation are uncontrollable hæmorrhage and perforation. The conditions for which he may operate at some selected or convenient time are chronic ulcers, pyloric stenosis, and hour-glass contraction. In these three latter conditions surgery has accomplished much, and, with added experience, is destined to achieve a brilliant future. But these operations belong rather to the field of gastro-plastic surgery, and will not be discussed at present. The two operations upon which I shall offer a few remarks are those for hæmorrhage and perforation.

(*a*) *Hæmorrhage.*—Mr. Moynihan states that "the one character that the hæmorrhage should possess to warrant the performance of an operation is recurrence; recurrence, too, at intervals which, becoming gradually curtailed, do not allow the patient to make up in the interval the ground which he loses in the attack.". He has operated upon 22 cases, which from appearances and the nature of the hæmorrhages would most likely have terminated fatally, and with 19 recoveries and only 3 deaths.

Joseph A. Blake states "that a single large hæmorrhage, without previous symptoms referable to ulcer, should not be operated upon, but when there have been antecedent symptoms operation should be performed. Cases suffering from a recurrent hæmorrhage should be operated upon." With this opinion, Dr. W. Gilman Thompson concurs in his article.

Recently, Mr. Frederick Eve reports two cases of duodenal ulcer, with severe hæmorrhages, treated by the operation gastro enterostomy, both patients making good recoveries.

Dr. Edward M. Buckingham reports a case of successful operation for hæmatemesis.

Other cases could be collected to show that this complication in its most desperate and uncontrollable form may be made the subject for successful surgical intervention.

Dr. Atherton, then of Toronto, operated successfully for hæmorrhage 16 years ago.

(*b*) *Perforation.*—On this subject there are now many cases on record. At the recent meeting of the Canadian Medical Association, Mr. Caird gave details of 18 cases operated on for perforation, with 7 deaths, and one of these was quite hopeless before operation.

Alfred A. Young records three cases of operation for perforation, with two recoveries, and one death, following a secondary operation for subphrenic abscess.

T. J. Wood mentions a case he operated on 52 hours after the perforation had occurred, in which recovery took place.

F. B. Lund records three cases of perforation with operation and recovery. In one case there was some suppuration in the abdominal wall, and in another a rather slow convalescence.

B. G. A. Moynihan, in a recent paper, relates 22 cases of perforated ulcer operated upon, and with 14 recoveries and 8 deaths.

These cases could be multiplied by a search through the literature of the subject. Enough has been said to prove that the aid of the surgeon should be sought in all cases of suspected perforation.

(*c*) *General results of surgical treatment.*—Heydenreich states that the death rate in gastric ulcer does not fall much below 25 per cent.; and that in the cases of the disease surgically treated which he has been able to collect, it fell to 16 per cent.

In the Hunterian Lectures, five years ago, Robson and Moynihan collected 184 cases of operation on gastric ulcer, excluding those for hæmorrhage and perforation, with a death rate of 16 per cent. In their recent work upon the subject, they state that the death rate should not exceed 5 per cent., in cases operated on for gastric ulcer, excepting the emergency cases of bleeding and perforation. They go on to say "in those treated surgically in the worst and most complicated cases, the results are so striking that it is incumbent to urge most strongly that, although cases of gastric ulcer should first be submitted to medical treatment yet if such treatment fails to cure in a reasonable time, or if relapses occur on the resumption of solid food, then medical should give place to surgical treatment."

It would appear that the death rate in operations for hæmorrhage of the stomach may be placed at about 15 per cent., for operations in cases of perforation at about 40 per cent., and for operations when the time is favorable about 5 per cent. It is certainly reasonable to expect, as it becomes more generally the custom to operate early in perforation cases, the results will be much better.

In conclusion the medical treatment may be summed up in the words of Boardman Reed thus: (1) quiet the pain; (2) allay vomiting; (3) prevent dilatation of the stomach; (4) preclude or arrest hæmatemesis; and (5) prevent perforation.

The claims for surgical treatment are thus set forth by Robson and Moynihan: "For intractable or relapsing gastric ulcer it is, in the greater number of cases, the only satisfactory method of dealing with these refactory cases, and operation should be resorted to at a much earlier period than has hitherto been the custom, and always before the patient is so far reduced by pain and starvation or the supervention of serious complications that weakness and anæmia render any operative procedure hazardous."

Mikuliez says: "The danger to life from gastric ulcer is at least not less, but far greater than the danger of a complete modern operation."

ADDITIONAL EXPERIENCE IN THE TREATMENT OF PELVIC DISEASE ASSOCIATED WITH PSYCHOSES.

By ERNEST A. HALL, M.D., L.R.C.P., Ed., Fellow Br. Gyn. Society, Victoria, B.C.
Prepared for British Columbia Medical Association.

TWO years ago at the meeting of this Association in Victoria, I brought before you a matter that has engaged the attention of not a few of the leading men of the profession in Europe, namely, that of providing accommodation for the better treatment of extreme forms of nervous diseases and of recent cases of insanity, and for the placing of such cases under more favorable circumstances than are usually found in our provincial hospitals. This matter, though favorably received by not a few members, was postponed for one year and finally dropped. It is not my purpose to re-introduce discussion upon this matter, as in the tardy evolution of rational treatment of the insane, the realization of the ideal is evidently yet in the dim distance. I will dismiss the subject with an extract from an address delivered by Dr. Clouston, of Edinburgh, before the Medico-Psychological Association, July 25th, 1902. In speaking of the advantages of treating recent cases of insanity in wards associated with the present general hospitals he said: "Firstly, any one may go to seek advice at a hospital, or to be treated in one, without losing any of his self-respect, injuring his prospects in life, or going counter to any special prejudice in his mind. Secondly, the treatment of this class of diseases—I attach enormous importance to this argument—would educate our poorer population, and, indeed, the whole population, into entertaining the belief that mental diseases is on all-fours with other classes of disease, and that it in no way implies shame or repulsion. If this education could take place to any degree it would sweeten life to every family in which mental disease has occurred, and that would probably comprise every fourth or fifth family connection in the land. Besides, it would diminish one of the most

poignant terrors in the lives of those who have suffered from the disease or who fear its occurrence. The absence of this prejudice and fear would of itself greatly aid recovery.

"Assuming that there would need to be a time limit, say six weeks to two months, to the stay of those patients in such wards, just as there is in the case of most ordinary medical and surgical patients. Would such a comparatively short period be sufficient for effective treatment? In a large number of cases this period would be sufficient. In the cases of those who got worse, or in whom the symptoms were prolonged, we have the asylum to fall back upon. We have the means, therefore, of continuous special treatment where needed. I have found that out of the ordinary certified patients 10 per cent. recover, and are discharged within six weeks; 20 per cent. within two months. A much larger number treated in the earlier stage for the milder form of disease would recover; and many could safely leave the hospital to complete their recovery at home. If you have broken the bad brain habit, if you have successfully contended by proper treatment with the worst symptoms, the patients could with safety go home to complete their convalescence."

With regard to my investigation into the association of pelvic disease in women with mental disease, I have nineteen additional cases to report. Of these eighteen were married, and the other single; two had recovered mental health in the provincial hospital for the insane, and two others were not mentally affected at the time they came under my care, one for obstruction of the bowel from adhesions to a large parovarian cyst. Eighteen of these patients showed decided pelvic disease.

As it is principles we are endeavoring to evolve, rather than the report of and discussion of "cases" I will make my report as brief as possible.

No. 111. Mrs. —— aged 33, good heredity, married two years, one child, was referred by Dr. Proctor. Six months after birth of child had attack of religious mania, took dislike to her child. She was curetted by her family physician who found an enlarged ovary. When she came under my care some months later she would not carry on a reasonable conversation, but continually talked of hell and her burning in it. She was obedient to the nurses. The treatment consisted in curetment, amputation of the cervix, removal of right cystic ovary, and both tubes. Convalescence normal. Within a few weeks a great mental change was apparent, and, after six weeks, I was unable to detect any trace of her former delusions. The last report from her husband was perfectly satisfactory. Dr. Proctor reports this case completely recovered.

No. 112. Mrs. ——, aged 38, melancholie for some years, seen with Dr. W. B. McKechnie, uterus enlarged, with fibroid cervix. Hyst-

rectomy was done by Dr. McKechnie, but up to the last report no alteration of the mental condition was noticeable.

No. 113. Mrs. ——, aged 33, four children, youngest 11 years. For four years she suffered from attacks of melancholia, lasting six weeks. Examination showed lacerated perineum and left salpingitis, also piles. Operation recommended.

No. 114. Mrs. ——, aged 35, married 12 years, had three children, youngest eight years old. Had brother died in asylum after injury to head. She was in the provincial hospital six months with mental recovery. Dr. Doherty diagnosed internal trouble. Examination showed right movable kidney. Cystic ovary, lacerated cervix and perineum. At the operation the omentum was found adherent to the uterus. Convalescence normal.

No. 115. Mrs. ——, aged 35, a borderland case, good heredity, no children, suffered from pain in side for six years. For some time had become mentally confused, careless of personal appearance, with intermittent attacks of melancholia. The conditions found were appendix constricted by fibrous band, omentum adherent to anterior abdominal wall, both ovaries cystic. Convalescence normal. Mental stability recovered.

No. 116. Mrs. ——, aged 28, three children, mother insane after each child, and brother insane from self-abuse. For three years suffered from dull pain in head and back. Intermittent melancholia, at times would run into street in an excited condition. Mind cloudy. She had been to several practitioners who diagnosed ulceration of the womb. The conditions found were metritis with fungosities, chronic appendicitis, and slight uterine prolapse. Convalescence normal. Mental improvement marked.

No. 117. Mrs. ——, aged 30, two children, good heredity. Had received treatment for congestion of the womb. Melancholic. Several times threatened her life. She suffered severe pains in the head and back, increased during menstruation. The conditions found were laceration of cervix, ovaries septic, and slight prolapse. Convalescence normal. Pains in back and head all but removed. Mental condition improved.

No. 118. Mrs. ——, aged 30, mother and aunt melancholic, two children, miscarriage six years ago. For several years had been very nervous. During her husband's absence she awoke at 1 a. m., screaming that he had been killed in a railway wreck. This happened exactly 24 hours before he had been in a wreck on the C. P. R., in which one of the employees of the road had been killed. She continued acutely maniacal. Under chloroform I found sufficient to justify surgical treatment. The medical attendant absolutely refused consultation and co-

operation with me, as he said there was nothing to be done. I found lacerated cervix, fungosities, left ovary cystic, chronic appendicitis. Physical convalescence normal. There was no mental improvement, and after three weeks she was removed to the provincial hospital where, after a few months, she made a perfect recovery. She has greatly improved in physical health, never enjoyed better health than at the present time.

No. 119. Mrs. ——, aged 23, religious delusions and mild melancholia, good heredity. Conditions found were cervicitis with erosion, fungosities, cystic right ovary and adherent clitoris. Convalescence normal. Mental recovery.

No. 120. ——, aged 28, one sister insane, married eight years, three children. Pain in side for years, acute mania. Was referred to me but was too violent to treat in private hospital, was sent to Westminster where she recovered after a few months. The conditions found were lacerated cervix and perineum, both ovaries septic, partial uterine prolapse. Convalescence normal. Physical health improved.

No. 121. Mrs. ——, aged 41, good heredity, three miscarriages, a history of gastric ulcer, followed by delusions. Examined with Dr. Doherty in the Provincial Hospital. Conditions found were salpingitic adhesions. Treatment recommended. She was removed to the Burrard Sanitarium but became so unmanageable that she returned to the Westminster without treatment.

No. 122. Mrs. ——, aged 33, good heredity, three children, well marked delusions, said she had been a horse for years, now a cow, etc. Conditions found were left ovary enlarged and adherent in cul-de-sac. Operation recommended.

No. 123. Mrs. ——, aged 48, good heredity, five children. Had abscess from last child, suffered from severe pains in head and pelvis, and delusions. Was unmanageable, destroyed furniture, burned silver plate, etc. Conditions found very lacerated perineum, cystic ovary and adhesions. Operation without any mental improvement. Was subsequently placed in the hospital for the insane.

No. 124. Mrs. ——, aged 38, good heredity, seven children. Melancholia after the birth of each child, youngest child two years old. Has been confused and forgetful. Had been recently in the asylum. Conditions found were lacerated perineum, cystic left ovary, chronic appendicitis. No apparent mental improvement when she left the hospital.

No. 125. Mrs. ——, aged 24, two children, good heredity. Referred by Dr. Boucher of Pheonix. Suffered from severe pain in head and side, became nervous, excited, with delusions. Conditions found

were right ovary septic, chronic appendicitis. Convalescence normal. Mental condition satisfactory upon last report.

No. 126. Mrs. ——, aged 37, good heredity, three children. Melancholia from birth of last child, four months previously. Suffered at that time from pelvic abscess which was opened externally. She became unable to manage her household and had to be under constant surveillance. Examination by Dr. Frank Hall and myself showed large ovarian cyst with adhesions. Operation by Dr. Frank Hall, with immediate mental recovery.

No. 127. Mrs. ——, 40, good heredity, four children. Complained of abdominal pain for ten years. Had nervous prostration for eight years with periods of mania. Perfectly rational at present time. Conditions found were cervical tear and polypus and myometritis. Convalescence normal. The after physical history of this case has not been as satisfactory as I had expected. It was the only case of the series in which I did not open the abdomen. I regret that this was not done, as she has subsequently complained of symptoms referable to conditions that might have easily been rectified. In dealing with these cases, especially when there have been indications of intra-abdominal trouble, and where operative measures are demanded, I would favor opening the abdomen as a matter of more accurate diagnosis.

No. 128. Mrs. ——, aged 56, good heredity. Seen in consultation with Dr. McKechnie. Simple dementia. Examination showed slight perineal tear but not sufficient to call abnormal. No treatment recommended.

No. 129. Mrs. ——, aged 39, good heredity, no children. For several years had given evidence of mental disturbance. Subject to fits of ungovernable temper, alternating with depression, took little interest in domestic duties, slovenly in habits and appearance, but not decidedly affected at time of operation. I removed a large parovarian cyst. Convalescence normal.

The operative treatment given these cases is most conservative. Normal ovaries are never removed, cystic ovaries are resected. All other structures are dealt with in the same manner that we would with similar conditions in ordinary patients, with this exception, that, in view of the desirability of limiting the production of defective offspring, to diminish the insane potential, I request the friends to allow me to sterilize the patient by removal of the tubes close to the uterus.

As to the results of these nineteen cases all but one presented definite pelvic lesions. There were no deaths in the cases submitted to treatment. As to the psychic results there was no response in the patient operated upon by Dr. McKechnie. Dr. Frank Hall's case was an

immediate mental restoration. Of the other seventeen no treatment was recommended in one case, in two operative treatment was advised, and of the remaining fourteen upon which I operated the result was physical improvement in all cases. As to the mental results, so far as I have been able to ascertain, four were not mentally affected at the time of operation. Of the remaining ten, four recovered, four were improved, and two were unaltered.

These results superficially viewed do not give a very brilliant showing, but we must remember that these patients were treated for physical disease. No case is treated in which a physical lesion is not ascertainable, and the physical results have been equal to that obtained by any of you in the management of your ordinary gynæcological patients, but, in addition to the improved physical condition, we can report five mental recoveries and four improvements out of twelve operations upon those mentally clouded. The results are worthy of consideration. Or, to take a different view point, surely the unfortunate dement suffers sufficient distress in the mental disability without the additional load of physical disease; and who so unsympathetic, so inhuman, as to deny her the privilege of physical relief?

Psychic abnormability is conditioned by imperfect development or physical deterioration. Irritation, sepsis, and degeneration too often lead the way through the mazes of nervous phenomena from slight alterations of thought, habit, and conduct to complete rational subjugation. This process is frequently somewhat tardy, and it is during this prodromal period, before thoughts and habits are confirmed, that we should most carefully interrogate the various bodily organs and functions, and endeavor to determine the presence of lesions that might in any way interfere with physiological harmony, remembering that insanity is the psychic sum of the physical abnormalities, and that, perchance, the removal of but a comparatively minor lesion may regulate cortical metabolism and restore the mental balance.

In this connection I quote a few passages from McMaughton Jones: "The connections between the vagina, uterus and ovaries through their nerve supplies, with the splanchnic nerves, and with the spinal cord in the sacral and lumbar regions, through the pelvic and hypogastric plexuses, anatomically explain many of the reflex phenomena that follow upon stimulation or irritation of the ovarian and uterine nerves consequent upon disease in the ovaries or uterus.

"The reflex connection between the mammary gland and the uterus, and between the sciatic nerve and the uterus, shows that this reflex association is established between the uterus and such a distant part as the nipple, and other peripheral nerve-trunks, as those of the sciatic.

"As examples of this, we may take the occurrence of varying shades of optic neuritis and retinal irritation in connection with suppression or irregularity of the catamenia; neuralgic pains in the eyeball associated with the menstrual epoch, neuralgia of the supra and infra orbital nerves, slight epileptiform seizures of the facial muscles, toothache and dental neuralgia, laryngeal migraine and functional aphonia, or paresis of the intra-laryngeal muscles, milder forms of hypertrophic rhinitis; and similarly, tinnitus aurium and vertigo, sympathetic neuralgia and temporary congestion of the mammae. As consequences of menstrual irregularities, we find irritation of the dorsal and lumbar nerves, painful spinal zones, herpetic eruptions of the skin, functional irregularity of the cardiac rhythm, gastralgia and nausea, slight icteric attacks, atonic or irritable states of the intestines, irritation of the bladder, with increased frequency of micturition, pains in the branches of the lumbar and sacral nerves; varieties of headache, and severe hemicrania. All such symptoms may be accounted for by reflex vasa-dilating or vaso-constricting effects produced by irritation arising in the uterus or ovaries, as the result of arrested or imperfectly discharged physiological processes.

"It is equally true that the ill-health of the uterus or ovary is frequently the first step in the general deteriorating process, and as it originates, so it maintains it. All we know of the phsysiology of uterine action compels us to regard the uterus and ovaries as the strongest links in the chain of the woman's health. Weaken them as you may from without or within, and you immediately, but fundamentally, touch all the mainsprings of her life."

With reference to the results of my work in this department, which has covered some seven years, my statements will be somewhat more conservative than those given expression to in the enthusiasm which greet the opening of a comparatively new field for therapeutic exploitation. Results, even beyond the most sanguine expectations in the early part of this work no doubt were capable of giving a bias to our judgment and influencing conclusions. This may have been a factor in my earlier discussions of this subject and has possibly led to the making of statements that to-day are to be modified. Yet the main contentions of seven years ago stand firmly established to-day, and it becomes in this department, as in all others of our profession, a matter of keen discrimination, careful judgment and skillful application.

It is satisfactory to note the ever increasing attention that is given to the matter of physical disease in the insane, and also the fact that many of the leaders in the profession both in America and Europe are agreed upon the important role that disease of the genital organs of women play as causative factors in the production of psychoses; and

coming nearer home I have to thank not a few of the profession of our own province for their appreciation and hearty co-operation in the work. There are yet those who ridicule, and a few who oppose. Of these it can be unprejudicially said that as a rule they are those who have given the matter very little consideration and have made no personal investigation.

Of the intricacies of co-ordination, association and inter-dependencies of the mind and body underlying our superficial observations, we know nothing. We do not dare to state that a given mental defect is conditioned by a corresponding physical abnormability, that an alteration of habitual conduct can be traced to a tangible physical disease; but what is paramount to this discussion is, does the lacerated cervix with everted membrane, the adherent omentum, salpingitic adhesions, cystic or fibroid enlargements, interfere with normal physical metabolism? If so, then let us show a willingness to remedy these conditions. With the mental phenomena as such we, as surgeons, have nothing to do except to hope for mental relief to follow the restoration of physical health.

ACUTE INTESTINAL OBSTRUCTION, WITH REPORT OF A CASE.

By W. J. MACDONALD, M.D., St. Catharines, Ont.

EVER since the days of Hippocrates cœliotomy for an obstruction in the bowel has been advocated, but as far as we can learn, never carried out in the early days. We are told that Praxagoras advised the opening of the gut, and establishment of a fecal fistula, but we do not read of his ever having so treated a case. This is very advanced treatment, and extensively practised in the present day in cases of great distention and extreme prostration, with an obstruction requiring a great deal of time and consequent shock in its removal, the actual obstruction being removed at a later date. If, however, he did not resort to the operative measures he advised, he used medical treatment much in advance of his time in the way of emetics and distention of the bowel by fluids and air. The first authentic and successful case of enterostomy for this purpose is that reported by Renault in 1787.

