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THE

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McGILL UNIVERSITY, - Montreal

Faculty of Medicine, Seventy-Ninth Session, 1910-1911

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HALIFAX, Nova Scotia

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THE MARITIME MEDICAL NEWS

VOL. XXII, *DECEMBER, 1910*, No. 12.

WORLD OF MEDICINE.

Spinal Compression. A. Primrose, Toronto, Canada (*Journal A. M. A.*, October 22), says that the conditions demanding surgery for paraplegia from compression of the cord are by no means clearly defined. From a study of 14 cases coming under his care he describes the indications for operation as they appeared to him. Hemorrhage in the neural canal may be the cause of the paraplegia, either extra or intradural or into the substance of the cord. When the paralysis comes on after an interval of time between it and the injury, this possibility must be kept in mind. Two of his cases were of that type. It is not possible always to say whether the hemorrhage is extradural or intradural, but hemorrhage into the cord is more likely to give local symptoms. The results of hemorrhage are likely to manifest themselves earlier than those due to congestion. When the symptoms point to hemorrhage outside of the cord it is better to operate early, as the clot may not absorb. Severe injury to the spinal cord may cause death by clot, as was the case in two cases observed. In another acute reflexion of the cervical spine, producing stretching of the cord with hemorrhage, caused paraplegia. If fragments of the neural arch have been driven forward, compressing the cord, early operation may give relief, and if there is any strong evidence of partial severance of the cord the same is true, even before we can absolutely determine the fact. The most common cause of compression paraplegia from disease is spinal caries, and this is frequently amenable to milder measures, but occasionally operative interference is necessary and should not be delayed too long, as experience has demonstrated to the author. If treatment by extension for three months is not effective, he would advise laminectomy unless other conditions contraindicate it. In tumors of the cord valuable time is often lost by delay until after the cord is damaged beyond repair, and he seems to think that operation should be performed in dubious cases. Even when the growth is syphilitic gumma, operation is better than waiting to cure it by specific treatment. The operation of laminectomy, carefully performed, is not a dangerous procedure and does not seriously affect the stability of the spinal column. Cases have been reported by Horsley and others in which symptoms of chronic spinal meningitis simulated tumor and were relieved by opening theca and washing out with strong mercurial solution. In traumatic paraplegia the questions are more difficult. Primrose does not believe that regeneration after complete severance of the cord is possible, though some cases have been reported of partial recovery. He thinks that these were only partial severance. The suggestion of Kilvington, of Melbourne, of nerve crossing in the neural canal is mentioned and the possible danger of the operation must be considered. In all cases of doubt he advises early operation as the better course.

Pernicious Anemia; Its Definition And Treatment. E. Grawitz, Berlin, states that the term pernicious anemia includes such very grave forms of anemia as arise without any recognizable organic affection and without parasitic influences, as the result of a specific injury involving the red blood corpuscles. The most important and frequent cause is intestinal intoxication, in which a primary lack of free hydrochloric acid in the stomach plays an important part. This deficiency enables bacteria that are swallowed to find a good culture medium in the albuminous substances of the ingesta without being hindered in their development by the influence of hydrochloric acid. Hemolytic toxic substances are thus produced. The treatment of this condition is in the main dietetic, consisting chiefly in the avoidance of animal albumin. For purposes of disinfection, regular lavage of the stomach and irrigation of the bowel are resorted to. Later the arsenic treatment is carried out by the injection of a neutral one per cent. solution of sodium arsenate in increasing doses from one milligram to one centigram daily.—*Ex.*

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The Treatment Of The Acute Stage Of Poliomyelitis. H. M. McClanahan, A. M., Omaha (*Journal A. M. A.*, October 22), discusses this subject in detail. He says that treatment of the acute stage has received scant consideration. If we can do nothing to modify the disease, certainly we can do something for the patient, and until specific treatment is discovered it is the duty of the physician to institute proper treatment to meet the indications in the average case. Isolation of the patient can do no harm to the individual and may protect others in the family. To my mind it is more important than rigid quarantine. The advice of the family physician is usually accepted, hence if he advises the mother at once to isolate the patient he has adopted the best measure to prevent the extension of the disease to others. If a mistake in diagnosis is made no harm can possibly result. If during local epidemics of this disease, such as prevailed in 1909 in Nebraska and during 1910 in Iowa, physicians everywhere would adopt this course many cases might be saved from exposure.

The important principle of treatment is elimination. This includes thorough depurative action on the bowels, for which McClanahan recommends castor oil, the ingestion of a liberal amount of fluid to promote excretion from the kidneys, the use of remedies to stimulate diaphoresis, a liquid nourishing diet and proper regulation of the temperature and ventilation of the room.

If the child refuses to drink enough liquid to keep up free elimination from the kidneys, then warm salines by the bowels should be given. To stimulate the skin nothing equals a hot pack. This is also of benefit in the polyneuritic type. If properly applied this is agreeable to the child and it is always important to have the child's voluntary cooperation. A soft, white blanket, lightly wrung out of hot water (if there is evidence of stupor it should be wrung out of mustard water), is wrapped snugly about the child. A dry blanket should be wrapped over this—not a muslin sheet which absorbs water. The child should be encouraged to drink while in the pack. Some children will drink freely of grape-juice when they will not take water. When removed from the pack they should be gently rubbed dry and placed between blankets until perspiration has ceased.

The diet during the acute stage includes milk, plain, diluted or modified; buttermilk, broths, and, if there is much gas, some of the modified cereals, sometimes a poached egg, toast when properly made and fruit juices. Toast

to be easily digested should be made from bread well dried, slices cut thin and heated through.

The fever seldom requires special attention, and when it does, sponging or a cool enema most safely meets the indication. Coal-tar derivatives should be avoided entirely. As a routine treatment McClanahan recommends the use of hexamethylenamin (urotropin). It is generally well tolerated by the stomach. Certain types of the disease require special consideration. By the cerebral type is meant cases beginning in a stormy way with fever, delirium or stupor, muscular rigidity, etc. It usually happens that these symptoms subside in two or three days, and if the physician has called it cerebrospinal meningitis he begins to doubt his diagnosis. Lumbar puncture is now recognized as the only positive method of early diagnosis, but is also useful as a therapeutic measure.

In the polyneuritic type, with cutaneous hypersusceptibility, morphin may be required, at least in some cases. Relief can often be attained by the use of a suppository: Powdered opium gr. ½, extract of belladonna gr. ½, sodium salicylate gr. 5, oil of theobroma enough for one suppository. One suppository is to be inserted every three hours until relief is attained. Here again the hot pack, as above described, will sometimes give relief. When the stomach will retain it, sodium salicylate is of benefit.

The mortality in this disease is chiefly from the involvement of the medulla, leading to respiratory failure. I think it is well to remember that this complication will occur in any type of the disease; hence such symptoms as shortness of breath, pallor of the skin with slight cyanosis of the lips, unwillingness to talk and an anxious countenance, should warn the attendant of approaching danger. Oxygen might be of benefit. If McClanahan should again see a case of this type he would do a lumbar puncture, on the theory that the bulbar paralysis might be due to pressure and that the withdrawal of fluid would tend to relieve this pressure.

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Orthopedic Treatment Of Acute Poliomyelitis. John Ridlon, Chicago (*Journal A. M. A.*, October 22), states that the treatment of this disease consists of massage, use of braces and surgery. In nearly all cases of anterior poliomyelitis contraction deformities develop sooner or later. In most cases, fortunately, it is later, some months after the acute attack with its usual accompaniment of sensitiveness and soreness of the limbs has passed, and when it is comparatively easy with splints or braces to prevent it. But in a few cases contraction deformities, even of severe degree, develop during the first eight or ten days, while the sensitiveness is still so great that it seems a positive cruelty to move the child at all. But if the attending physician allows contraction deformities to develop, whether it be early or late, he should realize fully the responsibility he is taking, and should stand ready to admit that to his neglect of a simple precaution the child must have all the rest of his life more useless limbs than he needed to have. For no orthopedic or surgical treatment can ever make these contracted muscles as good as they might have been had he prevented the development of deformity. In regard to braces, Ridlon says that here and there an orthopedist can be found sufficiently competent to correct some slight contraction deformities by braces constructed to stretch the shortened muscles, but of these there are few, for most young orthopedists seem to have a greater ambition to perfect themselves in surgery than in mechanics. As a rule, braces should be used only to prevent the development of deformities at joints where the tendency is not