Nineteen years prior to the report of Renault's case we find recorded in vol. 4 of the *Transactions of the Royal Academy of Surgery of Paris*, published in 1768, the record of a successful laparotomy for the removal of a "twist" in the bowel. The Baroness de Lanti of Chatillon-sur-Seine was suffering intensely from what was diagnosed by a young army surgeon as a "twist" in the bowel, and was promised recovery if she would

submit to an operation. She consented, the "twist" was found and relieved, the intestine returned and the abdominal wall sutured. The patient recovered. A second recovery is recorded by Oesterdykins Schacht, in which the exposed intestines were kept warm with hot milk while the coils of intestine were being unravelled.

The authors of the seventeenth and eighteenth centuries, with a few notable exceptions, condemned the operation, and even in our own day, in spite of the mighty strides which have been made in abdominal surgery within the past few years, we have those who, when all medical treatment has failed, are unwilling to subject their patients to operative measures, believing that all means at their disposal have already been used to prevent a fatal issue. The operation, to within these last few years, has had no history, and to-day we have before us a field almost as broad, and one almost as ripe for advancement, as that which confronted us twenty years ago in the great field of appendicitis; but as we understand more and more of its pathology, and are thus able to arrive at an earlier and more accurate diagnosis, our present high mortality should be reduced by at least one half.

Based on the statistics of some of the larger European hospitals, we find that one death in every four hundred is due to mechanical obstruction of the bowel. Dynamic obstruction is responsible for a much larger percentage, because in a great many cases of the partial arrest of the intestinal contents, whether it be by compression, slight intussusception or from any cause whatever, dynamic obstruction and death frequently supervene from the inflammatory condition produced, or the accumulation of fermented matter and gases above the seat of constriction. In acute obstruction we find the majority of cases above the ileo-cecal valve, while the opposite is true of the chronic cases.

In all cases of acute obstruction the onset is sudden, though a feeling of languor and constipation may have been present for some days. From the beginning the symptoms are urgent, and the expression of the patient denotes the existence of an alarming condition. Spontaneous recovery from strangulation must be very rare, a very small percentage of cases of intussusception in adult life recover, and after a complete volvulus recovery is unknown.

Diffuse abdominal pain, usually severe, and often agonizing, is the first important symptom. The complete arrest of the intestinal contents produces, above the obstruction, a violent peristalsis in a vain endeavor to force a passage. This pain is present in every case, and though usually constant, may in certain cases, when the constriction is of an intermitting nature, be liable to exacerbations, and being referred, as a rule, to the epigastric region, its diagnostic value is indeed limited. Except in the milder forms of obstruction, the stoppage is complete, when with the

accumulation of intestinal contents, the pressure from within the bowel, and the exhaustion of muscular force, paresis is established and the pain subsides. Some indication as to the time occlusion occurred may be obtained from the time of the last normal motion of the bowels, for after the obstruction was complete, any contents which may be evacuated as the result of enemas, would only represent the contents below the seat of obstruction. In the milder forms of intussusception the intestinal flow will not be completely suspended, but in these cases the symptoms are mild as compared with acute cases, and are rarely confounded with the latter. The pain is not aggravated by pressure, but on the other hand diffuse pressure tends to relieve it.

If the constriction is located in the small intestine, and especially if near the stomach, vomiting supervenes very rapidly after the onset of the pain, frequently within a few hours. Should it, however, be situated at or below the ileo-cecal valve, the vomiting may not commence until the second or third day, by which time the intestines have become filled to distention with secretions, when, under the influence of the increased pressure from the intestine itself, and also the abdominal wall, the contents are evacuated by the only possible route. In this latter case the vomiting is more apt to be irregular, and the vomitus more fecal in character from the very commencement. This vomiting remains constant until the termination of the attack, even teaspoonsful of water, occasionally given to allay the thirst, will be persistently rejected. This condition is most distressing, as practically no relief whatever is afforded by the ejections, no matter how copious.

Tenesmus is sometimes present when the obstruction is in the large bowel. Fifteen per cent. of cases of volvulus of the sigmoid flexure, and fifty-five per cent. of acute intussusception produce it. It is also a frequent accompaniment to stricture of the large bowel.

Collapse, usually profound, is frequently an initial symptom. Several cases are on record of patients having fallen to the floor and been able to procure assistance for some time, so sudden and profound was that collapse, supervening on no further prodromal symptoms than vague abdominal discomfort. Sudden, profound collapse such as this, especially in the young and vigorous patient, suggests complete strangulation.

Fever is interesting because of its lack of importance. The most severe cases usually show a normal or subnormal temperature, though in about one-quarter of all cases fever may vary from one-half to one and one-half degrees.

Tympanites, always present, is sometimes much more marked than at others. It is of least importance in intussusception, most important in volvulus. Due to the accumulation of fluids and gases in the intestinal tract, its presence is early seen, and sometimes the dimensions reached

are enormous. Sometimes, though infrequently, it is accompanied by tenderness, which in turn has a certain diagnostic significance. Should the meteorism be slight, and the tenderness localized and circumscribed, the point of maximum tenderness may indicate the seat of obstruction, depending, as it does, upon the localized peritonitis produced in the neighborhood of the obstruction. More frequently, however, the tenderness is diffuse, and consequently of limited importance from a diagnostic standpoint.

In differentiating a mechanical obstruction of the bowel from certain other abdominal lesions, a real difficulty may be experienced. Acute general peritonitis may frequently simulate obstruction, though some phases of the clinical picture are very much contrasted. In obstruction the pulse is at first slow and full, becoming more rapid, wiry and irregular as septic intoxication and prostration ensue, while in peritonitis it is wiry and rapid from almost the beginning of the attack. In obstruction the temperature is normal or subnormal, while in peritonitis, except in the very gravest cases, it rises above 102 F. The most important single symptom is to be obtained from the condition of the abdominal muscles; in obstruction, pressure gives no pain, while in peritonitis, the pain thus produced is intense. In obstruction a limited amount of ascites may be present, while in peritonitis it is entirely absent. This sign is more important in the female because vaginal palpation will often reveal its presence, be it ever so little. In obstruction, pain may be intermittent, and is usually referred to the epigastrium, while in peritonitis it is never entirely absent, is much more severe during peristalsis, and is located over the seat of the inflamed peritoneum.

Acute enteritis closely simulates obstruction in every particular, save that in the latter the temperature is seldom above normal, while in the former it is likely to be high, or at least over 102 F. In every case of suspectd obstruction a careful search should be made of all situations where a hernia may be concealed. In appendicitis the vomiting is not so persistent, and does not become stercoraceous, constipation is not so complete, and the pain, which is at first continuous and general, quickly tends to localize in the right iliac region, and the tenderness becomes easily outlined.

Acute pancreatitis has not been infrequently mistaken for acute obstruction, for in both the onset is somewhat similar. In the former, however, there will frequently be discovered a rounded hard circumscribed swelling in the middle line of the abdomen midway between the umbilicus and the ensiform cartilage. Cyanosis of the face is always marked, while quite frequently this symptom may manifest itself in the abdominal wall. Flatus can generally be made to pass even if no motion can be obtained. In certain cases the two conditions may coexist, as the swollen pancreas

may so compress the duodenum as to cause complete occlusion. The presence of fat necrosis, pathognomonic of pancreatitis, may usually be demonstrated by a small exploratory incision.

When once a diagnosis of obstruction has been established, and the earlier it is made the greater will be the percentage of recoveries, no time should be lost in temporizing with medical means. No purgative should ever be given. if the obstruction is a gall-stone impacted in the jejunum, it wedges it tighter; if it is an intussusception, it drives it further; while if it is a volvulus, it turns it further on its mesenteric axis. Opium is useful in so far as it relieves the pain, thus lessening the shock. For this reason a hypodermic of morphia should always be given. It causes the cold, clammy condition of the skin to disappear, the temperature to rise, and the pulse to improve in quality; it relieves to a certain degree the tension of the abdomen, the facial expression returns from one of intense anxiety to comparative ease, and the quantity of urine which is sometimes severely diminished, is greatly increased: in short, morphia relieves the shock, and places the patient in a much better condition to stand a severe laparotomy. The lower bowel should be evacuated by a normal saline enema, so that nutritive and stimulative enemata may the more speedily have effect.

Case 16.—Acute intestinal obstruction. Laparotomy. Removal of large lumbricoid blocking ileo-cecal valve. Recovery.

On Sunday afternoon, March 6th, 1904, I was called to see a lad of fourteen suffering from severe abdominal pain. From the parents I received the following history: On the previous Friday morning, on rising, he felt nauseated, but after eating a fair breakfast, went to school as usual. On several occasions during the forenoon he asked to be allowed to leave the room because of abdominal pain and a tendency to vomit. He ate no dinner, and during the afternoon the pains continued, slightly increasing in intensity. As his bowels had not moved since the previous day, he was given, by his parents on his return from school, a tablespoonful of Epsom salts, which, however, had but slight effect. During the night he slept but little, but complained of great pain in the region of the umbilicus. On Saturday the dose of salts was repeated morning and evening, but with indifferent effect either time, only a small amount of mucus being passed. On Sunday morning repeated doses of salts failed to produce any effect whatever, and on account of increasing pain I was called to see him at five in the afternoon.

On examination I found the boy with a temperature of 100 F., and pulse 128. He was lying in the prone position with both knees flexed. The abdomen was tympanitic and tender. The point of maximum tenderness being in the middle line about two inches above the umbilicus. Rectal examination revealed nothing. At intervals small amounts of a

brownish fluid was vomited with a faintly fecal odor. A high enema of normal saline was given with negative result, this being followed by one of mag. sulph., glycerine and water, with no better success. Early on Monday morning the pulse rose to 140 and the general symptoms became rapidly more acute. Laparotomy was advised and performed at once.

The abdomen was opened in the middle line and the small intestine found to be greatly distended, while the large was flat, contracted and empty, and in color presented a somewhat lighter appearance than normal. An intra-abdominal mass was discovered at the junction of the ilium and cecum. On opening the bowel immediately above this mass, a pair of hæmostatic forceps was introduced, and a large lumbricoid eleven and a half inches in length, and of the diameter of an ordinary lead pencil, was withdrawn. The worm was rolled up in a ball, and completely occluded the ileo-cecal opening. The incision in the intestine was closed with a continuous Lumbert suture of silk, and the abdominal wall with layer sutures of the same material. An uninterrupted and speedy recovery followed.

CASE OF ACUTE URAEMIA IN WHICH DECAPSULATION OF THE KIDNEYS WAS PERFORMED BY DR. A. GROVES, OF FERGUS.

Reported by DR. A. M. EAST, of Fergus.

S—. G—., a girl aged 19 years, has always been delicate and subject to slight ailments. For the past several weeks she has complained of a sore back, of getting tired easily, of pained ankles and feet, and of pain behind the ears. She has been slightly sick at the stomach, at times, and her appetite has not been very good. She complained of her head feeling like bursting and of a pain over the heart. Insomnia has troubled her more or less and the last week she has been very irritable. The urine was not diminished in quantity enough to be noticed by patient until Saturday night, from then none was passed until after the operation, 12 o'clock the following Monday night.

Sunday she took a chill and this was the first symptom they considered serious enough for medical attention. At this time the patient complained only of headache and thought this due to an attack of the grippe. Sunday night the patient became very drowsy and so weak in the legs that she could not walk. Monday morning she did not waken, except at times on being aroused, when she woke only to a semi-conscious condition, and, at these times, was very irritable and wished to be left alone. Monday afternoon the pupils were found to be contracted

and later a convulsion occurred. Her own physician saw the patient for the second time Monday evening, when the pupils were markedly contracted and convulsions almost continuous, though not of such violent nature as in the afternoon. Soap sud and saline enemata were given and pilocarpine nitrate administered hypodermically. No urine could be obtained by the catheter. No œdema could be observed. Marked Cheyne-Stokes breathing was present. The temperature was 101° and the pulse beat 120. The patient was prepared for operation at her home and placed on an improvised table. No chloroform was needed.

An incision was made over the left kidney and the kidney exposed. The capsule was very tense and congested, the kidney substance showing through it a mottled appearance. The capsule was incised the whole length of the outer border, the tenseness causing the edges to separate widely and the cortex to protrude. The kidney was extremely congested and bled profusely. The capsule was well separated by passing the fingers completely around the kidney. The right kidney was now exposed and decapsulated in the same way. It did not show the mottled color nor was it as congested as the left. Both wounds were stitched up and the patient placed in bed. Directly after the operation, the breathing was noticed to be easier than before. The temperature rapidly rose to 104° and the pulse beat could just be counted at 160. The patient all this time was bathed in perspiration, which stained the sheets. Five hours after the operation one dram of urine was passed per catheter, at the end of six hours half an ounce, and at the end of seven hours the same quantity. Throughout the next day and night the temperature remained high, 105°. Pilocarpine was administered hypodermically, hot packs and saline enemata were given, and cold applied to the head in the form of a snow cap. Considerable rigidity of the muscles was observed, at times, and some twitching. Water was given per mouth at short intervals, one dram at a time. This the patient did not always swallow, but it was persevered in until several drams at a time were taken. The urine was increased slightly in amount at each catheterization; and, forty-eight hours after the operation, the patient was in a semi-conscious condition. On the second day after the operation, the quantity of urine voided in twenty-four hours was eleven ounces, the third day it was twenty-two ounces, and the patient was quite conscious. The fourth day twenty-six ounces were passed.

The quantity of urine in twenty-four hours decreased for several days, dropping to twelve ounces, and then increased again when no account of it was taken. The temperature fell to normal on the second day, the patient making a rapid recovery.

CONGENITAL UMBILICAL HERNIA.*

By P. E DOOLITTLE, M.D., Toronto.

ON the morning of November 8th, about 9.30, I was summoned by Dr. John Noble to come at once to St. Paul street, and be prepared to replace some intestines in a baby. I supposed it was a case of prolapsed rectum in a young child, but was quite unprepared for what I found, which was a new born baby with its entire intestinal tract from duodenum to sigmoid flexure, lying partly in and partly out of a ruptured sac, which latter was attached to the infant's belly at the usual site of the navel. On examination, the cord was found to terminate in the wall of the sac about six inches from its attachment to the child, while its vessels passed through the sac wall and continued, free of cord tissue for five or six inches, to their attachment to the small intestine. The infant was well developed and well nourished, and presented no other abnormal appearance, except that the anterior abdominal wall lay quite flat instead of presenting the usual rounded outline. The sac containing the intestines had ruptured during its entrance into the world and the intestines had been kept warm by the application of towels wrung out of boiling water, which had been kept applied during the hour that elapsed before I reached the bedside. The opening connecting the sac with the abdominal cavity was about three-fourths of an inch in diameter, and was almost completely filled with the section of the large and small intestines and the intervening mesentery, an opening not larger than a slate pencil being left. The intestines were covered with a soft mucous exudate organized in places into bands which bound the mass together with many adhesions, and were of a dull red hue presenting the appearance of of passive rather than active congestion.

To place them en masse through an enlargement of the abdominal opening, in my judgment, could only end in disaster, as the abdominal cavity, developed without intestinal contents, was quite too small to retain them, without such an amount of bursting pressure as would prevent the abdominal wound being closed and held closely till union could occur, while on the other hand if the intestines could only be worked back through the small opening they could probably be retained. With this latter object in view, after sterilizing my hands, I started with the duodenal end of the small intestine and, nipping about half an inch of it under the index finger of my right hand, I cautiously pushed it into the small opening, the left index finger retaining it there till the next section was pushed down upon it, and in this way I proceeded, gaining half an inch at a time, till in a few minutes I could see a distinct impression had been made on the mass. The infant did not seem to very much

* Read before the Toronto Medical Society, December 7th, 1905

disturbed by the manipulation, so no anæsthetic was given. When the abdomen became especially tense by the child's crying, I desisted till it was quiet again. The intestines and my hands were kept covered with the hot towels, the work being done by the sense of touch mainly, and the adhesions were broken down as they presented themselves at the opening. Beyond being very tedious, no especial difficulty was experienced till I reached the caput coli and, although the opening was enlarged by the absence of the mesentery of the small intestine, yet it was with considerable difficulty that this larger mass was forced through. the rest of the large intestine was replaced without much trouble, and, with the replacement of the last section, I found that the end of my index finger made a firm plug with the vessels emerging along side of it.

An examination of the empty sac showed that the skin was reflected upon it for about one-third of an inch, where it merged into semi gelatinous tissue, much after the appearance of that of the cord, but having blood vessels from the child running some distance into it. This reflected skin made a good sulcus for the strangling cord. In changing my finger for Dr. Noble's, a section of the small intestine to which the cord vessels were attached popped out and on inspection, showed that a prolongation from the intestine the still patent omphalo mesenteric duct extended for several inches with the vessels. With this again replaced, I tied the vessels at about two inches from their intestinal attachment and cut them off, a little meconium escaping from the end of the duct; and, with a cord made up of a great many untwisted strands of thread, I slowly closed and puckered the opening till it contracted down to the vessels, but not drawn tightly enough to strangle the skin. I then cut away the sac walls, leaving a generous button behind. This was liberally sprinkled with bismuth formic iodine and a pad soaked in alcohol (whiskey) was applied, and over this a firm binder.

The child had become quite livid during the latter part of the operation, but its breathing was regular and good. An hour and a half had been spent in reducing the bowels, making two and a half hours in all that they had been exposed. As I was required in my office I hurried away, but in revolving the baby's chances in my mind, if it had any, I realized that the intestines, which had been bound by at least a score of adhesions, and were covered with plastic exudate, would quickly become agglutinated again, and that any twists or strangled parts would soon be permanently closed. I, therefore, at once communicated with Dr. Noble, and, at my suggestion, he gave the infant half a grain of calomel every twenty minutes for three doses by the mouth, followed by a rectal injection of Epsom salts. A movement followed the injection, and half an hour later there was a second free movement. A little mucous and greenish liquid was vomited during the latter part

of the replacement, and a regurgitation of greenish liquid occurred during the day. On his visit the next morning, Dr. Noble found the child's tongue very much swollen and protruding out of its mouth, giving the expression of cretinism. The vomiting ceased, and the bowels moved again, showing that the alimentary tract was open. The doctor asked me to continue in charge of the baby. A very little sweetened water only was given on the second day, and, on the third day, with a free flow of milk, the baby nursed heartily. On my visit the following morning I found the penis and scrotum very much swollen, when I instructed the nurse to slacken the binder a little. I visited it again two days later and found that the loosened binder had not relieved the anasarca, and that the scrotum had given way on the right side with a free serous discharge, with some relief to the engorgement. On the following day, the left scrotum gave way similarly, but only a small opening was produced, which in four days more had healed. The dropsy rapidly subsided and quite disappeared. The swelling in the tongue commenced to subside about the sixth day and, by the tenth, the tongue was but little larger than normal.

The baby nursed heartily till the sixth day, when the mother developed a septic thrombosis, its natural food being suddenly cut off. This was a sad blow to my hopes of saving the infant's life, and I concluded that modified milk would be the next best thing to the lost supply, so I at once put it on a food consisting of a whey base with half per cent. casein, three per cent. fat, and six per cent. sugar. This food agreed perfectly and is still being continued. On dressing the navel the third day the nurse noticed fine bubbles of gas exuding, and the same occurred for several following days. The navel button remained organized and, on the twelfth day, I passed a small ligature round it and strangled its blood supply, cutting it away two days later. Considerable serum cozed from the navel from the first and a very little still continues. Its weight, twenty-four hours after birth, was ten pounds three ounces, and it steadily lost for three weeks, since when it has gained, till two days ago it weighed a shade over ten pounds. Age of mother thirty-eight years. Three other children, aged two, four and six, all healthy and well developed at birth. Nothing abnormal in family history of either parent.

The extern staff of the Toronto General Hospital handed in their resignations a few days ago to Dr. J. N. E. Brown. The trouble arose out of a regulation requiring them to take their midday luncheons outside of the hospital. It was arranged they should receive their luncheons when appointed.