great, in joints where the deformity has been fully corrected, and to enable the patient to use the limb more and better than he can use it without the brace. If there is no deformity and no tendency to deformity and the patient can use the limb without a brace, then a brace should never be used. A brace should be a help, not a burden. It is greatly to be regretted that the cupidity of some physicians leads them to order braces from surgical instrument makers who give a commission of 25 per cent, on the cost of the brace, for this usually means a costly brace that the physician can neither measure for, fit to the patient, nor use intelligently. Ridlon discusses the indications for surgery and states that there is a certain risk, not often appreciated, in the use of great force in the correction of paralytic deformities. For both from non-use and from deficient nutrition arising from the paralysis, the bones grow thin and friable and may be broken before the deformity can be overcome. These bones when broken sometimes are the source of fat emboli, not infrequently the cause of death. But when a deformity can be safely corrected without a cutting operation it should be so corrected. Then it should be put up in a well-padded and heavy plaster splint and kept in the splint and used for from four to eight months. After that an efficient brace should be worn for years. When a paralytic deformity cannot be corrected by force alone, it can generally be fully corrected by simple tenotomies and force. When this is done the after-treatment should be as before indicated, namely, a well-padded and heavy plaster splint, worn for months while the limb is being used, followed by a brace, for years in most cases, and massage and movements. He declares that tendon splicing is useless and that tendon transplantation is of value in a small and carefully selected group of cases. The tendon-lengthening and joint-fixation with permanently buried silk ligatures as practiced during the past five years holds out as yet a promise of better results when well done in carefully selected cases. Yet hardly a week passes that we do not see cases operated on by others that have been utter failures. As yet it is too soon to say what the ultimate results will be after ten or fifteen years have passed in the cases that now seem to be entirely satisfactory. Treatment of these cases by nerve grafting is useless. The resection of flail joints in complete paralysis in order to obtain ankylosis and escape the burden and cost of braces for life is sometimes a success, and sometimes a failure through failure of bone union, probably owing to the impaired nutrition. The prognosis, in Ridlon's opinion, is not good for recovery from the paralysis.

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Treatment Of Poliomyelitis From A Neurologist's Point Of View. B. Sachs, New York (*Journal A. M. A.*, October 22), states that our views of the treatment of this condition have undergone a radical change. It will not do for the physician to sit idly and state that "there is little to be done." The disease calls for patient and intelligent treatment with prospect of reward. The entire aim of treatment, Sachs says, is mildly to stimulate the nerves and to exercise in one way or another muscles which cannot be exercised by will. This, he says, can be done by electricity, massage and by active and passive exercises. He takes up in succession the proper form of electric treatment, the methods of giving massage, and emphasizes the importance of active and passive exercises especially in the earlier paralytic stage. He touches briefly on orthopedic treatment and states that as a rule much time is wasted in hoping for a return of normal conditions. If six months or a year after the onset of

poliomyelitis a group of muscles shows considerable wasting, an absolute reaction of degeneration and no return of muscular power, it is useless to hope for spontaneous improvement. The orthopedist should then step in and attempt to correct the mischief done by the disease. He states that he knows of no drug which has the slightest effect on the spinal lesion or on the paralyzed muscles after the acute stage has been passed. While salicylates and mild narcotics will have to be employed in the earlier period of the disease, and even iodides and ergot may be administered in the earlier stages, there is no sufficient reason to exhibit these drugs in the paralytic and post-paralytic periods. For the relief of neuritic and muscular pains, give a combination of pyramidon, citrate of caffein and aspirin, or aspirin alone, varying the quantities according to the age of the patient. If necessary, codein may be added. Injections of strychnin or of arsenic are absolutely useless, he believes, though there can be no objection to the use of the ordinary blood and nerve tonics, provided the practitioner keep in mind that he is attempting to improve the general condition of the patient and is not endeavoring directly to effect a change either in the spinal cord lesion or in the paralyzed nerves and muscles. In conclusion, he insists that intelligent gymnastic exercise of the paralyzed or weakened limbs is the method to which one should pin one's faith, and from personal experience he states that the physician who directs these exercises intelligently, and who will direct them patiently, will have no reason to regret the time devoted to this cause. In recent epidemics the disease has been of such varying intensity that we have no right to claim that any case is a hopeless one, and much can be done by properly directed therapeutic efforts.

EDITORIAL.

WE wish to direct the attention of the readers of The Maritime Medical News to the following circular letter:—

"After much serious thought and a great deal of negotiation with the publisher, the Finance Committee of the Canadian Medical Association is at last in a position to make a definite statement to the profession concerning the new Journal of the Association. The Committee has concluded arrangements with Mr. Geo. N. Morang, in Toronto, as publisher; and it is now possible to say with reasonable certainty that the first number of the new Journal will be issued in the first week of January, 1911, under the editorship of Dr. Andrew Macphail, of Montreal. It can also be said that no effort will be spared on the part of those responsible for bringing out the Journal to make it a publication worthy in all respects of the National Association, whose interests it is particularly designed to serve. The Finance Committee, therefore, earnestly requests the loyal support of every member of the profession in Canada. This is absolutely necessary if the interests of medical men throughout the country are to be safe-guarded and advanced. If the Canadian Medical Association can count upon a membership which will embrace the great majority of the medical men in Canada, it will necessarily become of truly national importance, and will be able in very many ways to exercise the most beneficent influence on the fortunes of the profession in this country.

"As the Association year is a Calendar year, the Finance Committee, having the precedent of the British Medical Association before them, think it best to draw upon each subscriber shortly after the New Year annually.

"A subscription form is enclosed, and it is hoped that you will fill it out and return it without delay to the General Secretary, at 160 Metcalfe Street, Montreal.

"It is to be remembered that the subscription price of the Journal includes the fee for membership in the Association, which is open to all qualified and registered medical practitioners in Canada."

This circular is signed by Doctors James Bell, Montreal, chairman; J. T. Fotheringham, Toronto; F. N. G. Starr, Toronto; George E. Armstrong, Montreal, *ex officio;* F. G. Finley, Montreal; R. J. Blanchard, Winnipeg; S. J. Tunstall, Vancouver; Murray MacLaren, St. John N. B.; Edward Archibald, General Secretary, Montreal, *ex officio.*

There has been for a long time a feeling that we in Canada should have a Journal, somewhat on the lines of the British Medical Journal, a journal which should serve the interests of the profession throughout the Dominion. It was natural that the impulse should come first from the Canadian Medical Association. Whether or not, in course of time, the association may, as in the case of the British Medical Association, be represented in every part of the country by branches, forming the local medical societies, there can be no doubt that a journal conducted by the Canadian Medical Association, publishing the papers read at its annual meeting, and such other articles as might be contributed, discussing matters of importance to the whole profession, such as medical reciprocity, giving from time to time a *conspectus* of medical progress in general, and such items of

home and foreign medical news as would be interesting to us all, would be at once an interesting paper and a powerful factor in binding our scattered interests in one Canadian whole. More than a year ago, at the Winnipeg meeting, sanguine spirits hoped for the appearance of such a journal during the present year. There were lions in the way, and it is only after an immense amount of hard work and a great deal of mutual concession that the Finance Committee of the Canadian Medical Association is in a position to issue the circular we have just quoted.

Knowing, as we do, the high aims of those who have struggled so hard to found this journal, and the distinguished ability of those directly in charge of it, we have great confidence in urging all our readers to subscribe for it. And this brings us to consider our own relation to the new journal.

The *Maritime Medical News* was founded in 1888 by Dr. Arthur Morrow, now residing at Kalispell, Montana, and has, we believe, served a useful purpose, and has been to some degree a bond of union to the profession in the Maritime Provinces. It must be evident that the new journal, if successful in its aims, will serve a much wider purpose and must tend to unify the interests of our profession throughout the Dominion. A careful consideration of all these circumstances has led the shareholders and editors of the *Maritime Medical News* to the conclusion that it is their duty to further as far as possible the interests of the new journal, as they believe these interests are also those of the medical men of Canada, and they have therefore resolved to suspend the publication of the *Maritime Medical News* with the current issue.