THE CLINICAL RESULTS AND THE APPLICATION OF ANTI-TUBERCULOUS SERUM.

A Lecture delivered by Dr. ALEXANDER MARMOREK, before the Societé de Therapeutique. December 13th, 1905

Translated from the *Bulletin General de Therapeutique*, December 30th, 1905, by A. J MACKENZIE, B.A., M.B., Toronto.

TWO years ago, in our first communication on the serum, we said: "We are only too ready to admit that a much greater experience than ours, carried out on a much wider scale, is necessary for the rendering of a definite judgment on the value of our serum."

The summary and hasty judgment then pronounced upon our discovery did not prevent our carrying out the plan originally proposed, of submitting the new remedy to the rigorous objective examination of a large number of clinicians. This test, thorough and extended as we desired, is completed to-day, for we did not succumb to the reception given at that time. During the past two years the serum has been used by a large number of physicians. To-day twenty-seven publications from different countries report results arrived at by different investigators; we find observations, for the most part in detail, with regard to 350 patients treated with the serum. This respectable number is exclusive of a large number of observations which have not been published because no exact conclusions were arrived at. These results are the more valuable because we have always insisted that the first cases chosen for treatment should be those seriously affected, or those in whom the disease progressed in spite of all therapeutic measures. Although this procedure has resulted in a certain degree of annoyance, our opinion remains unchanged that for him who would make a serious and scientific trial of a new remedy against a disease so chronic as tuberculosis, there is only one course to follow, and that is to treat at first only those patients who present well-advanced lesions. Our reason is, that many light or beginning cases are subject to spontaneous amelioration, and so are not so well suited to prove the value of the serum treatment as when it is introduced by a preponderance of graver cases. We were misunderstood in this. Almost always, there were chosen in the first period cases too far advanced, in which the condition was desperate, and interpreting falsely our idea, which was suggested by reasons scientific, but we must confess, not politic, the experimenters have hastened to a definite and unfavorable conclusion from a small number of cases, and have denied to the serum any curative value whatever.

We have counselled the clinicians, who for the past two years have undertaken the difficult task of testing the serum on the tuberculous, that they should use it on those cases in which all other methods have proved unavailing; for example, those who retain their febrile condition in elevated sanatoria, or who do not manifest any signs of improvement.

Briefly, we wished that such a choice of patients should be made as would not facilitate our task, but would, on the contrary, submit the serum to a rigorous test, the results of which would not offer any opportunity for an equivocal interpretation. We believe that satisfactory results obtained under such conditions, would justify the conclusion that the serum, and it alone, had produced the fortunate change and that by excluding other treatment one could justly consider the specific action of the serum as the sole cause of the amelioration and the disappearance of the morbid syndrome. It is only recently, when the curative effects already observed had formed convictions favorable to the serum, that the field of treatment was enlarged and the remedy was applied to cases in the initial stages. This is the reason that one finds but few such cases in the publications we cite. The good effects which were rapidly obtained in these cases form, however, a useful supplement to the series, and on the other hand, some cases treated *in extremis*, permit one to fix the physiological limits of the serum treatment.

One finds in the publications, which serve as the basis of this *resumé*, almost all the forms of tuberculosis and all the phases of the malady. One meets, however, most frequently, cases in a stage of invasion, advanced, often serious, often even desperate, which, according to all clinical evidence, do not present any possible chance of amelioration. Conclusions derive support from this diversity of character, and as well from the diversity in person of the investigators. These united results form the impersonal conclusion that we desire, in anticipation, to express in the formula: The antituberculous serum is a specific remedy; it has an undeniable curative action.

We are going to pass in review before us, gentlemen, the results observed, in order to understand the technical method and the mode of employment throughout this experiment, so long and patient, which have brought the serum to the form which we accept to-day. The majority of those treated have suffered from pulmonary complaints. In choosing cases more or less advanced, according to our instructions, the physicians were not able to rely upon speedy cures, the more so since the time during which the diseased were treated with the serum was almost relatively too short. And even in spite of the complete disappearance of the pathologic symptoms, as the physicians have often had occasion to observe, they have prudently hesitated, and with just reason, to pronounce the word cure, because the time passed since the cessation of the treatment does not exclude the possibility of return. For these reasons it would be a mistake in studying the results of the serum treatment to divide them grossly into two classes, "cured" or "not cured." We have a more delicate method, consisting in a detailed examination, of demonstrating in a salient fashion, the specificness and the real value

of the seric action; we decompose the morbid syndrome into its elements and we study the effects of the serum upon its principal symptoms; the fever, the dyspnœa, the general state, the quantity of sputa and bacilli, the organic alterations which are determined by auscultation and percussion. If we recall the state in which the majority of the patients were before treatment, and read that those in charge were warned against all change in regime, and especially against superalimentation, in order the better to judge of the effects of the serum, in brief that the patients have been submitted to the action of the specific medication alone, one must confess that the favorable influence takes a particular significance, and attains sometimes the definiteness of an experimental demonstration.

It is impossible for me to give you here extracts from these numerous publications, which are cited in the bibliography. In reading them one gets the clear idea of slow evolution in knowledge and the progressive development of method; one understands how difficult it is to arrive at a judgment, and one conceives the timidity of the first favorable opinions. Little by little for each observer the number of patients increased, and in the same period experience was augmented, and conclusions took a more decisive form.

Permit me to cite for you the most characteristic figures we extract them from the works of authors who have made a great number of observations, and who, by appeal to previous publications, have shown that they profited by former experiences.

M. Dubard, of Dijon, has treated 35 patients, of whom only 19 have been kept sight of long enough. Among these, five were in extremis, three of them are dead, two are still there. Moreover, one of the deceased suffered from laryngeal lesions, causing dysphagia, but after twelve or fifteen injections of the serum he was able to eat without pain, and laryngoscopic examination revealed improvement (diminution of the infiltration and cicatrization). Four grave febrile cases with bilateral lesions have been treated. Amelioration was manifest in all, and in one there was complete disappearance of all symptoms, objective and subjective.

Among three cases of surgical tuberculosis, two presenting enlarged glands of the neck have been completely cured by the serum, the third, (sacral osteitis) presents a noticeable improvement, but refuses to have a sequestrum removed, which is the cause of continued suppuration.

M. Veillard relates 22 cases of pulmonary tuberculosis of which the treatment has been undertaken at the sanatorium of Clairmont-sur-Sierre, in Switzerland. All these patients were inmates for a long time before the commencement of this treatment without showing any signs of improvement. Seven were in a very bad pulmonary condition and left little room for hope; several, already in an advanced stage of tubercular

cachexia, presenting the prognosis of a fatal termination at a near period. In the case of one of these patients with extensive cavitation, the serum caused an appreciable amelioration in the state. Among nine patients, gravely affected, three showed great improvement, two noticeable improvement, two remain in the same condition; in the case of these the serum treatment had to be interrupted on account of an intolerance. These two who showed the intolerance have been benefited, nevertheless, in the sense that later after the cessation of the injections, an appreciable amelioration was noted. Six patients in a condition less grave, although with cavitation or with complications, either pleural or intestinal, accompanied by a bad general state, gave the following result: in the case of four, diminution or disappearance of the expectoration and of the number of bacilli; their pulmonary lesions noticeably improved.

M. Lewin, of Stockholm, reported to the Congress of Tuberculosis the most extended statistics, as follows: 156 cases treated in Scandinavia; 128 of these were suffering from pulmonary affection, 15 in the first stage (according to Turban's classification), 49 in the second, and 64, that is 50 per cent., in the third stage. Among this number, the serum was injected 17 times at least, while 51 received only 10 or 12 injections, and consequently have not been treated in a continuous fashion. The first group gives 65 per cent. improvements, noticeable in the totality of the symptoms studied, viz., general state, appetite, dyspnœa, percussion, auscultation, fever, weight, expectoration and bacilli; 26 per cent. remained in the same state, and 10 per cent. presented, in spite of the treatment, an advance of the malady.

In the second group, there is noted 40 per cent. of noticeable improvements, 44 per cent. remained in the same state, and 16 per cent. showed a progression in the morbid process. You will notice, gentlemen, in making comparison between the figures of these two groups, how important, from the point of view of the results obtained, has been the length of the period of treatment.

Stephani publishes the results of a year's practical experiment at the sanatorium of Montana, Switzerland. He recounts 17 observations of patients treated, all seriously affected by the bacilli and all resistant to any therapeutic measures. Stephani considers the following results as being due to the serum: recession of pulmonary foci newly formed, rapid disappearance of pleural friction sounds recently appeared, fall in a temperature curve obstinately maintained. Nine times out of 17 this amelioration was noticed. In seven grave cases of tuberculosis of rapid and spreading course, five times the malady has been arrested in its course. He adds, "Although the serum has brought some patients to a state of health our observation was too short to speak of an absolute cure."

We wish, in addition, to quote the statistics given to us by Dr. Waller, physician to the sanatorium of Holahult, in Sweden. These patients are in the number which served for the statistics of Lewin, but the results in detail are given because 77 per cent. belong to the third stage of Turban. Eight patients have received 22 to 24 injections, the 18 others 11 to 14 injections. The following is the list:

General state,	75%	improved in the first group,	56%	in the second.
Appetite,	50	"	39	"
Dyspnœa,	63	"	50	"
Percussion,	25	"	11	"
Auscultation,	38	"	39	"
Fever,	38	"	33	"
Weight,	38	"	56	"
Sputa & bacilli	75	"	44	"

One sees that the figures given for the fever and auscultation are almost identical in the two groups. One is able to arrive at the conclusion that the first effects of the serum show themselves rapidly, other effects are slower and it is necessary to continue the treatment long enough to see all the symptoms improved.

From the point of view of the antifebrile action of the serum, we quote these two interesting series. They have been published by MM. Jaquerod, of Leysin, and Frey, of Davos. They have treated by subcutaneous injections of serum seven cases of advanced pulmonary tuberculosis, which had remained stationery in spite of a long sojourn in a sanatorium at a high altitude. In the case of the seven the fever fell from the time of the use of the serum. Frey used it first by the subcutaneous method and, among 8 cases so treated, 5 became afebrile. In the case of 16 other patients, in whose case he used the serum by the rectal route 15 times, the result was positive and complete. It would take too long to enter into the details of other work, as of Latham, of London; Richer and Lemieux, of Montreal; Muller, of Budapest; Klein and Jacobson, etc. They report analogous results although founded on a smaller number of cases. One finds in this bibliography, however, some rare cases in which the definite cure obtained gives a striking proof of the efficacy and specific action of the antitubercular serum. Such is the case of acute pulmonary tuberculosis in a young woman, complicated with bacillary laryngitis, and the almost unique case of tuberculosis of the bulbar conjunctiva with rapid invasion of the cervical glands. M. Schwartz, of Gleiwitz, has obtained in these two cases by the injection of serum, a complete restoration. I would also like to mention the case of which I have received the description last year in a conference at St. George's Hospital, London. It was that of a young man affected with

tuberculosis of the lumbar vertebrae with multiple stercoral fistula, glandular suppuration and cutaneous ulceration. This patient was healed after 27 injections, and this complete cure is maintained to the present day, after two years of cessation from the seric treatment.

On the whole, one is able to say that the observation of surgical tuberculosis shows us very frequent cures. If we review the cases published by Bassano, of Ventnor, Lewin, Jaquerod, Richer, Latham, etc., we will conclude that the satisfactory results show a proportion of 80 to 100 per cent. The forms treated were diverse: epididymitis, arthritis, osteitis, adenitis, etc. The first symptom which improves rapidly and in a constant manner is the pain. One notices in succession the diminution of suppuration and infiltration about the diseased focus, the cicatrization of obstinate fistula, etc. We do not wish to insist too much, but each of these observations brings us a new proof of the general and specific action of the serum, and all these united give to the reader confirmation of the judgment which we have made above.

Gentlemen, one of the greatest difficulties during this long experiment was to find, after much groping, the best method to follow in the application of the serum. Already at the outstart we have clashed with the phenomena of intolerance in patients. These phenomena showed themselves only after a number of injections, in the form of erythemata, urticaria, arthralgia, etc., they increased with the continuance of the treatment. This showed that an injection itself did not cause any damage, but that it was provoked by the accumulation of injections. A great deal of patience was necessary to overcome these obstacles and they were too much for a number of physicians. These accidents with the serum at the beginning—as, for example, those published by M. Zelony concerning three patients—were very often the cause of the interruption of the treatment, or left in the mind an unfavorable impression. Such phenomena were then little known, because up to that time a chronic malady had never been treated by injections of serum. We commenced to study them and concluded that injections at first painless and leaving no trace at the place where they had been practised, became sensitive and even painful with repetition. After a large number of injections one was able to notice a local infiltration, redness or œdema.

We tried to remedy this state of affairs by interposing a day between two injections; this was an advance, but still insufficient. We soon understood that there was in the skin a growing hypersensitiveness to the incorporeal substance. Laboratory experience had showed us that such was manifested by animals toward other antitoxic injections and even to normal serum. This led us to suspect that the cause of trouble was not the specific substance contained in this serum, but the albuminoids contained in the serum of the horse. All these phenomena were

made the subject of a profound and interesting investigation by MM. Pirquet and Schick, and MM. Arthus and Marfan. These were the first to make known to us the intimate chemism known to-day as anaphylaxia. But we ourselves had to find the way to obviate it. Clinical experience showed us that at the end of ten or twelve injections this sensibility attained its maximum; on the other hand, experiment on the rabbit showed that the reaction of the organism against a new injection was lost after three weeks of rest. These two facts suggested to us that one should proceed with a series of injections as follows: inject a dose every second day for three weeks, and then cease for three or four weeks; by the adoption of this method there has been a diminution of the accidents. It is true that one may still see erythema, localized or general, but there are no painful symptoms causing interruption of the treatment, and one observes nothing more than a passing inconvenience.

This method is suitable to almost all cases and has shown happy results in practice, but while it is given as a rule to be followed generally, it must be adapted to the requirements of particular cases, while following the general lines, but the periods of repose should not be abridged. It is only for the very grave cases with rapid advance which bear the serum treatment well and with few symptoms of anaphylaxia, that one can give the first six or eight treatments daily. Later, when the first period of treatment is over, we should follow the ordinary rule. We set out carefully with doses of 1 to 2 c.c., which were found insufficient, and we increased gradually to doses of 5, 10 and 20 c.c.; we consider to-day the dose of 5 c.c., repeated every two days, as sufficient in the majority of cases, while it can be doubled in grave cases without inconvenience. Just lately a new mode of employment has been instituted, which appears as if it would supersede the old, and which may open a new era in the application of all sera, this is the rectal method instituted by MM. Frey, of Davos, and MM. Mannheim, of Berlin.

They have had the idea, independently of one another, of abandoning the subcutaneous injections, because they met with too many symptoms of intolerance in their patients. Their first attempts gave them very encouraging results, and to-day this method is spreading rapidly and gaining every day more partisans. There is here no subcutaneous reaction to fear, the phenomena of hypersensibility no longer exists, there are no accidents from anaphylaxia. This recalls a communication of Widal who from his experience is of the opinion that the phenomena of anaphylaxia cannot have their origin in the circulation but in the skin. In fact it has been possible in support of this theory to introduce by the rectal routs without interruption for weeks the antitubercular serum, and the patients have experienced no malaise and there have been no signs of anaphylaxia. Sometimes they have noticed a little intestinal

irritation, but as a rule the mucous membrane tolerates the serum well and absorbs it readily. The therapeutic effects that they have observed seem to prove that the whole of the antitoxin enters the circulation. In having recourse to this method they have gained yet another advantage, for they are able to keep the organism for a long time continuously under the influence of the serum; there is one drawback, there are patients upon whom the rectal injections have no effect. After all our experience we can explain this only on the assumption that the serum fails to pass through the mucous membrane. For these cases the subcutaneous method should be tried. The actual reports, although very affirmative, are not yet numerous enough to fix the place of the method in therapy, it is necessary for this to await the results of a larger number of experimenters. The method is easy and appears exempt from the inconveniences inherent in hypodermic therapy, it has already triumphed over much of the hesitation which is ordinarily manifested toward subcutaneous injection. Is it destined to replace the latter in serotherapy? One cannot say as yet, but all the appearances are in its favor. Within the limits of precise indications it certainly renders great services. Already the first results assign to it a place that must be ceded by the subcutaneous method; in the presence of very grave forms, for example in the case of miliary or meningitic tuberculosis, one would not hesitate to use very strong rectal doses administered every day, for this is the only method which permits one to introduce into the body for a long time doses much larger than the ordinary. These are from 5 to 10 c.c., introduced daily by means of a syringe furnished with a sound; this can be continued for 12 or 15 days, then a respite of 8 to 10 days.

Gentlemen, during two years, there have been made more than 40,000 injections of this serum, which proves at least its innocuity. There exist only then the contra-indications to its use. You have seen that it is used in all phases of the disease; its use is so easy that it does not impose upon the patient any change in his ordinary life, they go and come, and they continue their ordinary occupations without the least uneasiness. We have already ourselves shown the possibility of the treatment of the tuberculous without the necessity of hospitalization; M. Dubard has realized on his side the treatment of the poor sick who come to his dispensary without interrupting their work. He closes his communication with the following words: "I insist on this point, that no one of my patients has to change his mode of life, some even go on with their trades. This suggested to me the idea that one would be able to to make use of the dispensaries in order to apply this treatment to the sick who frequent these establishments." And M. Dubard has employed exclusively the subcutaneous method.

You will find, gentlemen, in several of the works cited the words "serum double." This demands an explanation. This serum is active against both the bacillus of Koch and the streptococcus. It is known the part the latter takes in the pathology of tuberculosis, it is known how it frequently shows itself as soon as the ulceration shows itself in the lung, and how it plays a part in causing hectic fever. It was therefore natural to attempt to combat its effects by the action of antistreptococcic serum. It has been tried simultaneously with the antitubercular serum, and it has been found that those patients in which both germs had appeared were more favorably affected by the combination than by the one alone. When this was determined we undertook the immunization of the same horse against the two germs. Such a double serum gives us the best results in the cases attended with hectic fever.

One question suggests itself at the close: How long should the treatment of a case of tuberculosis last? How often should one repeat the series of treatments? The answer to this depends naturally on the nature, the extent, and the gravity of the affection. And the number of injections will depend on this entirely. The two extremes in our experience were 8 and 77; 8 sufficed to cure a case of tubercular osteoarthritis of the sternoclavicular articulation, 67 injections were necessary to definitely conclude the cure of the febrile pulmonary tuberculosis, with a small cavity and laryngeal ulceration. It seems to us that the series should be continued repeatedly, increasing the spaces more and more, so long as there are morbid symptoms. We should add, and this concerns the pulmonary form, that we should continue so long as there are bacilli in the sputa; their continued presence in the pulmonary passages after the complete disappearance of other morbid signs, appears to us to demonstrate that they are transformed into veritable saprophytes. In this they resemble the diphtheritic bacilli, of which the presence persists in the throats of children after they are completely cured of croup; but it is probable that the bacilli momentarily innocuous for their host, are able to recover their virulence and cause a relapse. For this reason the serum treatment should be kept up until the bacillus of Koch has for some time been absent.

This is the balance-sheet of this two years' experiment, which would not have been possible in its extent were it not for the collaboration and good will of so many of our confreres. We owe to them a recognition, sincere and profound. Their results have given a place in the arsenal of therapy to this serum so long decried. The results obtained so satisfactorily already, will, we feel assured in saying after all that precedes, be still better in the future, when the serum is applied to cases slight or beginning.

Gentlemen, the era of experiment seems to us to be completed, that of practical application commences.

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills, Que.

The report of the superintendent of the Royal Victoria Hospital, presented at the annual meeting of the institution, shows a number of interesting figures. There were 3,093 patients treated during the year, an increase of 39 over the previous year. Of these 1,729 were Protestants, 1,118 Roman Catholics, 211 Hebrews and 35 of other faiths. The free patients numbered 1,631. The total days of hospital treatment aggregated 71,194, as against 74,777 in the preceding year, a decrease of 3,583 days. Other figures were given as follows: On January 1st, 1905, there were 174 patients in the hospital remaining from 1904 and during the year 3,085 were discharged, of whom 1,348 were cured, 1,098 improved, 184 not improved, 278 not treated and 182 died. There remained in the hospital on December 31st, 1905, 189 patients. Of the 182 deaths, 57 took place within 48 hours of admission. The death rate for the year was 5.89 per cent., or deducting those who died within 48 hours after admission, 4.05 per cent. The highest number of patients in the hospital on any one day was 219, on Feb. 24th, and the lowest 166, on July 18th. The highest monthly average was 212, in February, and the lowest 178, in July. The daily average for the year was 195, as against 205 for the previous year. The ordinary medical work of the hospital was interfered with to some extent during the year by the extensive building operations conducted. The number of patients was restricted and the cost per day increased, two wards being practically out of use most of the time. During the twelve years that the hospital has been in existence 29,682 patients have been admitted to the wards for treatment. In the outdoor department the total number of treatments was 24,872: medical, 8,587; surgical, 4,988; eye and ear, 4,524; nose and throat, 5,633; diseases of women, 1,140.

The income for the year was $160,591, while the ordinary expenditure amounted to $124,547, the balance of $36,043 being applied to the reduction of the indebtedness incurred by the new buildings and other additions. The total cost per day per patient was $1.75; the cost per day of maintaining each person in the hospital—staff, servants, employees and patients—being 93 cents and the daily cost of provisions for each person 23 cents.

The following appointments were made to the medical staff:

Dr. J. W. Stirling, ophthalmologist to the hospital, in succession to the late Dr. Buller.

Associates in medicine: Drs. Fry, Cushing and McCrae.

Clinical assistants in medicine: Drs. Burnett, McAuley and Russell.

Clinical assistants in neurology: Drs. Robertson, Robins and Russell.

Clinical assistant in ophthalmology: Dr. Tooke.

Clinical assistant in gynæcology: Dr. Goodall.

Clinical assistant in laryngology: Dr. Hamilton White.

Registrar: Dr. Cushing.

Assistant registrar: Dr. McAuley.

House pathologist: Dr. Klotz.

Assistant in x-ray department: Dr. Cram.

At the annual meeting of the Western General Hospital the following reports were read:

The number of patients treated was 524 and the number of consultations in the outdoor department was 6,698. In order to provide urgently needed accommodation the Board of Governors had decided to proceed with the erection of one wing of the new building, sufficient to accommodate 100 beds, and it was hoped that this building would be ready for the reception of patients before the year was out. The lady superintendent reported that the number of nurses was 16. Ninety-six applications for admission to the training school had been received; 15 probationers had been admitted, and eleven nurses had graduated. The treasurer reported total receipts of $21,405, and total subscriptions for the new wing $13,895, leaving about $50,000 to be collected this year.

The net liabilities apart from the new building amounted to $1,081, as compared with $7,700 last year, and the outstanding accounts, compared with 1904, showed a reduction of nearly $2,000, so that the financial position was gratifying and encouraging..

During one week in February 29 case of typhoid broke out in the city, which is a good deal higher than the ordinary rate. The other cases of contagious diseases are comparatively few; diphtheria, 4; scarlet fever, 10; measles, 20; chicken pox, 3; whooping cough, 7; tuberculosis, 21.

At the Montreal Medical Society the following papers were read:

"Demonstration of New Apparatus," by Dr. I. W. Hutchison. (1) bed cage; (2) abdominal bandage; (3) extension splint.

Pathological specimens:

(1) Cerebelian tumours; (2) papilloma of bladder.

"Some Points in the Physiology and Hygiene of the Vocal Organs," Dr. Wesley Mills.

"Automobile Fracture," Dr. Archibald.

The annual banquet of the McGill Medical Faculty was held on February 13th, at the Place Viger Hotel, and was a most successful function.

The guest of honor was His Excellency, Earl Grey, and the dining room was decorated throughout with mottoes, coat-of-arms, crests and other insignia of the Grey family as well as with the crests of McGill and her sister universities.

Mr. W. L. McDougall, '06, presided, and at the table with His Excellency were Justice Archibald, Principal Peterson, Dean Moyse, Dean Roddick, Dean Bovey, Dr. Shepherd, Dr. Wesley Mills, Dr. Birkett, Dr. Armstrong, Dr. Martin, Captain Trotter, Col. Hanbury-Williams, Dr. Girdwood, Capt. Newton, Dr. Yates, Dr. Wilkins, Dr. Bell and Dr. Starkey.

The loyal toast having been given by the chairman, who referred to His Majesty the King as "the world's peacemaker," and enthusiastically honored, Mr. McDougall proposed "Our Guest," in a happy speech. In his reply Eary Grey followed a humorous vein practically throughout and time and again caused roars of laughter to rise from the assembled students. He gave a hard hit at patent medicines in the course of his speech. He stated that he bought a bottle of Peruna a short time ago and sent it to an analyst who reported that it contained 40.5 per cent. of proof spirit. He mentioned the crime of the soothing syrup habit and said that although he believed many of the medicines advertised were harmless yet he thought that in order to protect the lives of the people that the medicines containing alcohol and other potent drugs should have the percentage of these drugs printed conspicuously on the label. Before leaving the dining hall His Excellency expressed a desire to hear one more college song and McGill was rendered with a right good will by the students.

Mr. Donnelly proposed "Old McGill," and Dr. Peterson replied as well as Justice Archibald. The other toasts were "The Dean," proposed by Mr. I. S. Sheahan and replied to by Dr. Roddick; "The Faculty," by Mr. O. S. Waugh, responded to by Dr. Shepherd; "Sister Universities," by Mr. Fraser, responded to by representatives of Toronto, Queen's, Laval and London; "Class '06," by Dr. Martin, to which Mr. Munroe replied; "The Freshmen," by Mr. Hunter, replied to by Mr. Kelly.

"God Save the King" and "Auld Lang Syne" completed a memorable evening to the students present.

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, February, 1906.

CATARACT AND OPTIC NERVE ATROPHY.

Dr. John P. Martin, of Hamilton, has a short but interesting article upon the foregoing subject, based on the report of a case. The patient, a woman of 32 years, when two years old had her left eye punctured by a stick. It atrophied and became blind. Two years later she began to lose the sight in the right eye. When she came under the care of Dr. Martin she could not discern light from a 16-candle power lamp. The patient had a cataract of the right eye. The doctor informed her that an operation would not likely benefit her sight. After much solicitation on the part of the patient he removed the cataract. She gradually regained her sight until she could write and read with suitable spherical and cylinder lenses. This case teaches more hopeful prognosis in cases of lost light perception.

MEDICAL THOUGHTS, FACTS AND FANCIES.

This interesting paper is by Dr. Sprague, of Stirling. He gives a very instructive instance of cutting fees and points out the evil of such a course.

A sharp shaft is thrown at those who recommend so readily—even medical professors—many of the preparations on the market. It is rearing a system of commercialism in the temple of Hippocrates.

A protest is raised against some of the men who enter the study of medicine. It should have none but the best.

He strongly urges the study of the fathers in medicine. From their lives much valuable information may be learned on the proper method of life, and how to overcome difficulties such as beset their paths.

Some keen criticism is offered on the custom with some young doctors in towns and villages securing for themselves large castles to live in. Such has often proved their downfall, and has forced them to leave the place, or even the profession. Patronage is fickle.

A protest is entered against those who practise medicine purely from the greed of gain. Such men degrade the profession and undo the high standard to which better men have raised it. The suggestion is thrown out that in time the state may determine in some way who should study medicine. In the meantime they should be purified by a good classical education. The profession is even calling for the ideal man. "It is no mean thing to have been born the possessor of much virtue," said Weir Mitchell of Osler.

The Dominion Medical Monthly, January, 1906.

CHRISTIAN SCIENTISTS AND THE LAW.

Walter Mills, of Ridgetown, in his article quotes extensively from the Criminal Code of Canada, and from the Ontario Medical Act to show that when a death occurs under the treatment of a Christian Scientist such Scientist is liable to be prosecuted for homicide, as one of the important elements in ministering to the sufferer was denied in the lack of proper medical advice.

A case is quoted where the Scientist was not convicted because the act of sitting beside the patient and looking at him, without prescribing anything, or performing any surgical operation, was not practising within the meaning of the Act.

The writings and teaching of Christian Scientists are referred to, showing that the system is one of treating disease, and should come within the meaning of the Acts. They do pretend to cure disease, and they charge for such attendance.

It is pointed out that in some States of the Union, the law distinctly prohibits every form of medical, surgical or obstetrical practice other than as rendered by those who conform to the requirements of the law.

The Montreal Medical Journal, January, 1906.

ORGANISMS NORMALLY PRESENT IN THE CONJUNCTIVA.

Dr. D. H. McKee, of the Montreal General Hospital, contributes this article on the organisms found normally in the eye. He claims that a knowledge of the bacteriology of the conjunctiva in health and disease is very important to the opthalmologist. The conjunctiva, the author contends, offers every inducement to the lodgement of micro-organisms. The researches of many competent observers have shown that harmless and injurious bacteria are constantly found in the conjunctival membrane. By different observers, staphylococci of several varieties, streptococci, micrococcus candicans, sarcina lutea, bacillus subtilis, etc., have been found.

Of the 140 cases of the writer, 40 gave negative results. Of the 100 yielding positive results the following is the finding: staphylococcus pyogenes albus, 48; staphylococcus epidermis albus, 9; staphylococcus pyogenes aureus; 2; streptococcus pyogenes, 16; bacillus xerosis, 42; bacillus diphtheriæ, 1; sarcina lutea, 1. The bouillon and agar were made after Abbott's method, using beef instead of beef extract.

Bacteria have been found in the conjunctiva after cleaning it with 1-2,000 bichloride solution. In many cases where no organisms can be found, infection may occur; and, again, infection may not follow

operations, though bacilli be present. In many instances these organisms do no harm to the healthy conjunctiva and cornea, but attack them when abraded.

DENTIGEROUS CYST OF SUPERIOR MAXILLA.

In this paper the writer gives a very good account of such cysts, and illustrates his remarks by the report of a case. These cysts occur in connection with developing teeth, or naturally formed teeth that are retained within the jaw. They are met with frequently in connection with the third molar or the canine teeth. These cysts are usually made up of a thick soft membrane surrounded by a horny shell. The tooth usually has its crown in the cavity and the root in the wall of the cyst. The cavity generally contains a clear, glairy fluid, which may become infected and purulent.

The etiology is variously given. The normal amount of fluid around the developing tooth may increase beyond proper quantity, and cause the cyst; or, the irritation caused by the growing tooth may develop a cyst in the surrounding tissue. The tumor grows slowly and is painless, the surface is smooth, but may be lobulated. The treatment is the removal of the retained tooth. It is generally met with under 30 years of age.

In the case reported the x-rays were employed to locate the tooth. The cavity was opened. When the tooth was removed it was found to be a normal canine. The patient made a speedy and satisfactory recovery.

THE BEST TREATMENT FOR TUBERCULOSIS.

Dr. J. W. Flinn, of Prescott, Arizona, discusses this subject. He points out that the wealthy can go where they like, but the poorer classes must have some suitable place arranged for them.

The conditions should be pure air, maximum sunshine, agreeable temperature, good accommodation and food. He is inclined to agree that some variation in temperature is good for the early stages, but an equable temperature suits the later stages best.

Much importance is attached to altitude as the most important point in the fresh air treatment of the disease. This outweighs any benefit to be derived from latitude. On this point he quotes a number of good authorities.

The leading feature of the paper is summed up in the statement: "Having found a suitable climate for our patients, we shall endeavor to give him (1) an absolutely out-of-door life, with the comforts of home and no roughing it; (2) good food, well cooked and nicely served;

(3) rest or carefully regulated exercise; (4) systematic bathing; (5) the constant care of a physician, with the best medication possible."

On these various points some good advice is offered. On the matter of bathing, the statement is made that this is too much neglected. Cold sponging is spoken highly of.

INFLAMMATION OF THE UTERINE APPENDAGES.

The writer of the above article, W. W. Chipman, states that by the uterine appendages he means the ovary and fallopian tube on each side. It is the usual experience to find these organs on both sides involved in inflammatory processes. The lesion of salpingo-ovaritis is generally bi-lateral.

In the study of these inflammations their anatomy and pathogenesis must be considered. The lower portion of the uterus and vagina present a single canal, which in the upper part bifurcates into two tubes, opening into the peritoneal cavity.

In the pathogenesis of these inflammations it should be remembered that they may spread or arise in possibly four different ways: (1) the ascending form, where the infection enters from the vagina or uterus; (2) the descending form, when the infection spreads from the peritoneal cavity into the tubes; (3) infection from the blood stream, pyæmic in character; (4) direct infection from the adjoining pelvic viscera.

The organisms most often found in order of frequency are: (1) the gonococcus; (2) streptococcus, staphylococcus, and the bacillus coli communis; (3) the tubercle bacillus; (4) the ray fungus of the actinomycosis bovis. There may be mixed infection. The most common infection is the gonorrhœal. It may be acute of chronic. In the former the patient is extremely ill and the abdominal symptoms predominate.

The main features in the treatment are rest, nurishing liquids, small enemata or gentle aperients to move the bowels, and the application of heat or cold to the abdomen. Morphine may be given to relieve pain.

In the chronic form of gonorrhœal, the following plan is recommended. The patient is confined to her room, really to bed. A hot vaginal douche is given, the return of the fluid being delayed by gathering the labia round the nozzle of the apparatus. The upper part of the vagina is then packed with pledgets of lambs' wool soaked in glycerine containing iodine or ichthyol. The vagina is then filled with a dry tampon. This is removed in the evening and a hot douche given, but the packing is not introduced. In the morning the same treatment is repeated. This routine is followed for some three weeks, when the patient is allowed three or six months' interval. The treatment may be repeated. Localized pain is relieved by blistering the skin over the ovary before or behind. Tonics should be given, and the thorax may be massaged as

an aid to the general health. She should be instructed to rest during the menstrual period. Change of air, Russian or Turkish baths, and the use of hot air are useful. If operation be required it should be thorough. The diseased parts should all be removed. Take away the inner genitalia above the vaginal vault and as much of the germ-infected parametrium as possible.

SYPHILITIC NECROSIS OF THE FRONTAL BONE.

This case is placed on record by Drs. Gray and Archibald. The patient was a woman 32 years old. In June, 1903, she fell and injured her forehead, the frontal bone being bruised, but the scalp was not cut. In 1897 she had a syphilitic sore throat. The necrosed and uncovered area of bone was 2½ inches in diameter. The necrosed bone was removed and a large skin graft from the forearm placed upon the surface of the wound. There was some sepsis and, when the pedicle connecting the flap to the arm was divided, the result was not as perfect as could be desired, nevertheless a very good Cosmetic effect followed. There is also a very considerable filling up of the gap by new bone. Treatment by potassium iodide prior to operation failed to accomplish any good.

The Maritime Medical News, January, 1906.

THE BURIED SUTURE.

Buried sutures are to-day, says Dr. J. M. Elder, so much a part of every major operation that a discussion of them is of interest. Buried sutures may be divided into absorbable and non-absorbable. The absorbable is the ideal form of suture, but it is very difficult to gauge the time these sutures may take in absorption, and so they may stretch and give way too soon. This has led to the use of the non-absorbable in many cases.

Absorbable sutures are made of catgut, kangaroo tendon, and other animal preparations. These can now be rendered quite sterile. But, further, chromicized catgut can now be prepared to last buried in the tissues from 15 to 30 days, and is also now rendered pliable and strong. This has given a great impetus to the employment of this material for buried sutures.

Juniper-oil catgut is prepared by placing No. 1, 2, 3, 4 catgut in juniper oil for eight days, and heavier Nos. 12 to 14 days. It is then put in alcohol for 48 hours, and then in sublimated alcohol 1 in 500. It is ready in 5 to 7 thereafter.

Chromicized catgut may be made thus: the catgut is cut lengths of 60 inches, washed with castile soap and water, wound on glass reels, and placed in a jar containing a liberal quantity of a one per cent. solution chromic acid for 9 hours. The jar is covered with gauze and

the solution poured off, and replaced with B. P. sulphurous acid for 12 hours. The jar is again covered with gauze and the acid poured off. The catgut is then covered with a two per cent. solution of salicylated alcohol. Stopper the jar loosely and boil in a water bath for 15 minutes. Then cover tightly and leave for two weeks. If sterile it is ready for use.

The material for non-absorbable sutures are silk and linen thread, wire of different material, and silk worm gut. The two latter are objectionable in parts where there is motion, as the ends cause irritation. In parts where there is no motion they are often very suitable. Silk and linen thread make excellent material for embedded sutures, and can be sterilized readily at the time of operation. They do not irritate the tissues and are very useful for operations on the intestinal canal.

The conclusions are that when union may be expected in five to seven days use plain catgut, except in the gastro-intestinal tract, where silk or linen is to be preferred, because they will not stretch, and they are sure to be encysted and pass into the canal. When the buried suture should last longer than one week, use chromicized catgut, erring on the safe side as to the time it is supposed to last. For suturing tendons the preference is given to chromicized catgut or silk. For bone use broom wire made of soft iron. This wire is soft and strong and twists well, and the ends can be buried in the bone, causing no irritation. Horse hair may be used for buried suture, and answers well in suitable cases.

THE SURGERY OF THE STOMACH.

This paper was read by Dr. George S. Armstrong, of Montreal, at the Canada Medical Asociation meeting last August.

In five cases of perforation of the stomach, or duodenum, he had four recoveries. The ages of the patients were from 21 to 40. He states that no time should be lost in operating upon such cases.

In the treatment of hæmorrhage, the author states, that in recurrent cases the general trend of opinion is for operative interference. This is specially true in chronic recurrent hæmorrhages. In acute, copious hæmorrhage, it may be necessray to operate in order to save the patient's life. The results of such treatment has been, on the whole, encouraging.

Some of the sequels to chronic gastric ulceration, such as adhesions, bands, pyloric stenosis, and hour-glass contraction, can only be successfully dealt with surgically.

An interesting case of gastric syphilis is mentioned. The stomach was much thickened at one place. A portion was removed, and presented the characteristics that have been found in the disease. The portion removed presented the appearance of malignancy under the microscope. The case was clearly not one of simple ulceration.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

TREATMENT OF ACNE.

In *The Medical Record,* Jan. 13th, Moschowitz, of New York, describes a new treatment for acne by means of the induction of a localized hyperæmia as follows:

The method is very simple. An ordinary dry cup with rubber bulb attachment is used. The edge of the cup must be broad, and the diameter varies from three-quarters of an inch to one and one-half inches, depending upon the part of the face to which the cup is applied. The cup is applied to the affected area of the face for one hour every day, preferably in the evening. If the application is made twice a day, for an hour at a time, more rapid results will be obtained. The suction must be of the slightest character, so that the least pull will separate the cup from the skin. This point is emphasized for two reasons: first, because greater suction is not so efficient, and may even aggravate the condition; and secondly, because if more suction is employed, a disagreeable ring may form which takes a day or two to disappear. The cup must be removed every one or two minutes, and re-applied to permit of a new influx of blood. The applications are begun over that area of the face in which the acne pustules are most numerous, and are repeated daily over the same area until the pustules have disappeared. The cup is then shifted to another part of the face, and a similar course is pursued. This is repeated until the entire face has been treated. It takes from two to five applications over each area, until a satisfactory result is obtained. It is needless to say that if two cups are used at the same time the duration of healing will be reduced one-half.

THE ROLE OF SALINE SOLUTION IN THE TREATMENT OF PNEUMONIA.

In *The Medical Record*, Jan. 16th, Taylor, of Philadelphia, discusses this question, and gives the record of his experience with the treatment. Saline solution was first used for pneumonia only in those cases which had reached a desperate stage, so that it is not surprising that the results were discouraging. The role of the saline solution is now believed to be the conservation of the alkaline condition of the blood, the value of which

is expressed by Sajous, viz., "The primary effect of deficiency of alkaline salts in the blood being to inhibit nutrition, to impair the efficiency of, and finally arrest the protective functions of the organism, it constitutes one of the most active causes of death. The salts of the blood 'have most important functions,' writes this eminent physiologist; 'they maintain a normal composition and osmotic pressure in the liquids and tissues of the body, and by virtue of their osmotic pressure they play an important part in controlling the flow of water, to and from the tissues. Moreover, these salts constitute an essential part of the composition of living matter. In some way they are bound up in the structure of the living molecule, and are necessary to its normal reactions or irritability',"

Now, in any disease where there is fever, the loss of the main salt of the blood, sodium chloride is not replaced owing to restricted diet, anorexia, etc., and though the cells attempt to hold it in reserve, as shown by the diminution of the normal half an ounce a day in the urine, the time soon comes when the cells are hampered in their vital function and gradually cease to secrete their autoprotective antibodies, thus giving free sway to the pathogenic elements. Sajous, therefore, advises the use of saline solution from the outset in all fevers.