If at some future time it should appear to be in the interests of the profession in these Maritime Provinces to have a journal representing local or special needs, we have no doubt men will be found able and willing to resuscitate and revivify this slender body of ours.

And now to all our readers a kindly farewell! To the new journal our hearty and loyal good wishes, and to all our comrades from Sydney to Victoria (and not forgetting Newfoundland) a Happy New Year!

THE USE OF VACCINES IN SEPTIC AND INFLAMMATORY CONDITIONS.

By ERNEST WATSON CUSHING, M. D., LL.D.

AFTER the demonstration of the relations of pathogenic bacteria to infections, and to the diseases dependent on infections, there were opponents of the germ theory of disease who maintained vehemently that the real disease lay in the patient, and that the invasion of bacteria was a consequence rather than a cause of the malady.

Many heated discussions and much personal rancor arose from these opposing views, as was see in the experience and writings of Lister, Tait and others.

It soon became evident, however, that there was some truth on each side of the question; that, as bacteria are vegetables, not only the seed, but the soil must be considered; that just as rabbits and guinea pigs are easily infected by tubercle bacillus, while rats and goats are immune, so some men are prone to be affected by certain bacterial diseases, while others under similar conditions escape.

It was observed, moreover, that a reduction of the vital forces of the individual increased his liability to such diseases; in other words, that there is an individual resistance by which we are protected from infection, which resistance varies in races and individuals by nature, and is variable in the same individual, not only for disease in general, but for each specific pathogenic bacterium.

The problem then arose as to how the individual resistance to any given bacterium should be estimated, and where desirable increased.

To Wright, of England, we are indebted for working out a theory and method by which practical results are obtained.

It is based on the supposition that there are formed in the body certain substances which enable the leucocytes to attack and destroy the invading bacteria. These substances are known as opsonins, and their relative abundance in the system can be estimated, and thus a guide to diagnosis can be deduced.

Although interesting and useful in certain cases, the determination of the opsonic index is seldom required in surgical and obstetrical work, and will be passed over as foreign to this paper.

Of much more practical value to us is the theory that the presence in the body of the toxic products of any given bacterium arouses the vital forces to produce resistance to the particular bacterium. From this the deduction is easy that if pathogenic bacteria are cultivated on suitable media, and then the life of the bacteria is destroyed, the toxic products remain in the culture, and on the injection of this culture into the body a resistance will be developed by the natural forces which will help the system to overcome the invasion of that bacterium.

This is supposed to be analogous to the process which causes the self-limitation of diseases dependent on bacteria, where it is held that the system produces substances which render the body an unfit soil for that particular growth of bacteria, and so they die or are destroyed by leucocytes, and the patient recovers.

If such resistance is not developed, however, the patient dies.

The specific means of helping the patient to offer resistance to the bacterial invasion are two, by serum and by vaccines.

Serums are formed by introducing living bacteria into the body of some animal which has a high resistance to the particular bacterium, although it is not entirely immune. The animal must also be of such a nature that its blood serum, when injected into the human body is not harmful.

The antitoxin for diphtheria, prepared from the blood of a horse which has been so immunized, is the most familiar example of a serum. Sera, however are only adapted to diseases where the bacteria remains localized, and only their toxins are in the blood of the patient. They contain bodies which act directly in antagonism to the toxins of the disease, but not directly on the bacteria. They are inapplicable, as a rule, to the pyogenic bacteria with which we are now concerned.

Vaccines or killed cultures are supposed to act directly by helping the system to destroy the hostile bacteria: it is claimed that they assist materially in shortening the disease, and will help many patients to recovery who would otherwise die.

Are these claims true? That must be determined by experience, and my own experience has shown that vaccines are extremely useful, and even indispensable, in the treatment of many surgical as well as other infections.

Nevertheless, a great discrimination must be used as to the source of supply. Vaccines are not like tinctures that will keep indefinitely. They should be fresh, carefully kept in a cool place and out of the influence of light.