The relation between a febrile process and the blood-salts in Barlow's "General Pathology, 1905." "The cause of this change is quite unknown, but whatever the true explanation may be it is probable that the change is highly important for the organism, for it is an unfavorable sign in febrile disease, and it is known that diminished alkalinity of the blood goes hand in hand with increased susceptibility to infection.

From the clinical side the evidence is satisfactory. A typical case is cited of a child seven months old, with characteristic signs of double extensive broncho-pneumonia and temperature of 103.5, saline solution alone produced a disappearance of the morbid phenomena in 72 hours. Lemaire reports a series of six cases of double pneumonia which showed intermittent pulse. Under this treatment only one was lost.

The old view that the toxins are washed out of the body by the use of the saline solution is shown to be wrong by the fact that the urine is hypo-toxic, not hyper-toxic, the toxins have been destroyed in the blood.

Recently J. B. Todd introduced a measure which will serve greatly to facilitate the use of saline solution; *i. e.* administering by the mouth as a lemonade, each glassful (six to eight ounces) containing ten grains of sodium chloride and five grains of potassium bicarbonate and a teaspoonful of lemon juice. This is given every two hours in adults. In the two cases reported among those thus treated, one of woman of 84 years and the other a girl of eight years, the temperature was 104° and 103.5° respectively when first seen. Saline drinks were instituted early, and produced the typical effects of intravenous and subcutaneous injections, both ending in recovery.

THE LIMITS OF HYPNOTISM.

In a recent article in *Cosmos*, Paris, reviewed in the *Literary Digest*, there is a discussion of hypnotism and its therapeutic possibilities, with a review of the theories that have been held as to its field. At first when hypnotism was suggested as a means of relieving physical and mental troubles it was believed that before long it would prove the most generally available remedy, but it has been shown by experience that the limits are as follows :—

(1) Hypnotism, since it is by no means inoffensive, and may be contraindicated as well as indicated, should not be employed except by a practised physician.

(2) We must not expect suggestion to cure a purely mental state, nor even a grave and profound neurosis like hysteria.

(3) The capital indication of hypnotism in therapeutics is furnished by the precise localization of the neuroses to be treated, especially hysteria.

The author goes on to say that when nervous disease is treated hypnotically certain of the nervous symptoms disappear, but a cure rarely results.

THE HEART IN TUBERCULOSIS.

In the *Medical Record*, March 3rd, Hutchinson of Redlands discusses the condition of the heart which is associated with and predisposes to tuberculosis. He notes that the old method of attempting to discriminate between certain phthisical types has been found of little practical value because almost any undeveloped, languid or unhealthy child or young adult, from whatever cause defective, could be fitted under one or other of them; and moreover that such distinctive features as are present in those who afterwards become clearly consumptive are almost invariably the signs of an early stage of tuberculosis, or of tuberculous involvement itself, most frequently in the glandular system; but many of them clear signs of the beginning involvement of the lung itself, such as rapid pulse, cold extremities, chilliness, easy fatigue, afternoon flush, sparkle of the eye, etc.

One general physical characteristic which seems to indicate a predisposition to tuberculosis is unusual tallness of stature in young adults as over five feet eleven in men or five feet seven in women; although sufficient data have not as yet been collected to give an indubitable proof, the figures from the Life Guards, who average six feet two, show a mortality more than double that of the Royal Artillery, where the minimum is as low as five feet four inches. The shape of the chest, too, is a useful

PELVIC APPENDICITIS.

Armstrong includes under the term pelvic appendicitis those cases in which the diseased area of the appendix lies over or below the brim of the true pelvis, and in which the pelvic peritonæum is primarily involved. The mortality is high in this group of cases, the chief reason being failure to make the diagnosis early. The misleading feature is absence of a characteristically tender point. Only deep pressure causes distress. In the early stage, when the disease is confined to the appendix only, deep pressure touches the sensitive spot, and if now a careful examination be made per rectum and by conjoined manipulation, an indefinite suspicion may be changed into a positive diagnosis. In operating the Trendelenburg position is of great value. The small intestines can be carefully protected and the deep pelvic cavity brought into view. Drainage is always necesary and convalescence is usually slow.—*N. Y. Med. Jour, and B. M. J.*

INTRAPERITONEAL TUBERCULOSIS.

Dr. F. F. Lawrence, of Columbus, Ohio, read a paper on this subject in which he drew the following conclusions: (1) Intraperitoneal tuberculosis is frequently a local disease. (2) It probably occurs much more frequently in the female than in the male. (3) In a large majority of cases it is primarily visceral and the general peritoneum is secondarily involved. (4) The surgical treatment is rational, sometimes agreeably surprising in results, and again bitterly disappointing. (5) In this, as in many other surgical conditions, early diagnosis and early operation will bring more certain results. (6) In this condition the greatest obstacle to overcome is the idea that it is a secondary condition. (7) No case of intraperitoneal tuberculosis should be denied the benefits of operation, no matter how extensive, so long as there is no positive pulmonary or pleuritic involvement, for the reason that some apparently hopeless cases fully recover. (8) When there is a tubercular peritonitis, a sequel of tubercular tubes, ovaries or appendix, the primary focus should always be removed. (9) In these tubercular cases the mesenteric glands have not been found frequently involved, and when they are operation accomplishes very little good. (10) In tubercle of tubes and ovaries the adhesions are usually firm, sometimes, though not usually, very vascular and not infrequently involve loops of the small intestine; hence the greatest care is necessary to avoid serious injury to bowel and at the same time separate completely all adherent surfaces and provide complete drainage. (11) Drainage is the great factor in recovery, when properly carried out.—*Boston Med. and Surg. Journal.*

GYNÆCOLOGY.

Under the charge of F. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

NONOPERATIVE TREATMENT OF PROLAPSUS UTERI, THE SCHATZ PESSARY, ETC.

Kate Campbell Mead, M.D., of Middletown, Conn., writing in the *N. Y. Med. Jour.*, says: It is not entirely to the often maligned obstetrician that many cases of metritis and malpositions of the uterus are due, but rather to the ignorance of mothers as to the care of their own health and that of their growing daughters, and to the negligence of the family physician in teaching women and girls the rules of physiology and hygiene to be observed during their menstural periods.

Metritis, as caused by congestion of the uterus from any cause, is one of the most common forms of uterine trouble among the unmarried as well as among those who have borne children.

It has been said that the constant to and fro movement of the uterus and the organs about it is essential to their health. This to and fro motion cannot be accomplished unless the breathing is deep and free, or unless there is alternate pressure and relaxation to cause a free flow of blood through the veins and lymphatics of the pelvis, and thus give gymnastics to the muscle fibres in the uterine supports. Constructed ribs cause congestion of everything below the point of constriction, and induce more or less paralysis of the diaphragm and of all the abdominal organs.

In such cases it is impossible to cure the congestion of the uterus unless external as well as internal details are attended to. Among the external details there must be attention to exercise, clothing, etc. Proper gymnastic exercises will so strengthen the abdominal and spinal muscles as to remove the need of artificial support. After these muscles have regained their tone the circulation of the entire body will be equalized and the nervous system relieved of a great source of irritation. A woman's skirts should not be heavy, nor should they bind her with their bands. They should be fastened to her waist and hang from her hips.

None of the ordinary pessaries on the market has been entirely satisfactory in relieving cases of procidentia, and perhaps no artificial support will ever be made to take the place of normal perinæum and normal suspensory ligaments, but the most satisfactory artificial aid in this respect for cases of prolapsus uteri with rectocele and cystocele is a pessary invented by Professor Schatz, of Rostock University in Mecklenburg, Germany. This particular pessary is saucer-shaped, made of hard rubber, and perforated liberally so as to allow for the exit of secretions. It is made in many sizes from 6 cm. to 9 or 10 cm., and is the only one

I have ever seen which can be retained in cases of prolapse or procidentia with torn perinæum and flabby vaginal walls. The old cup pessary is ruinous to the patient's mucous membrane, of little value as a support, and actually harmful if worn long. The Hodge or Thomas Smith pessaries cannot be retained unless the pelvic floor is whole. The ring pessaries are of more value than some of the others, but frequently are so bulky as to be uncomfortable. Professor Schatz formerly recommended the egg or ball pessaries in cases of large inoperable genital prolapse. These pessaries are hollow, very light in weight, and are frequently used in the clinics abroad, particularly in Rome. The suction of the vagina holds this artificial egg in place with such strength that frequently to remove the pessary it is necessary to soften a small area in its surface with ether or chloroform and extract it with tenacula or forceps.

Professor Schatz, having used these various pessaries and realized their imperfections, made this "Schalen" or saucer-shaped pessary, which is so anatomically correct that it will support a complete prolapsus, even if the pelvis is tilted or the perineal tear one sided. He says: "These pessaries, of suitable size and proper thickness of rim, generally give such good satisfaction that, as I feared, they have found too ready a service among physicians. They permit the patient and physician frequently to neglect an operation which should be preferred to the use of the pessary."

For cases where the saucer pessary in large size is not efficient because of the weight of the uterus and an unhealthy discharge, and also for cases where the patient cannot learn to remove and replace it, Professor Schatz has adapted a funnel-shaped pessary which is easy to remove, and which is fashioned on the principle of the old cone-shaped, clubbed, handled, or other stem pessaries, but which seems to him more correct in shape and more satisfactory in every way.

AN IMPROVED METHOD OF VENTRO-SUSPENSION OF THE UTERUS.

Dr. Maunsell, in the *British Gynæecological Journal* of Nov., 1905, describes this improved method as follows: The abdominal wall having been divided, either by a vertical incision or by Pfannenstiel's transverse method, the peritoneum is incised either vertically or transversely, according to whether complications are expected or not. The fundus of the uterus is grasped by a vulsellum and drawn forwards and downwards. If the peritoneum has been incised vertically it is closed with a continuous fine silk suture as far as the protruding uterus, so that the uterus stands out through a transverse slit, as in the alternative method of opening the peritoneum. The edges of the transverse peritoneal opening

are united to the urterine wall by a continuous suture of fine silk. On the posterior surface of the uterus the line of suture should lie about three-quarters of an inch from the fundus, and on the anterior surface about half an inch from the same point. Whilst the anterior suture is being introduced the uterus is drawn upwards by means of the vulsellum. The vulsellum is removed and the uterus falls back towards the pelvis, drawing the peritoneum into a narrow funnel-shaped depression, the sides of which can be readily approximated by a few sutures passed from side to side through the fascia and subperitoneal tissue. thus obliterating any dead space and preventing immediate contact of the uterus and obdominal muscles.

The abdominal incision is closed by continuous silk suture for the aponeurosis and subcuticular suture of silkworm gut for the skin. The advantages claimed are: (1) Firm support for the uterus without interfering with its mobility; (2) no interference with distension of the bladder; (3) should pregnancy ensue, the peritoneum will accommodate itself to the rising uterus and will contract again after delivery, not remaining as an elongated band, as the fibrous adhesions do in the ordinary ventro-suspension advocated by Howard Kelly and other operators.

(The reviewer is of opinion that this method of Maunsell is only a modification of Kelly's, and that modification no improvement. Any method which embraces the anterior surface of the uterus in the suspension cannot so surely secure that ever present force, the intra-abdominal pressure, upon the posterior surface of the uterus which is so necessary to maintain that organ in an anteverted position. S.M.H.)

THE TREATMENT OF PELVIC SUPPURATION.

In the November number of the *British Gynæecological Journal* Dr. Ralph Worral mentions a series of 45 cases operated on by him during the last year for pelvic suppuration. He says that while there have been earnest advocates of the vaginal, and equally earnest advocates of the abdominal route, he claims to be the first to advocate and practise the systematic employment of both routes along certain well defined lines. He recapitulates as follows:

(1) In all cases in which it is evident from the symptoms and physical signs that pus exists in the pelvis, the treatment should be operative.

(2) When the patient is desperately ill, the operation is to be done without a moment's delay.

(3) When it appears probable, after a careful examination and weighing of all the factors in the case, that the patient, although seriously ill,

is likely to improve with rest and supporting measures, the operation is postponed until the symptoms have subsided and the temperature become normal.

(4) The opening of the abdominal cavity is always preceded by curettage at the same sitting.

(5) The abdominal cavity is always opened first through the posterior vaginal fornix. If serious constitutional symptoms are present at the time of operation, and if pus can be evacuated from the pouch of Douglas, or from pus sacs within reach of the finger, and if bimanual examination discloses no other collection which might be responsible for such constitutional symptoms, the pelvis is thoroughly cleansed, powdered with iodoform, and the pus sacs lightly packed with gauze. In a week the patient's condition has usually so much improved as to allow of abdominal section in the middle line and the removal of the pus sacs.

(6) If, on the other hand, there are no constitutional symptoms, or these are but slight, or if, again, it be impossible to reach and evacuate the pus from the presence of which constitutional symptoms have arisen, then the final step of median abdominal section is undertaken at the same sitting, and the pus sacs completely removed.

(7) If the uterus appears to be involved in the septic process, it also is removed.

(8) The same rule applies to the appendix vermiformis.

(9) Flushing is not practiced unless there is general purulent peritonitis.

(10) The pelvis is carefully cleared by gauze swabs and lightly powdered with iodoform.

(11) Every case is drained by a single strip of gauze two inches wide carried from the pelvis into the vagina.

This technique is the outcome of a large experience and much anxious thought; it gives good results, and I have therefore thought myself warranted in again bringing it under your notice.

A NEW OPERATION FOR ANTEFLECTION AND STENOSIS OF THE INFANTILE UTERUS.

Barrett (*Amer. Jour. Obst.*, September, 1905) presents a new method for the correction of the anteflection and the constriction at the internal os. The uterus is first dilated and if necessary curetted, and if there is great elongation of the cervix it is amputated. The abdomen is then opened in the middle line and the uterus is brought up and held with a tenaculum placed just above the flection at the internal os. A longitudinal incision is now made over the internal os, its length corresponding

with the extent that the posterior wall needs shortening in order to straighten the uterus. By tenaculum forceps the longitudinal slit is changed to a transverse one, broadening the cervix the length of the slit and shortening the posterior walls to the same extent. A median suture is placed while the forceps hold the incision transversely, and further sutures are placed as needed. By this the circumference of the uterus is materially increased and the constriction obliterated.

A CASE OF COMBINED EXTRA-UTERINE AND INTRA-UTERINE PREGNANCY COMBINED.

H. T. Miller's (*Medical Record,* Oct. 7, 1905) patient was a woman of forty who had had two children, now aged 6 and 14 years respectively. In the fall of 1904 symptoms developed which indicated an extra-uterine pregnancy, and when she came under the author's care in May 1905, this diagnosis was made. On opening the abdomen a cyst-like tumor having a pedical containing the right Fallopian tube was removed. The cavity of the sac was distended with dark-colored blood and contained the remnants of a placenta and degenerated fetus. The size of the utedus gave rise to the suspicion of an intra-uterine pregnancy, which was verified on the second day after the operation by the spontaneous expulsion of a perfectly formed four months fetus. Recovery was uneventful.

TREATMENT OF INOPERABLE CANCERS OF THE BREAST BY OVARIAN CASTRATION.

We take the following from the *N. Y and Philad. Journal,* of Nov. 4th, 1905: The close relation existing between the mammary glands and the ovaries has been known for a long time; but it was in 1896 that is was first shown that there was a diminution of the secretory activity of the breast following the extirpation of the ovaries. Beatson, to whom this is to be ascribed, asked the question, "whether, cancer of the breast is not due to an irritation of the ovary, and if castration would not arrest the cellular proliferation of the cancer, or bring about, as in the lacteal secretion, the fatty degeneration of the glandular elements?" The success of his first ovarian castration for inoperable carinoma of the breast (the operation which now bears his name), proved that he was entirely justified in his opinion. M. H. Rouland has collected fifty-two cases of Beatson's operation. In twelve the cancers have entirely disappeared; in eleven, there was a diminution; in twenty-nine, the result was feeble or no improvement. In one case, that which M. Reynes presented to

the Congres de Chirurgie in 1903, the result was striking. A young woman of thirty-two years had suffered with double cancer of the breast for ten years. The malignant character of the growth was established by microscopic examination. Double ovariotomy was performed. One year later there remained of the tumor nothing but a small nodule, which was mobile, and could be extirpated with facility. Although this case seemed very favorable to Beatson's operation, a number of surgeons present declared their disbelief to this method.

A PLEA FOR MORE THOROUGH EXAMINATION OF DOUBTFUL SPECIMENS OF ECTOPIC PREGNANCY.

Dr. J. Wesley Bovee, of Washington, D.C., in writing on the above subject in the *Journal of A.M.A.*, of Dec. 31st, 1904, mentions the fact that every abdominal surgeon meets with cases in which, before or during operation, the diagnosis of ectopic pregnancy is made, but in which no fœtus or placenta is found. In such, absence of the fœtus is attributed to the rapid absorptive action of the peritoneum on the nearly boneless ovum, and the absence of the placenta to interruption of the pregnancy before the development of that structure is commonly understood to begin. It is now known, however, that the trophoblast enters into the formation of that structure early in the developmental stage of segregation or cell division. The writer says he feels sure, in observing the work of others, that this diagnosis is adhered to even without microscopic examination; if blood, either loose or encysted, is found in the peritoneal cavity, and a tube or ovary, or both, distended by blood coagulum. In his own experience several times the microscopic examination of such specimens has caused the diagnosis to be changed. He further believes that the diagnosis of ectopic pregnancy is often wrong, even when made during an operation, and should not be made except by the aid of the microscope.

The doctor mentions ten cases operated on by him in which the *macroscopic* examination of the removed specimens, taken with the case histories, gave very strong presumption of tubal abortion or ruptured tubal pregnancy, but in which the *microscopic* examination proved such diagnosis untenable.

STARVATION AND LOCKED BOWELS FOR FROM TEN DAYS TO TWO WEEKS.

Dr. Howard A. Kelly, of Baltimore, in a paper of this title, mentions this as a method of after-treatment which he had used in some fifteen cases, for the most part in complete tears in the recto-vaginal septum.

The treatment consisted in two parts: first, a very limited diet for from ten to fifteen days; and, second, the locking up of the bowels during this period.

The food is limited to albumen in water, giving nothing the day following operation, and but one dram every three hours on the second day, and increasing this a dram each day until the patient was taking four drams every three hours. In this way the patient was fed in all, during a period of ten days, not quite three pints of albumen and absolutely no other food.

One patient was confined for fifteen days on this diet and without an evacuation. At least two very frail patients were treated in this way. When the evacuation did take place, two drams of licorice powder were given, and in some cases an oil enema, and the passage was secured with the patient lying on her side so as to avoid any straining. In no case were there any scybala, nor was there any difficulty with the evacuations.

The author thought this starvation plan of treatment might have a wider range of utility in treating dyspeptics and hysterical patients, as well as in all kinds of plastic operations on the intestinal tract.—*From American Journal of Obstetrics*, Feb., 1906.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the Charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty, McGill University, Montreal.

PAPILLARY CYSTADENOMA OF THE BREAST.

In *The American Journal of Obstetrics*, Nov., '05, Edward J. Ill, M.D., calls attention to a form of non-malignant tumor of the breast, associated with a bloody discharge from the nipple and little if any pain.

He reports eight cases and discusses the symptoms, pothology, and treatment.

All the cases but one were beyond middle life, and all complained of a more or less copious discharge from the nipple, varying in color from a light yellowish pink to a dirty brown yellow. The tumor which is always present may escape the observation of the patient. On palpation a clongated mass can be felt, starting a short distance from the nipple and radiating from it, which is not sensitive, nor does it give rise to pain. The discharge, which is often sufficient to soil three or four small handkerchiefs daily, is of a serous character, containing red blood cells, leucocytes and a little fatty cell detritus.

The tumor consists of a papillary odenomatous mass, usually single, but sometimes multinodular, which protrudes into and dilates the duct. By retention of some of the fluid, the duct becomes cystic in character.