Moreover, the different bacteria which are classified together by their appearance under the microscope, and by their behavior on different culture media, and in staining, differ in pathogenic properties. There are as many varieties of streptococci, for instance, as there are of mushrooms. Some are worse than others.

Except, perhaps, in the case of staphylococcus, by far the best results are obtained by use of autogenous vaccines; that is, of vaccines cultivated from the secretions or discharges of the patient himself.

In spite of the laudable endeavors of the manufacturers to make and distribute killed cultures or vaccines, no results will be obtained with those bought of apothecaries comparable to the results of use of fresh autogenous vaccines.

Every large and well-conducted hospital should have in its pathological department some one competent to make such vaccines. Small hospitals and private practitioners should be in close relations with the nearest well-equipped medical school or pathological laboratory, and doubtless arrangements could be made by which autogenous vaccines would be furnished on application.

The specimen of secretion, as fluid, around an appendix, or secretion from a puerperal uterus, or sputum from a pneumonia, is collected on a swab, just as in the case of specimens from the throat in a case of suspected diphtheria, and replaced in the tube and sent by mail to the laboratory. In twenty-four hours a culture can there be made, suspension of bacteria counted, sterilized, and the vaccine returned to the sender.

Stock of vaccines of many strains of streptococcus mixed together, as well as stock vaccines of other bacteria, are kept in the laboratories, or they may be obtained direct from accredited agents of some of the large manufactures. The best results with vaccines are obtained in cases of infection with the following bacteria, in the order

named:— Colon bacillus, pneumococcus, staphylococcus.

With streptococcus results are disappointing in rapid and virulent infections, where the system offers little resistance and there is no time for resistance to be developed. In less severe cases streptococcus vaccine is very useful.

Vaccines of gonococcus gives no satisfactory results in acute infections, nor is it possible by their use to prevent the infection from extending to the Fallopian tubes. It is not yet settled in how far such vaccines moderate the violence of salpingites and prevent suppuration. In gonorrheal arthritis vaccines appear to be decidedly beneficial and they have been shown to be very useful in chronic vulvo-vaginites of children.

The classes of cases most common in abdominal surgery and obstetrics in which vaccines are useful are:—Puerperal infections, appendicitis, abdominal operations, infections of bladder and kidney, post-operative pneumonia, and post-operative fistula.

Since January, 1907, I have records of something over fifty cases of the use of vaccines in cases which I have operated or treated myself or seen or watched in consultation. Nearly all of these cases were infected before I saw them, and this is true of all the puerperal cases.

The rest of the cases, some 700 or more, which I have operated on during that time have required no vaccines, as the forces of nature were sufficient to insure recovery. Vaccines, nearly always autogenous, were used in the following fifty-three infections:

11 staphylococcus pyogenes aureus; slough from burn; excision of breast, followed by streptococcus for subsequent erysipelas; stitch abscess; urethrotomy (male); infected wound of lip; abscess of wound; severe impetigo; infected glands of neck; sinus to carious bone; infected wound of lip; severe impetigo of head and face; infected glands of neck; sinus to carious bone; myomectomy.

2 staphylococcus pyogenes aureus and tuberculin T. R.; sinus after nephrectomy for tuberculous kidney; esteomyelitis and necrosis of tibia.

2 pneumococcus; puerperal infection and pneumonia; pneumonia after appendectomy.

1 pneumococcus and streptococcus; phlegmon of neck and pneumonia.

1 pneumococcus and colon bacillus; chronic pyæmia and pneumonia.

1 bacillus mucosus capsulatus (autogenous); appendectomy.

16 colon bacillus; appendectomy, 4; puerperal infection, 5; fecal fistula, 1; pyosalpinx, 1; cystitis, 1; pyelitis, 2; orchitis, 2; hematocele, 1.

1 colon aaud tuberculin T. R.;, multiple ulcers of colon and rectum.

2 colon and various (autogenous); Cæsarean section; appendectomy.

5 colon and stretptococcus; appendectomy, 3; salpingectomy, 2.

7 stretptococcus; puerperal infection, 1; myomectomy, 1; extraperitoneal abscess of loin, 1; osteomyelitis of foot; empyema, 1; infected hand 2.