The prognosis is good as the growth is not malignant.

Spontaneous recovery may take place, of which two cases are cited.

Dr. Ill considers that an operation while not imperative, is the best treatment. He removes the whole breast, as to excise the mass is too difficult. He suggests that possibly deep curettage with drainage might be equally beneficial.

HYSTERECTOMY IN ACUTE PUERPERAL SEPTICÆMIA.

Charles Greene Cumston, M.D., *The Am. Jour. Obstet.*, Nov., 1905, in a very able paper discusses the question of hysterectomy in acute puerperal septic infection. The difficulty has been to state what cases are suitable for this form of treatment.

The author, in clearing the field for discussion, states that it must be proved that the uterus is the seat of marked lesions and form a serious danger to the organism. Having this view in mind, the pathology of puerperal lesions are divided into three groups: (1) The uterus alone presents marked lesions, in which case hysterectomy would seem to be distinctly indicated. (2) Cases in which the uterus presents lesions, but where other infectious lesions exist in the various viscera, as lung or spleen. Here the value of the operation is extremely doubtful and in the opinion of many absolutely contra-indicated. (3) Those cases in which the uterus is free from lesion, serving but the port of entry. Here hysterectomy is worthless.

He refers to the reported cases, showing that uterine abscess and purulent infiltration are far more frequent than is generally admitted, and those clinical observation would lead one to suppose. He quotes Beckmann's description of the uterine gangrene, and states the condition is of great interest, because it offers a precise anatomical indication for hysterectomy.

With regard to uterine abscess, he distinguishes large abscess formation from mere purulent infiltration of the uterine wall. He states that such abscesses are to be found usually near the orifices of the tubes or on the side of the uterus in the neighborhood of the large lymphatic vessels. Such cases offer a distinct anatomical indication for surgical interference.

Infiltration of the uteri, apparently healthy, is referred to and Jeannis case is specially mentioned, where the uterus was firm and apparently healthy, yet was found to be infiltrated with S. pyogenes. After operation, the patient recovered.

He sums up this portion of his paper by concluding "that during puerperal septicaemia the uterus is frequently the seat of very important and extensive lesions. The most characteristic points of these

lesions are:—purulent infiltration, small and multiple, or isolated large abscesses, patches of mecrobiosis, or gangrene more or less generalized. When the uterus is healthy in appearance it may still be an absolute microbic sponge; not only streptococci, but also the principal ærobic and anærobic pathogenic organisms, may occupy the uterine parenchyma. From the anatomical standpoint, the removal of such an organ can hardly be considered as an illogical surgical procedure.

He admits that the clinical signs in recorded cases have had but little weight as indications for removal of the uterus. He discusses the relative value of the temperature chart, pulse curve, involution curve, etc.

With regard to the diagnosis of gangrene, he discusses the symptoms at length, dwelling on the free lochia, horribly offensive in character, which bears in it strips of uterine mucosa of varying size.

He admits that recovery from even this condition is possible, as Buckmann's figures shew only 11 deaths in 40 cases. It was diagnosed by careful intrauterine examination as was done by Budin.

He considers bacteriological examinations furnish no indications for hysterectomy.

He quotes the work of Monchotte who, in connection with a study of the value of curettage in puerperal septic infection, showed that the effect on the blood of a successful curettage was to reduce the leucocytosis, and result in the appearance of eosinophiles.

A review of the study of the blood in puerperal infective cases is then given, but, as the author states, Pinard's opinion holds that bacteriology is powerless to furnish as an indication for hysterectomy in acute puerperal septicæmia.

With regard to the value of blood examination, he concludes that hysterectomy is contra indicated when one finds a hematological formula characterized by the absence of leucocytosis, and by leucopenia. Hysterectomy may be indicated in two conditions; when the infection is serious from the start and made evident by a very high leucocytosis, a polynuclear leucocytosis remaining at about 70 per cent., and complete and persistent absence of eosinophile and basophile elements; secondly, when the ordinary minor surgical procedures do not result in decrease in the leucocytosis and polynuclear leucocystosis. He dwells on the fact that a lowering of leucocytosis is only favorable, when eosinophiles appear in the blood.

The author concludes his paper by stating that there are certain cases of puerperal septicæmia which might be saved by the removal of the uterus, but, up to the present, there are no absolute clinical signs which will allow one to proceed with certainty. Taking all the symptoms carefully into consideration and combining them with a careful

intrauterine examination, it may lead to an indication for surgical interference after all other therapeutic procedures have failed. Acute septicæmia, on account of its rapid evolution, can never be benefited by hysterectomy; but, on the other hand, in cases of secondary septicæmia with a slow evolution hysterectomy is indicated. No useful indications can be drawn from a bacteriological examination of the blood or lochia, but on the other hand, . cystologic examination of the blood furnishes excellent prognostic indications of the infection under consideration.

OPHTHALMOLOGY AND OTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology Medical Faculty of the University of Toronto.

AMAUROSIS AND THE INJECTION OF PARAFFIN.

It would appear that the injection of paraffin for its cosmetic effect is not so harmless as was once thought, as the following cases show:—

Mintz (*Centralblat of Chirurgie,* Jan., '05), reports a case of a young woman, syphilitic, afflicted with "saddle nose," who had a gramme of paraffin injected. Three minutes after the injection, the patient complained of a pain in the left eye. Fingers could still be counted, although complete blindness supervened, accompanied by vomiting. The ophthalmoscopic examination was negative. Atrophy of the optic nerve followed. Mintz believes that the injection was followed by thrombosis of the external nasal vein, a condition which extended by continuity to the opthalmic vein and, later, to the central vein of the retina.

Rohmer (*Annales d'Oculistique,* Sept., 1905), also reports the case of a woman of 42 years, syphilitic, who had five injections of paraffin, at intervals of two weeks, to remedy the deformity caused by caries of the nasal bones. At the time of the last injection she experienced sharp pain in the left eye, with loss of sight. The pain was intense and caused the patient to lose consciousness. Embolism of the central artery of the retina was diagnosed.

TREATMENT OF TRACHOMA BY X-RAYS AND RADIUM.

From time to time extracts from medical reports of the treatment of Trachoma by x-rays and radium have appeared in this column. The following are some recent communications on the subject:—

Vassioutinsky (*Gaz. des Hapitaux*), treated seven cases of varying severity. Radiotherapy exerted a very favorable influence upon the progress of the trachoma. The treatment was painless and he met with no case of dermatitis or other complication. Comparative study of the

effects of x-rays and the customary treatment showed that the latter was preferable where the deeper layers were not involved. On the other hand, good results were obtained, where other means had failed, by x-ray treatment.

Selenevsky (*Roussky Vratch*) treated seven cases of trachoma by radium, at first 1mg, and later 10mg. Time of exposure 10 minutes. The tube containing radium was simply applied over the area treated and slowly moved about without touching the surface. The results were truly astonishing. Five of the seven cases were entirely cured and the other two are in a fair way of becoming so. The number of sittings varied from eight to fourteen.

Beck (*Annals of Ophthal.*), treated three cases with radium, and obtained two cures and relief in one.

Harman (*B. M. Journ.*), treated four cases by x-rays without marked improvement, and seven cases by high frequency currents without any improvement at all.

Stargardt (*Zeitschrift f. Augenheilkunde*) investigated the results of the use of x-rays upon the pathological lymph follicles of trachoma. He found that the exposure of 12 minutes duration had no ill effects upon the conjunctiva. Stargardt selected three cases in which the granulations were relatively new and in which no scar tissue could be seen. The fornix of all six eyes was exercised in from 16 hours to 14 days after the exposure. These fornices were then subjected to microscopical examination. The changes found in the lymph follicle were remarkable. The changes consisted in a distribution throughout the whole follicle of an extraordinary number of particles of all shapes and sizes, most of them staining deeply with nuclear stains, and were probably dead nuclei. He came to the conclusion that the x-rays have an intense action upon the trachoma follicle but that it is more or less transitory, lasting from 24 to 30 hours.

RADIUM IN TRACHOMA.

Dr. Joseph Beck, of Chicago, in *The Annals for Oph.*, July, 1905, reports three cures of trachoma by the use of this agent. He states that radium acts best on superficial lesions, particularly on glandular and lymphoid tissues. It is positively proved that radium will destroy embryonic life and retard growth, providing it can be applied very close to the seat of the growth infection.

The method of application is simply placing the hermetically closed tube in contact with the tissue, for ten minutes to half an hour each sitting, which may be daily or less often. Complications, such as burns are rare, but there is sometimes marked reaction.

MENIERE SYMPTOM COMPLEX.

Dr. W. A. Lecompte, Boston, in the *Boston Med. Surg. Jour.*, Oct. 5, 1905, discusses the above. Fleurens in 1824 laid the foundations of our present knowledge of the functions of the internal ear. He divided the internal ear into two distinct sensory end organs—the cochlea, the end organ of hearing, and the semi-circular canals and vestibule, the end organ for the perception of movements of the head and body, an organ which plays an important part in orientation and equilibrium.

Meniere, in 1861, was practically the first to adapt the teachings of Fleurens to the conception of disease of the ear. He reported a series of cases from the study of which he concluded that "An auditory apparatus previously healthy, can suddenly become the seat of functional trouble consisting of variable subjective noises, continuous or intermittent, and soon followed by decrease of hearing; these functional troubles give rise to vertigo, uncertain gait and even dizziness so severe that the individual falls to the ground; that, moreover, they are accompanied by nausea, vomiting and a state of syncope; and that everything points to the belief that the material lesion is in the semicircular canals." One of his cases died and post mortem showed no cause for death except that the vestibule and semicircular canals were filled with a red plastic mass, hemorrhagic exudate.

Since Meniere's time there have been found similar post mortem pathological conditions, but these are mostly cases of leucæmia. The triad of symptoms, sudden vertigo, subjective noises and deafness, is known to be caused by diseases of the external and middle ear as well as the internal. For example, impacted wax, polypi, retention of pus in middle ear, adhesive inflammation in the middle ear, will cause these symptoms. Pernicious anæmia and syphilis are also causes. There is also a not inconsiderable number of cases in which the cause is unknown and ascribed to vaso-motor disturbances in the vessels of the labyrinth. Lecompte, therefore, prefers the title Meniere symptom complex to Meniere's disease.

THE BACTERIOLOGY OF TRACHOMA.

Pfeiffer and Kuhnt (*Zeitschrift fur Augenheilkunde*) excised trachomatous retrotarsal folds, made emulsions with sterile salt solution and filtered them. A perfectly clear filtrate was obtained. Ten or more drops were instilled into normal human conjunctival sacs with negative results. The authors therefore conclude that the normal conjunctiva does not become trachomatous by ultra microscopical organisms.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., C.M., Belleville, Fellow of the British Society of Laryngology, Otology and Rhinology.

LOCAL ACTION OF ANTI-DIPHTHERITIC SERUM.

Dopter (*Annals of Gyne. and Ped.* Sept., '05) records the results of his efforts to find means of rapidly clearing the mucous membrane of the throat of the bacillus of Loeffler after diphtheria. He used dried serum incorporated with gum and given in the form of pastilles. Each patient had to suck 12 pastilles each day, one every hour. In the 72 patients treated in this manner, the bacilli disappeared entirely in from two to six days, while relapses were very rare. He also used the serum in the form of a dry powder, which the patient snuffed every hour. In 25 cases, when the bacillus existed simultaneously in the nasal fossæ and in the throat, the disappearance from the nasal fossæ was slower than from the throat, yet the influence is evident in the diminished persistency of the germ. The local application of serum presents many advantages, namely, the cure is more prompt, the patient is rapidly freed from the injurious action of the toxine, the possibility of preventing the prolonged varieties of diphtheria, the relapsing forms and the severe toxic accidents, the paralysis and paresis of the velum palati seem to be avoided, and the period of contagiousness and isolation is notably diminished.—*Illinois Med. Bulletin.*

REFLEX COUGH.

Eugene Pallak (*Monatschr. f. Ohrenheilk.*) says the centre for coughing is situated in the medulla oblongata above the respiratory centre, and coughing has been experimentally produced by irritation of this centre. Cough may be produced by irritation of any part of the respiratory tract, but the bifurcation of the trachea and the posterior part of the larynx are particularly sensitive points. Reflex coughs may have their origin in chronic inflammatory conditions of the nose, naso-pharynx and pharynx, as well as from the pleura and pericardium. Reflex coughs from the stomach, from the presence of tape-worms, from gallstones, and from diseases of the genital and urinary tracts, have been described by various authors. Among the more sensitive points from which a reflex cough may take its origin are the external auditory meatus and the tympanic cavity. The author has made a series of experiments on this subject in a number of cases, and describes them in a very full and complete manner, to which justice cannot be done in an abstract.—*Laryngoscope.*

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EDITORIAL.

INTERNATIONAL MEDICAL CONGRESS.

Arrangements are being completed with regard to this fifteenth Congress, which meets in Lisbon from the 19th to the 26th of April. The principal general addresses will be delivered by—Sir Patrick Manson (London), Prof. Brissaud (Paris), Dr. Jose Maria Esquerdo (Madrid), Dr. P. Aaser (Christiania), Prof. Azevedo (Rio de Janeiro), Prof. Neumann (Vienna), Prof. Prince Jean Tarcharoff (St. Petersburg), and Prof. E. von Bergmann (Berlin).

The different nationalities are well grouped and we observe that the delegates from Great Britain, Canada, Australia, and the British Colonies will have a common meeting place.

As to the service of lodging, it will be in charge of M. Manuel Jose da Silva, Praca dos Restauradores, Palacic Foz, Lisbon, to whom may be addressed all correspondence on this subject.

Applications for membership will be received until the hour of the opening of the Congress and during the Congress, but in order to secure reductions granted by railways and navigation companies it is necessary to give your name as soon as possible. All such correspondence may be addressed to the Secretary-General, M. le Professor Miguel Bombarda, Nova Esola Medica, Lisbon.

Regarding the fetes and receptions which will be given in honor of the members of the Congress, it is announced that there will be three general fetes and there will probably be several receptions and dinners de gala. A bull fight according to the old Portuguese will be organized at the expense of the Congress. The definite details will be published at a later date.

We understand that a number of Canadians have already decided to attend the Congress. It is requested that any member of the profession in Canada who desires to join the Canadian Committee would at an early date communicate with Dr. A. McPhedran or Dr. W. H. B. Aikins of Toronto, who will be glad to furnish all available information.

THE CANADIAN PRESS ASSOCIATION ON MEDICAL ADVERTISING.

From *The News*, of 2nd Feby., 1906, we take the following:—

The Canadian Press Association, at its session this morning, took occasion to administer a sharp rap over the knuckles to the Ontario Medical Council for their recent action in disciplining one of their members for using the advertising columns of the press.

Chairman Dingman, of the resolutions Committee, submitted the resolution as follows:

"Your committee view with strong disapproval the conduct of the Medical Council in using their organizations to suppress, on the part of one of the fraternity, the use of the advertising columns of the papers in placing his qualifications and the offer of his services before the public. That, while the Medical Council may be safely left to discipline the profession for breaches of medical etiquette, the use of the newspapers in a legitimate way is a right that should not be under the control of any association."

The reading of the resolution was greeted with vigorous applause, and it was unanimously carried without discussion.

"This should be followed up by the press throughout the whole Province," declared Mr. Dillon. "And action taken to prevent interference with the legitimate work of the newspaper and its patrons. Let the Medical Council attend to its affairs."

The Press Association is composed of laymen from the medical standpoint; and, as such, do not understand the motives which govern the Medical Council in doing all that lies within its power to restrain members of the medical profession from resorting to unbecoming forms of advertising themselves. On a few instances the Medical Council has disciplined certain members for inserting improper advertisements in the lay press; and, in every instance, the concensus of the medical profession was with the Council in its actions.

The cases to which the foregoing resolution of the Press Association could apply justified, nay demanded, the interference of the Council. The most objectionable forms of advertisements have appeared in the lay press. The nature of these advertisements were of such a character as likely to bring discredit upon the whole profession. We think the Council acted wisely.

But the resolution of the Press Association shows how misguidedly such an association may act. Here is a case in which the Medical Council acted in the best interests of both the public and the profession; and, yet, the guardians of public opinion censure that act. That is, the mem-

bers of the Press Association proved themselves to be thoroughly unreliable and unsafe leaders or formers of a high and ideal standard of professional life, when that profession was not their own. In other words, money proved to be the root of evil; for they did not like to see any steps taken that might interfere with the use of the columns of the lay press for advertising purposes. The character of the advertisements evidently count for less than their size and number.

BRITISH MEDICAL ASSOCIATION, TORONTO, AUG. 21-25.

1. *Fares, Going Dates and Limits.*—(*a*) Domestic Business, Certificate Plan Arangements; free return regardless of number in attendance. Passengers going rail, returning R. & O. Nav. Co., or vice versa, rate to be one and one-half fare.

(*b*) *European Business* —On presentation of certificate, to be prepared and signed by the Secretary of E.C.P. Association, and countersigned by the Secretary of the Canadian Committee, or the Secretary of the British Medical Association, one-way tickets to be issued at one-half lowest one-way first-class rail fare; round trip tickets at lowest one-way first-class rail fare between all points in Canada. Rates to Pacific Coast subject to concurrence of T.C.P. Association. Steamship lines to advise Secretary what, if any, additional arbitraries are required.

Dates of sale,, July 1st to September 30th, 1906, inclusive. Final return limit, September 30th, 1906.

2. *Extension of Time Limit.*—On deposit with Joint Agent of Standard Convention certificates issued from points in the Maritime Provinces, from points west of Port Arthur and from points in the United States, on or before August 28th, 1906, and on payment of fee of $1.00 at time of deposit, an extension of time until September 30th to be granted. Joint Agency to be conducted in the name of G. H. Webster, Secretary E.C.P. Asociation, will be kept open from August 21st to September 15th, 1906.

3. *Side Trips.*—Side trip tickets to be sold from Toronto to delegates from the Maritime Provinces, from all points west of Port Arthur and from the United States, on presentation of validated certificate, or deposit receipt, at lowest one-way first-class fare for the round trip, to all points in Canada. Dates of sale, August 23rd, to September 1st, 1906, inclusive, return limit, September 30th, 1906.

Usual additionel arbitraries via Upper Lake Steamships to apply, viz., going lake, returning same, $8.50 aditional to be collected. Going lake, returning rail, or going rail returning lake, $4.20 additional to be collected. Also usual arbitraries via St. Lawrence route, for delegates

desiring to return by steamer, on presentation of tickets to purser, viz., $6.50 Toronto to Montreal; $3.50 Kingston to Montreal.

Via Northern Navigation Company on lines where meals and berth are not included the rail will apply; on lines where meals and berth are included, rate to be single fare plus meal and birth arbitrary.

THE PUBLIC HEALTH OF CANADA.

Owing to the fact that no cases of smallpox now exist on the frontier States adjacent to the Canadian boundary, it has been deemed unnecessary to continue the medical inspection at Canadian ports, and at the end of January the two remaining inspectors at North Portal and Sault Ste. Marie respectively were withdrawn. Previously, the inspectors at Canso, Owen Sound, Thessalon, Bruce Mines, Fort Frances, and Gateway, B.C., had returned to their regular practice.

Dr. Montizambert, Director-General of Public Health, in his annual report, recently issued, says that during the past year the usual threatenings of epidemic diseases have continued, and in addition there have been special outbreaks of Asiatic cholera in Europe and of yellow fever in the United States. Strict measures, ordinary and special, have therefore been required for the sanitary protection of the country. Frontier inspection for smallpox at threatened ports of the international border and extra inspections at some of the maritime ports have been maintained, as the conditions to the south have seemed to require. On the Atlantic side the outbreak of Asiatic cholera in Europe, especially in Prussia, called for special precautionary inspections. On the Pacific side careful inspection of all arriving Asiatics has been carried on throughout the year.

The special inspection of vessels from San Francisco was discontinued from Jan. 1, 1905, no case of plague having been reported in the city since the first of the previous March. Circulars of warning and instruction were issued from time to time to the regular quarantine officers and to the customs officers, who are also *ex officio* quarantine officers at all the unorganized maritime and inland quarantine stations.

We are glad to note that Dr. Montizambert once again calls attention to the urgent need for the creation of a Dominion department of public health. This country will not be doing justice to itself until such a department is called into existence. It must come sooner or later, and the sooner the better.

Speaking of the leper lazaretto at Tracadie, N.B., the Director-General says there are now at this institution 17 patients on the books—10 males, and 7 females. Those actually in the lazaretto are 15—8 males

and 7 females. There were no deaths during the year. Two new patients, both from neighboring districts, were admitted. Continued good results follow the treatment with chaulmoogra oil and strychnine, with creolin outwardly, all the patients taking it improving both in health and spirits, the appalling darkness of their former hopeless condition being now lightened and brightened by gleans of hopes. One patient, a man of 40, is so apparently cured of all symptoms of the disease that Dr. Montizambert felt justified at his last inspection of the lazaretto in approving of his going home, on the condition of his reporting from time to time for examination by the physician of the institution. He has been in the lazaretto for five years.

THE INTERNATIONAL CONGRESS OF TUBERCULOSIS.

Many of the problems concerning tuberculosis were discussed very fully at the recent Congress in Paris.

As to the pathology of the disease much stress was laid upon the need of a receptive soil for the germ to take possession of. Great attention was given to the improvement of the soil. With this view all will agree.

On the important topic of the communicability of bovine tuberculosis to man, the following resolution was adopted: "The Congress, after hearing the exposé of the most recent investigations, declares that it is not only indispensable to avoid contagion from man to man, but also to pursue the prophylaxis of bovine tuberculosis, and to continue to take administrative and hygenic measures to avert its possible transmission to our species; and finally, that it is desirable to be on our guard against all forms of animal tuberculosis." This finding will meet with general approval, and is in opposition to the view of Professor Koch a couple of years ago.

On the matter of the grass bacillus and the butter bacillus, both acid-fast bacilli, there was some difference of opinion. It was urged by some that these organisms were types of the tubercle bacillus; and might under certain conditions give rise to tuberculosis, through their undergoing certain changes.

It was also the general opinion of those who took part in the Congress that alcohol predisposed to tuberculosis. This is no doubt true, as its excessive use leads to poverty and ill-health.

Sanatoria and dispensaries for consumption were advocated. They were useful as agencies for the spread of information and the prevention of the disease. Notification of the diseases was also urged.

LORD STRATHCONA AND A NATIONAL SANATORIUM FOR TUBERCULOSIS.

According to a communication from Dr. C. J. Fagan, Secretary of the British Columbia Board of Health, Lord Strathcona has signified his willingness to co-operate with the health authorities of the various Provinces of Canada and the general public in the establishment of a national tuberculosis sanatorium.

In his letter Dr. Fagan says that while in England he had a long conversation with Lord Strathcona on the subect. Lord Strathcona asked him to put himself in communication with the Boards of Health of the different Provinces, and authorized him to state that: "If the authorities and the general public would demonstrate in a practical manner their desire to have such an institution, he would be ready and even anxious to contribute to a national movement which would have as its object the gathering of the tuberculosis patients of Canada at a place found most suitable for the purpose."

Should Lord Strathcona seriously put his hand to this work, there is no doubt but that it will be brought to a successful issue. With his high reputation and great wealth such an impetus would be given to the movement as would lead on to success. We hope his lordship may see his way clear to take up this great work. It would be a most fitting one for so philanthropic and wealthy a citizen of this country, and would redound to his credit with any of his many noble deeds during his long life.

Public opinion is being awakened on this subject, and good results must follow. At a meeting in Britain some time ago, His Majesty was present, and made the statement that "if the disease was preventable, why not prevent it?" This is the only true position to take. Sanatoria will do much for this end by isolating many cases. The time has come when the governments and municipalities should ask for the reporting of tuberculosis and then follow these cases up with proper instructions. In all cases where they cannot receive proper care and attention they should be removed to one of the sanatoria.

If such a course were adopted the time would soon come when the national death-roll from this disease would no longer be 8,000 or 10,000 a year—and most of these in younger and useful years. The only reason for this frightful death loss is ignorance and carelessness regarding its course—infection. We hope Lord Strathcona may find many to co-operate with him.

GENERAL PARALYSIS OF THE INSANE.

This disease, one of the most interesting with which the medical practitioner comes in contact, is also known by the names of dementia paralytica, progressive general paralysis, and general paresis.

It was recognized by Haslam nearly a century ago. In the early part of the nineteenth century Esquirol describes a case in his work on mental diseases. Since then our knowledge of the disease has steadily increased.

The three leading characteristics of the disease are: A vaso-motor disturbance, ending in vaso-motor paresis; mental impairment, which progresses to complete dementia; and loss of muscular power, which advances to entire or almost entire paralysis.

Clouston defines the disease in these words: "An organic disease of the cortical part of the brain, characterized by progression, by the combined presence of mental and motor symptoms, the former always including mental enfeeblement and mental facility, and often delusions of grandeur and ideas of morbid expansion of self-satisfaction; the motor deficiencies always including a peculiar defective articulation of words, and always passing through the stages of fibrillar convulsion, inco-ordination, paresis, and paralysis; the diseased process spreading to the whole of the nerve tissues in the body; being as yet incurable, and fatal in a few years."

The early symptoms of the disease are of the utmost importance and should be looked for carefully in all suspected cases. A few days ago, Dr. C. K. Clarke, of the Toronto Asylum, gave a most instructive address to the staff of the Toronto Western Hospital on general paralysis, devoting a considerable portion of his remarks to the early symptoms. He emphasized the fact that some of these cases lived a sort of double life, in one respect conducting themselves properly, while in another very immorally. They often indulged in great extravagancies before their condition became suspected or known. In some cases there was an absence of shame for acts that at one time they would be ashamed of. This was regarded a strong point. In some cases they act both mentally and physically, like persons who are drinking to excess. Such symptoms occurring in one who is known to be sober in habits should cause close watch to be made of the case. The character changes, and often a pronounced egoism develops. Delusions may be present or absent; and sometimes there is melancholia, which partakes of the grandiose type and is the most terrible melancholia that ever was known in the opinion of the victim. There may be a very sudden perversion of the moral nature, and without warning a person be guilty of an act that causes much surprise. Amnesia is common in the early stage of the

diseases, peculiar lapses of memory that should awaken suspicion. Epileptiform seizures or syncopal attacks are rather common in the disease before any other symptom may have appeared. The pupils are sometimes quite small, or may be unequal, or be of the Argyll-Robertson type. The writing should be carefully studied for omissions. The characteristic speech and tremors should attract attention. The mental operations are slow, and they take more time to perform a simple mental performance. They may talk fluently of millions, but cannot do a very simple sum in arithmetic. Inco-ordination is marked in their movements. The reflexes are rarely normal, and one knee jerk may be absent while the other is exaggerated, both may be absent, or both increased. There are periods of apparent improvement, but only to relapse again.

As to the etiology, the lecturer laid special stress upon syphilis, giving about 69 per cent. of the cases as yielding a history of syphlitic infection.

Dr. Mott, in the *Archives of Neurology*, urges strongly in favor of the influence of syphilis in the causation of general paralysis. He adduces weighty arguments to show that the juvenile type of the disease is due to inherited syphilis. It would appear that recent studies go to establish the fact that about 80 per cent. of paretics have had syphilis. But other factors play an important roll, such as intemperance, excessive sexual indulgence, and the complex influences of civilization. An eminent writer has coined the expression, "civilization and syphilization." Dr. Mott does not yet care to go the length of saying, "No syphilis, no general paralysis," yet he is inclined to think that the evidence is pointing that way. The fact that syphilis is common in some countries where very few cases of paresis are found may be explained on the grounds of the absence of the influence of higher civilization. Some years ago Krafft-Ebing inoculated with syphilitic virus eleven paretics in whom he could ascertain no history of the disease; but none contracted it, going to show that they had already suffered from it. Fournier has shown that, while it is the upper grades of men and the sporting type that yield most cases of paresis, it is the lower grade of women, the *demimonde*, that suffers almost exclusively; and these are the classes among whom syphilis predominates.

All the evidence is pointing strongly in the direction of syphilis being the principal cause of general paralysis, locomotor ataxia, and aneurysm.

SURGICAL OPERATIONS ON THE INSANE.

During the past two years, there has been a good deal written upon this subject. Some have taken the extreme position that the operations are curative in some mysterious sort of a way.

But it must be admitted that the insane have a physical side to their being as well as the mental. If a careful examination reveals any diseased or abnormal condition which can be remedied by an operation, it seems that experience goes to prove that such operations ought to be performed. Much suffering in this way may be relieved, and the mental status of these patients correspondingly improved.

It is now admitted by those who have had excellent opportunities of observation that a very large percentage of all the women admitted into asylums has some form of pelvic disease, such as chronic inflammations, neuralgic states, or lacerations. The percentage of diseased conditions thus found varies from 60 to over 90. From statistics gathered from the results of a number of operators, it would appear that, as the result of 776 such operations of some sort, there were 189 cures, and 200 improvements.

It would appear that when the operations are properly performed on suitable cases in no instance is the condition of the patient made worse. The relief obtained in many of these cases is the starting point towards recovery.

It is quite useless to perform operations upon those who are not suffering from some diseased or injured condition of the pelvic organs.

A SYMPOSIUM ON TUBERCULOSIS.

In *The Boston Medical and Surgical Journal,* for January 18, 1906, there appeared a series of articles on tuberculosis. As these articles deal with the disease from various aspects, we will reproduce some of the views expressed in them.

The first article is by Dr. E. H. Bradford, and discusses the open-air treatment of tuberculosis of the bone. The patients were kept under the influence of the open air both day and night. Bed-rooms partially ventilated are condemned, as not carrying out the open-air treatment. The cases treated consisted of spinal caries, hip disease, and tuberculosis of the knee. The results were very gratifying.

Dr. Theobold Smith examines the much disputed question of the sameness of the bovine and human types of tuberculosis. He agrees with Robert Koch that these types are almost distinct from each other, and that very rarely indeed does man become infected with the disease from milk or meat. He is not in favor of the wholesale destruction of tuberculous cattle, and regards such a practice as a waste of money, which could be better expended in caring for consumptives. He thinks dairy herds should be inspected and tuberculous cows in an advanced stage put out of use for milk and butter. This is urged because occasionally, man contracts the disease in this way.

How best to manage the insane with tuberculosis is taken up by Dr. O. F. Rogers, of Denver Hospital for the insane and Dr. Owen Copp, of the Massachusetts State Board of insanity. These writers both contend strongly that, as far as possible. tuberculous cases should be separated from those who are not.. But to do this the diagnosis must be made early to be effective for good. This is very necessary as the insane are liable to tuberculosis on account of their lowered power of resistance. The cottage plan of segregation is the best.

Dr. John F. Nicholls, Superintendant of the State Hospital, Tewkesbury, Mass., lays down some rules for nurses and attendants on the tuberculous. The great enemies of the disease are cleanliness, fresh air, sunlight, moderate exercise, regularity in eating, sleeping, bathing and out-door life. All sputum must be destroyed and not allowed to become dry to get into the form of dust. Dust must be removed by means of damp dusters, which are boiled and disinfected. Nurses should not allow patients to breathe in their faces while attending upon them. The wards should not be over crowded and the windows kept open. The nurses should be in good health. When these rules are adhered to there is no danger to the attendants. The greatest care must be taken to have the wards free from dust.

The importance of early diagnosis is emphasized by Dr. H. C. Clapp, of the Sanatorium at Rutland, Mass. He contends that with care the disease can be diagnosed before the bacilli appear in the sputum. He also states that lung specialists claim that three-fourths of the really early cases of pulmonary tuberculosis can be cured. He does not favor the use of tuberculin for diagnostic purposes, though there are times when it should be employed, and when employed with care causes no harm.

Dr. Wilder Tileston reviews the best methods of institutional treatment. The food should be as varied and nourishing as possible, and somewhat in excess of the amount required for a person in health. It should represent at least 3,000 calories. The cooking is very important. The food should contain abundance of proteids, carbohydrates and fats. Alcohol is better left out of the regular treatment. Digestive derangements should be carefully noted and corrected. Weekly weighing of the patients is important. The patients must receive fresh air all the time, and those unable to take exercise should be placed on sheltered verandahs. If there be fever the patient should be kept at rest, generally in bed, till the evening temperature is normal. Exercise must be increased with care and gradually. Drugs are only of secondary value.

Among the other articles of the series may be mentioned that by Austin Peters on the suppression of tuberculosis in our dairies; the value of tent sanatorium treatment by David Townsend; and the open-air

treatment of surgical tuberculosis in children, by John D. Adams. In the latter article much stress is placed upon sunlight, fresh air, prolonged rest, the tent or shack method, and that these cases should not be regarded as "hot-house plants."

SOME FAMOUS SAYINGS.

"Either I will find a way or make one."—Danish motto.

"The truest wisdom is a resolute determination."—Napoleon.

"I would rather excell all others in knowledge than in power."—Joseph Addison.

"The best part of a man's education is that which he gives himself."—Sir Walter Scott.

"To be employed is to be happy."—The poet Gray.

"Knowledge is power."—Lord Bacon.

"The only jewel that will not decay is knowledge."—Langford.

"Ah! Bobby, ye asked them for bread and they gave you a stone."—Burns' mother at his tombstone.

"What I am I have made myself. I say this without vanity and in pure simplicity of heart."—John Hunter.

"There are more men ennobled by study than by nature."—Cicero.

"Fortune has rarely condescended to be the companion of genius."—Lord Disraeli.

"I believe neither in idols nor in demons. I put my sole trust in my own strength of body and soul."—Norse Legend.

"Artistic excellence, however expressed, by genius, taste, or the gift of Heaven, may be acquired."—Sir Joshua Reynolds.

"Never put off till to-morrow what you can do to-day."—Lord Chesterfield.

"More mistakes are made by not observing than by not knowing."—Sir William Gull.

"Don't think, but try; be patient, be accurate."—Hunter to Jenner.

"What sculpture is to the block of marble, education is to the human soul."—John Locke.

"What is the use of a new-born baby—it may become a man."—Benjamin Franklin.

"Investigate first, explain afterwards if you like; but remember that nature is always something very much greater than all your explanations."—Thomas Sydenham.

"From a spitting of blood comes a spitting of pus, and a wasting of the body."—Hippocrates.

"We no longer fear dying of our wounds; our friend is with us."—The French Soldiers to Ambrose Paré.

"No! in the morning of my days I sought the sequestered and lowly paths of life—the valley, and not the mountain—and now, in the evening of my days, it is not meet for me to hold myself up as an object for fortune and for fame."—Edward Jenner.

"Depart from the highway and transplant thyself in some enclosed ground, for it is hard for a tree which stands by the wayside to keep her fruit till it be ripe."—St. Chrysostom.

"The physician needs a clear head and a kind heart; his work is arduous and complex, requiring the exercise of the very highest faculties of the mind, while constantly appealing to the emotions and finer feelings."—William Osler.

PROPRIETARY MEDICINE ASSOCIATION.

"A Toronto contingent of considerable numbers left last night to attend the annual meeting of the Proprietary Articles Trade Association of Canada, which takes place to-day and to-morow at the St. Lawrence Hall, in Montreal.

"The members of this association are those engaged in the manufacture and sale of proprietary medicines, drug and grocery specialties and trade mark articles generally. There will be a number of proprietors from the United States.

"At the banquet which will take place at the St. Lawrence Hall on Monday evening the wholesale and retail drug trade of Canada will be largely represented amongst the invited guests. The leading newspapers of Canada, and especially those of Montreal and Toronto, have intimated their intended presence to the committee. Amongst the public men who have received invitations the following gentlemen have accepted:—Hon. L. P. Brodeur, Minister of Marine and Fisheries; the President of the Montreal Board of Trade, the President of the Chambre de Commerce, Hon. Robert Mackay, the President of the Harbor Commissioners, Hon. R. Dandurand, Speaker of the Senate; Hon. F. L. Beique, Camille Piche, M.P., Herbert Ames, M.P., H. Gervais, M.P., and Robert Bickerdike, M.P., of Montreal, and Messrs. L. S. Levee, J. A. McKee, W. J. Edmanson, and J. H. McKinnon, of Toronto.

"Hon. W. Templeman, Minister of Inland Revenue, it is also hoped, will attend.

"Mr. David Watson is the chairman of the Board of Control of the association at Montreal, and Mr. Brady, of the Wells and Richardson Company, and Mr. Harson, of the Centaur Company, form the committee, with the chairman, Mr. Henry Miles, the president of the Proprietary Association, will preside at the meetings of the gathering and at the banquet."

Such is the intimation that comes to us through the daily press. The leading newspapers, no doubt, would be present, for these manufacturers are extensive advertisers. A short time ago, the Press Association abused the Medical Council in strong language because it used its influence to restrain certain physicians from resorting to what it regarded as unprofessional advertising. Of course money can do many things.

Then there are a long list of members of the Senate and the House of Commons. All this is no doubt for the good of suffering humanity everywhere. It is necessary that the public should be made aware of cures for consumption, ataxia, cancer, and such like diseases, of which the medical profession know nothing. It is too bad that so many valuable lives should be lost, and so the vendors of proprietary medicines come to the rescue!

A MILLION BABIES KILLED BY HARMFUL CONCOCTIONS.

"That more than a million infants had been sacrificed to the various concoctions known as soothing syrups and pain killers, and over twice that number killed by impure milk was the declaration made last night by Professor H. W. Wiley, chief of the chemistry bureau of the U. S. department of agriculture."

The associated press despatches furnish us with the above interesting item of news. Just couple with this the news item announcing the meeting of the proprietary medicine men.

The time has come when the medical profession must organize for other purposes than keeping up a high standard of education, the promotion of public sanitation, the prevention of infectious diseases, and such like laudable objects. There must be a business side to the medical profession.

PATENT MEDICINE MEN.

The recent meeting of those interested in the manufacture and sale of some patent medicine, is full of lessons to the medical profession.

In the first place, they took strong ground that the formula of their preparations should not be made known, but should be regarded as private property. This means that people who are not doctors, and sometimes not even druggists, should have the right to place on the market mixtures for consumption by the people, and yet not inform the people what these concoctions contain. It is known that some of these mixtures contain very powerful and dangerous drugs, and often a very high percentage of alcohol.

Another position taken was that special articles should be prepared and sold through the agency of the press. If this means anything, it means that preparations are to be placed on the market for certain diseases, and that enough is to be told in the advertisements as may lead people with certain symptoms to think they have these diseases, and so try the offered "cure." Now, this is wrong from every standpoint. It exaggerates the importance of drugs, it places in the hands of an unscrupulous person great power to deceive, and it leaves with the people—often very ignorant upon such matters—the task of making the diagnosis.

But, according to the newspaper reports, the climax was reached when Mr. L. S. Levee, of Toronto, stated "that the position assumed by the average physician as a public benefactor was absurd and untrue. Their whole mission in life was collecting coin, the same as other businesses. There were good and bad doctors, as there were good and bad patent medicines. Bad patent medicines were, however, soon discovered and put away, while a doctor of the poor class kept on putting away his patients until at last he was put away himself." The foregoing statement is from the *Globe* and the *Mail and Empire* of February 13th. It is certainly interesting reading from a member of the Toronto Board of Education.

Senator Dandurand is reported as saying "he did not sympathize with the view that the formulæ should be published on each bottle, as he believed that the men who had spent years, probably, in securing an article that would be of benefit to the public should reap the reward of his labors;" a declaration that was endorsed by loud applause. If Senator Dandurand knew somewhat about the composition of these mixtures he would not have so high an opinion of the labor required in their preparation. A little aloin, podophyltin and cascara will do for a laxative pill; a little squills, licorice and opium will make a cough mixture; and a little gentian and cheap whiskey will answer the purpose for some marvellous health restorer. But then a little learning is a dangerous thing! If some of these senators, like some of our clergymen, would just keep out of print upon subjects they do not understand, it would be much better for the people.

In the *Globe* of 15th February, we find the following advertisements:

"This weather brings colds. Safeguard yourself or family by the use of Dr. Chase's Syrup of Linseed and Turpentine."

"Terrible pains across the back. Suffered eight months with kidney trouble. Would have to stay in bed for three days at a time. Doan's Kidney Pills cured him."

"Operation for gall stones was the popular treatment until Dr. Hamilton discovered a more humane cure."

"Mother and child. Let the mother take Scott's Emulsion for the two."

AGAINST VACCINATION REGULATION.

"Mr. J. D. Nasmith headed a deputation from the Anti-vaccination Society and addressed the board, protesting against education being made conditional upon vaccination, and asking that the by-law be repealed. Mr. J. C. McCuaig charged that Dr. Sheard had discriminated between the children of wealthy and uninfluential citizens in regard to enforcement of the rule regarding vaccination of pupils in the public schools. Other speakers were Rev. D. C. Hossack, Dr. Becker, and Rev. J. B. Silcox, all of whom urged that the by-law requiring children to be vaccinated be repealed as unnecessary."

The foregoing appeared in the public press a few days ago. How often will it be necessary for the medical profession to answer the arguments of the anti-vaccinationists? They depend mainly upon the writing of Alfred Russell Wallace, whose figures have been shown to be absolutely erroneous. If these people had their way, we would have an epidemic of smallpox every few years. It would become, as it formerly was, a children's disease, with a fearful mortality and much disfigurement. The law should be made more rigid and thoroughly enforced. There is no harm to the child to be vaccinated with a little calf lymph.

The Ontario law at present states: That within three months after birth parents shall present the child for vaccination before one duly authorized to perform same, and again in eight days for verification of the vaccination."

It will be well for the people to adhere to this practise. The doctors throughout the country should impress upon those in authority the necessity for a strict enforcement of the law. Smallpox is one of the diseases over which the medical profession has a complete mastery; and, yet, these people would destroy all this.

PERSONAL AND NEWS ITEMS.

Dr. E. Scarlett has opened an office for practice in Callendar.

Dr. D. B. Neely, M.D., M.P.P., of Humbolt, Sask., was married in Markdale to Miss Laura Hill, of that place, on January 17th.

Dr. E. C. Benson has been appointed chief of the interne staff of the Toronto General Hospital.

Dr. B. A. Cohoe, a graduate of the University of Toronto, has gone to Johns Hopkins, Baltimore, as resident physician and bacteriologist.

Dr. W. S. Ferguson has sold his practice in Hensall to Dr. A. H. McFadden.

Dr. Harley Smith, Toronto, has removed from Spadina Ave. to 57 Harbord St., the residence recently occupied by Dr. A. Hamilton.

Dr. Niven, of Minnedosa, owing to ill-health, is compelled to go south, after a residence in the place for three years.

Dr. M. F. Irwin has been appointed assistant medical superintendent of the Asylum for the Insane in Brandon, Man.

Dr. Sheard recently paid a visit to New York as the guest of the Canadian Club in that city.

Dr. Clarence W. Field, of Milton, Ont., has obtained the triple qualification of Edinburgh and Glasgow.

Dr. Fred McKinnon, of Ottawa, has been appointed district medical officer of the Grand Trunk Railway, with his head office in Ottawa.

Dr. James W. Gray, of St. Catharines, was recently married in Chatham, to Miss Verna Heyward.

The Medical Society of the State of New York and the New York State Medical Society have decided to unite into one State Association.

The city of Hamilton is discussing the question of an isolation and a smallpox hospital.

Drs. J. L. and W. S. Turnbull, of Goderich, have dissolved partnership.

During the year 1905 the Winnipeg General Hospital had over 4,000 patients in the wards, and nearly 6,000 in the externe department.

The Medical Council has sold the Medical Building on the corner of Bay and Richmond Sts.

Dr. and Mrs. Charles Gilmour have left Toronto for some time for Sudbury, where his duties as surgeon to the James Bay Railway require his presence.

From the *Brandon Times*, Man., we learn that Dr. Harcourt is recovering, and intends soon going to Britain for a trip, where his wife and daughter have been for some time.

Dr. A. T. Stanton, a graduate of Trinity six years ago, has been appointed Demonstrator of Pathology in the School of Tropical Medicine in London.

The annual report of the Western General Hospital, Montreal, was of a very gratifying character. The number of patients treated during the year was 524, and the income from all sources was $21,405.

The Montreal General Hospital has received the handsome sum of $100,000 from the estate of the late Mr. E. K. King. McGill University gets $50,000 from the same estate.

It is announced that Dr. George McNeil has been appointed one of the assistant physicians to the London Asylum for the Insane. Dr. McNeil was in practice in London.

A couple of weeks ago the marriage of Dr. James Gow, of Windsor, and Miss Edith Doley, of Hamilton, was celebrated in St. Andrew's church, Jarvis street, Toronto.

The International Medical Congress will be held in Lisbon from 19th to 26th of April. All information can be obtained from Dr. W. H. B. Aikins, of Toronto.

Our esteemed exchange, the *Maritime Medical News,* now appears in a very much improved form. Congratulations are due the *News* for its enterprise.

Dr. E. C. Beer, who located in Brandon, Man., last fall, was recently appointed a member of the Medical Staff of the Brandon General Hospital.

Dr. Brefney R. O'Reilly spent Christmas with his parents in London, Eng. He has been appointed surgeon to a steamer going to make a voyage round the world. He intends starting practice in Toronto towards autumn.

The Canadian Medical Protective Association is in need of members. Now is a good time to join. The membership is now continuous until one withdraws. The annual fee is $3. This society has rendered excellent service since its organization.

The Ontario Medical Association will be convened, under the presidency of Dr. Bingham, on the evening of August 20th, as the meeting of the British Medical Association commences on the forenoon of 21st August.

The annual meeting of the Canadian Association for the Prevention of Tuberculosis will be held during the last week of March in Ottawa. It is expected a plan will be devised whereby the Federal Government may co-operate in the work of suppressing the disease.

At a recent meeting of the McGill Medical Society, Professor Penhallow pointed out the close relationship between lower forms of plant animal life. He stated there appeared to be a common origin and in many respects an essential identity of the two forms of life. He also stated that all the forms of tumors found on plants were caused by some sort of irritation as was the case so often in animals.

At a luncheon of the Canadian Club, a short time ago, Hon. W. J. Hanna, Provincial Secretary, stated that in Ontario there was an alarming increase in the number of inmates in the asylums. Their numbers were three times as great as in 1871 and three times as great as in 1881. On the basis of population our asylum inmates were two and a quarter times greater than in Nova Scotia. He intimated that these institutions were used for persons who should be cared for in some other way. The senile, the destitute and the weak, who by any stretch of the imagination can be held to be mentally affected, are often placed in our asylums. There are about 6,000 persons in the asylums, and of these 1,200 contribute nothing for their support.

OBITUARY.

J. F. BRINE, M.D.

Dr. J. F. Brine died at Canso, on 18th January. He was a class-mate with Sir Louis Davis and Sir F. Borden. He was a graduate in medicine of Harvard. He practised at Charlottetown and Richibucto. For the past fifteen years he practised at Canso, holding the position of medical officer to the Commercial Cable Company. He leaves a widow and four children.

W. M. CAMERON, M.D.

Dr. Cameron died suddenly at Halifax, on 24th January, in his 63rd year. When a young man he belonged to the Halifax police force, which he left to study medicine. He studied at the Halifax Medical College and in New York. His wife and three children survive him.

JOHN L. KANE, M.D.

Dr. Kane died at Aultsville, December 7th, at the age of 31, from injuries received in a runaway.

GEORGE W. THOMPSON, M.D.

Dr. Thompson, formerly of Humberstone, died at his residence, 129 Walmer Road, Toronto, 20th January, 1906, in his 69th year.

WILLIAM J. EARLY, M.D.

Dr. Early died at Owen Sound, where he practised for a number of years. He was a graduate of the University of Toronto, in the class of 1900.

MILTON BAKER, M.D.

Dr. Baker died in the Brantford Hospital, January 23rd, at the age of 38, of an ear affection which spread to the brain. He practised for nine years at Springfield, Ont., and for the past two years in Brantford. He graduated from Trinity in 1894.

ROBERT MITCHELL, M.D.

The death of Dr. Robert Mitchell, of Amherst, Nova Scotia, is reported. He was in his 73rd year, and had formerly held for many years the position of surgeon to the Maritime Penitentiary at Dorchester, N.B.

GEORGE PRINGLE, M.D.

The death of Dr. Pringle occurred at his residence in Toronto, on 16th February. He was in his 72nd year. He practised in Cornwall for many years, where he had an extensive clientèle. He removed to Toronto in 1889, and for a number of years has lived in comparative retirement on account of failing health. He leaves a widow and five children.

FREDERICK GOODWIN, M.D.

Dr. F. Goodwin, of Bayfield, N.B., died February 11th. The doctor had been suffering from Bright's disease for some time. He was 45 years of age and was born in Lornville, N.S. He was a graduate of the Medical College in Baltimore. He had been in practice fourteen years at Bayfield, and took an active interest in medical societies. His wife survives him. He had a large practice and was held in much esteem.

WILLIAM N. HAND, M.D.

The death of Dr. Hand occurred at Woodstock, N.B., on 10th February, after an illnes of three weeks, due to blood poisoning, contracted while performing an operation. He was in his 42nd year, and held a very prominent place in the opinion of the community where he lived. He was born at Plymouth, N.B., and graduated in Philadelphia. His untimely death, due to an illness contracted while in the discharge of his professional work, has cast a gloom over his many friends and acquaintances. He leaves a wife and two daughters.

BOOK REVIEWS.

BODILY DEFORMITIES.

On the Nature, Causes, Variety and Treatment of Bodily Deformities, in a Series of Lectures delivered at the City Orthopedic Hospital in the year 1852 and subsequently, by the late E. J. Chance, F.R.C.S., Eng., Surgeon to the City Orthopedic Hospital, Senior Surgeon to the Metropolitan Free Hospital, Formerly Lecturer on Practical Anatomy at the Aldersgate and Hunterian Schools of Medicine, etc., etc.. With illustrations drawn on wood by the author from cases in his own practice, and many additional drawings and copious notes from cases in the Editor's practice. Edited by John Poland, F.R.C.S., Eng., Surgeon to the City Orthopedic Hospital, Senior Surgeon to the Miller Hospital, formerly Senior Demonstrator of Anatomy at Guy's Hospital, etc., etc., author of "Traumatic Separation of the Epiphyses," "Skiagraphic Atlas," "Retrospect of Surgery During the Past Century," "Records of the Miller Hospital," etc., etc. Second edition in two volumes; Vol. I. London: Smith, Elder & Company, 15 Waterloo Place; 1905; Price, 6 shillings net.

Mr. E. J. Chance was a brilliant surgeon. There are not a few Canadians who came under the influence when he was actively engaged as surgeon City Orthopedic Hospital in London. The first lecture deals with skeleton and its influence on the external contour of the body. This lecture is full of thought and apt suggestions, and throws much light upon the whole subject of Orthopedic Surgery. The second and third chapters or lectures are "On the Causes inducing congenital deformities." In these lectures many examples are given of congenital deformities, and some excellent observations upon their causation. After discussing fully the error in development primarily in the ovum and hereditary influences, the author comes to the much debated one of mental emotion, fright, or longing on the part of the mother as a cause for various deformities. He states his unqualified opposition to the belief in maternal impressions. The arguments he advances, though more than fifty years old, stand the test of modern investigation; and, one would think, should set this subject at rest. He states that once the ovum has left the ovary it is a separate portion of matter, and not possibly under the influence of the mother's nervous system in any way. Lecture four discusses very fully the action of the cord and arrest in the development of parts of the body in the etiology of deformities. Lectures five and six take up the postnatal causes of deformity, as rachitis, rheumatism, diseases of the bones, muscles, burns, etc. The little book is a classic, and is the product of the long and large experience of a master mind, the whole being carefully edited by a surgeon of international reputation.

INTERNATIONAL CLINICS.

A quarterly of Illustrated Clinical Lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Gynæcology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia. Vol. IV., Fifteenth Series, 1906. Philadelphia and London: J. B. Lippincott Company. Canadian agents: Charles Roberts, Montreal. Price, $2.25.

This volume contains articles on treatment, medicine, surgery, obstetrics, gynæcology, ophthalmology and pathology. There are 20 beautiful plates and many other excellent figures throughout the text. No pains have been spared to make this volume a valuable one from every standpoint, and worthy of the series to which it belongs. Our words cannot be other than those of praise for these volumes of the "International Clinics."

TYSON'S PRACTICE.

The Practice of Medicine, a Text-Book for Practitioners and Students, with specia reference to Diagnosis and Treatment, by James Tyson, M.D., Professor of Medicine in the University of Pennsylvania, and Physician to the Hospital of the University, Physician to Pennsylvania Hospital, Fellow of the College of Physicians and Surgeons of Philadelphia, Member of the Association of American Physicians, etc. Fourth edition. Revised and enlarged, with 240 illustrations, including colored plates. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St.; 1906; price, cloth, $5.50.

We have reviewed this book on a former occasion, and it is a pleasure to review it again. As edition after edition appears, it is quite apparent that the author looses no opportunity, and leaves nothing undone to render this one of the most useful, readable and stimulating of the many excellent text-books on the practice of medicine. The author has a good style of stating his views, and has the power of being full without being prolix and being condensed without becoming obscure. The whole range of the practice of medicine is well covered in the present volume of thirteen hundred pages. When one bears in mind what an enormous field has to be traversed this will not appear too large a book. Indeed, to cover the ground undertaken there has to be a studied condensation. It is in this that the author excels. He makes clear his case and passes on to the next subject with such brevity as enables him to embrace the entire range of practice. Would sum up our opinion by saying the book is up-to-date, well written, complete, comprehensive, optimistic in tone, and very suggestive in treatment. The publishers have spared no pains to do their part well. It is, therefore, a pleasure to recommend this work to our readers. It is truly a fine addition to any medical library.

SIR JAMES GRANT'S LECTURES.

Sir James Grant, of Ottawa, during the past summer visited Britain, and in a number of places in Scotland delivered lectures, mainly on the subject of tuberculosis. We have had much pleasure in reading these addresses. They are couched in his usual felicitous style of language. His thoughts are timely. The scattering of such knowledge will do much good.

GRAY'S ANATOMY.

Anatomy, Descriptive and Surgical, by Henry Gray, F.R.S., Fellow of the Royal College of Surgeons, Lecturer on Anatomy at St. George's Hospital Medical School, London. Edited by T. Pickering Pick, F.R.C.S., Consulting Surgeon to St. George's Hospital and to the Victoria Hospital for Children, London, H.M. Inspector of Anatomy in England and Wales; and Robert Howden, M.A., M.B., C.M., Professor of Anatomy in the University of Durham, Examiner in Anatomy in the Universities of Durham and Edinburgh, and to the Board of Education, South Kensington. New American edition, thoroughly revised and re-edited, with additions by John Chalmers Da Costa, M.D., Professor of Principles of Surgery and of Clinical Surgery in Jefferson Medical College, Philadelphia, Surgeon to the Philadelphia Hospital, Consulting Surgeon to St. Joseph's Hospital. Illustrated with 1,132 elaborate engravings. Lea Brothers & Co., Philadelphia and New York; 1905; Price, cloth, $6.50.

It is well within the mark to state that this is the best known book on any medical subject in any language. Every English speaking doctor and medical student is familiar with Gray's Anatomy in a far more intimate way than merely the name. It is read, studied and valued—for it is truly a guide. No other country or language possesses its equivalent or rival. There are many books on anatomy, both general and practical, but Gray's Anatomy stands alone. It may be said that no other man ever wrote a book on any medical or surgical subject which begot him such fame. When Gray left the world his work on Anatomy, it could truly be said of him in the words of Horace, *Exegi mounmentum aere perennins*. We have watched the various editions of this work for nearly thirty years, and have noted how carefully the various editors have kept it abreast of the times. But in the midst of the necessary changes, the original plan of the work has been carefully maintained. The illustrations are excellent. Indeed, it would not be possible for the artist to make them any better; and the coloring is very fine, not too glaring, and yet pronounced enough to give a fine perspective to the several parts. The reading matter is so well known to most doctors that nothing need be said upon it. We do not think any one should practice medicine or surgery without being in possession of this work, which perfectly describes man, the subject of the doctor's life work. Anatomy as found in this book is no dry-as-dust study, but a fascinating storehouse of knowledge and pleasure. We congratulate the editor on the care he has bestowed upon this edition, and the publishers on the splendid form of the book in every aspect of the book-maker's art. As Gray's Anatomy lives on, it ever renews its youth; for it is perennial.

PRACTICAL DIETETICS.

With Reference to Diet in Disease, by Alida Frances Pattee, Graduate, Boston Normal School of Household Arts; late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; and Special Lecturer at Bellevue, Mount Sinai and the Hahnemann Training Schools for Nurses, New York City. Third edition. A. F. Pattee, publisher, 32 West Thirty-ninth street, New York City. 12mo, cloth. 300 pages. Price, $1.00 net, by mail $1.10, C.O.D. $1.25.

This little book is got up for the student, the physician, the hospital, the nurse and the home. Its subject matter has been prepared by one who has a very large experience in the practical teaching of dietetics. This experience is embodied in the present atttractive book. First of all there is an excellent account of the preparation of liquid. semi-liquid and solid foods. Then comes the subject of diet in disease, and after this the diet for infants. There is an appendix dealing with a number of matters in connection with the sick room, poultices, ice-bags, tables of weights, etc., etc. The arrangement of topics is a very convenient one. The book is full of recipes for cooking dishes and delicacies of almost every kind. The book has been very highly recommended by many eminent physicians and by many leading medical journals. To all these, we are glad to be able to add our own words of cordial approval. We wish for the book a very wide distribution.

THE SIGNS OF INTERNAL DISEASE.

A Brief Consideration of the Principal Symptoms Thereof, by Pearce Kintzing, B.Sc., M.D., Professor of Physical Diagnosis and Disease of the Heart, Maryland Medical College; Physician to the Franklin Square Hospital, Baltimore, Md. Illustrated. Cleveland Press, Chicago, 1906. Price in cloth, $3,00; in half morocco, $4.00.

We wish to preface our remarks by stating that this book is got up in a most attractive manner. The paper, binding and typography are excellent. The illustrations are of a superior character, and many of them are in colors. It would be very faint praise to state that they are all excellent and in very fine style. The graphic method is employed throughout the book, both fully and effectively. The descriptions of the signs and symptoms of disease are clearly and tersely given; and the author displays much tact and skill in being able to cover so much ground in such short space. The book is one on diagnosis, principally of the diseases of the chest, the abdomen, and the blood. The various methods of making physical examinations of the organs are well set forth; and the anatomical relations of the organs receive proper attention. After a very careful perusal of the book, we are glad to be able to recommend it to all who require an up-to-date work of diagnosis.

MISCELLANEOUS.

SIGNIFICANT FIGURES.

Fifteen millions five hundred and two pounds of tobacco, cigars and cigarettes were used in Canada during the year covered by the last fiscal report, and an analysis of the returns shows that the use of cigarettes is largely on the increase. The cigarette is an inexpensive and convenient form of smoke, and used rationally it is the best way in which to enjoy the solace of tobacco. Of the increase noted above, much is traceable to the popularity of the "Sweet Caporal" cigarette, and it is not surprising that it should grow in favor, inasmuch as competent analysts have attested to its purity.

SICK ROOM IN WINTER.

In rooms heated by a furnace where there is sickness Dr. Leroy M. Yale of New York advises that the hot air should be made to pass over water to which some Platt's Chlorides has been added, and a towel moistened with Platt's Chlorides kept over the register. When heated by a stove or open grate, a basin containing Platt's Chlorides mixed with ten parts of water should be placed near the fire, and a towel occasionally moistened in this kept suspended in the room.

IDIOSYNCRASY OR SOME OTHER REASON.

We meet with many cases in practice suffering intensely from pain, where for an idiosyncrasy or some other reason it is not advisable to give morphine or opium by the mouth, or morphine hypodermically, but frequently these very cases take kindly to codeia, and, when assisted by antikamnia, its action is all that could be desired.

In the grinding pains which precede and follow labor, and the uterine contractions which often lead to abortion, in tic douloureux, brachialagia, cardialgia, gastralgia, hepatalgia, nephralgia and dysmenorrhœa, immediate relief it afforded by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative. The most available form in which to exhibit these remedies is in "Antikamnia & Codeine Tablets."

The physician cannot be too careful in the selection of the kind of codeia he administers. The manufacturers of "Antikamnia & Codeine Tablets" take every precaution, in fact, they refine and purify every grain of codeia which enters into their tablets. This not only prevents habit and consequent irritation, which follow the use of impure codeia, but it does away with constipation or any other untoward effect.