2 strenptococcus and tuberculin T. R.; hysterectomy, 2.

1 pyocyaneus; fecal fistula after appendectomy.

I mention these various cases to indicate that I have had sufficient experience in the use of vaccines to warrant me in expressing an opinion as to their efficacy. After all, it is only by continous and careful observation of cases, by noting the fall of temperature, the amelioration of symptoms, the acceleration of recovery, ensuing on the use of vaccines, that an appreciation of their value can be formed.

In watching these cases I have been thoroughly convinced that in some of them lives were saved, and in most of the others convalescence was promoted

and shortened by the use of the vaccines, which in nearly all cases were autogenous, i. e., derived from the patients on whom they were used.

All of the puerperal cases and all but two of the others were infected before I saw them. Of the eight puerperal cases, one which terminated fatally was moribund when first seen. Of the seven which recovered, at least three were apparently likely to die, and I believe that without vaccines they would not have recovered.

In the two laparotomies very grave symptoms on the second day disappeared at once on the administration of mixed streptococcus and colon stock vaccines.

Two cases of myomectomy died, however, in spite of vaccines, one with a staphylococcus pyogenes aureus, and one with a streptococcic infection. There were also two fatal cases of appendectomy in presence of general peritonitis; one fatal case of streptococcus phlegmon of the deep tissues of the neck, with septic pneumonia; one fatal case of chronic pyæmia, with pneumonia. It is thus clear that in vaccines we have no panacea, no cure-all, but merely a very valuable addition to our therapeutic resources.

On the other hand, in none of these cases which I have watched, and in no others of which I have any knowledge, have any bad symptoms followed the use of vaccines, nor has any harm been done to the patient by their administration.

The results of my experience may, therefore, be briefly summed up as follows: Vaccines are useful in all cases of infection; they are indispensable in cases in which the natural forces fail to overcome the infection; they will turn the prognosis from bad to good in many doubtful cases; they will not work miracles nor render unnecessary the use of other approved methods of treatment, and the application of general surgical principles.

I would say, further, that in order to obtain good results, skilled knowledge and zeal on the part of hospital assistants and internes are requisite; in this respect I have been singularly fortunate. I have to thank Dr. Olga Leary and Dr. Grace Rochfort for carefully and zealously carrying out the details of the treatment; especially I have to thank Prof. T. Leary for his advice and co-operation in the use of vaccines made in the laboratories of the medical department of Tufts University.

Case I.—E. L., June, 1907. Four years ago had operation for cyst of broad ligament and appendix. Complained at that time of pain on urination. This pain continued with little relief from treatment up to last March, when she had an attack of severe pain in bladder, with tenesmus along the course of the ureter, and pain over the right kidney. Pus cells found in the urine. X-ray showed no evidence of stone.

June 17, a few tubercle bacilli found in sediment of urine. Catheterization of left ureter showed normal urine. Stricture of right ureter prevented passage of catheter.

June 23, operation. curved incision over right flank; last rib very long; capsule of kidney densely adherent. Kidney enucleated from capsule, and delivered after resecting two inches of last rib. Five inches of ureter removed; ureter was contracted, but not apparently diseased. Wound closed, leaving rubber and gauze drainage. Convalescence satisfactory.

July 1, little or no drainage; some rise of temperature. Tuberculin T. R. 5 minims every second day.

July 10, temperature normal in morning.

July 17, began to have free purulent drainage. Wound opened widely. Pus gave pure culture of Staphylococcus pyogenes aureus. Autogenous vaccine used daily.

Sept. 4, discharged, wound nearly closed. Great gain in general health and strength. During all this time the patient was kept outdoors day and night, and continued to live in this way after returning home. She is now perfectly well.

Case II.—Mary S., aged thirty-six years, January, 1907. Last April she began to have severe pain in leg, worse at night. No fever. Tenderness about ankle and shinbone.

In October was fitted for plates for supposed falling arch in foot. No relief.

November 11, at another hospital leg was baked during the first week; no relief.

November 19, had an operation, incision near knee, bone chiselled, pocket of pus found; much relief.

December 1, ankle began to swell; pain in leg and ankle gradually growing worse.

January 9, patient came under my charge, and was admitted to my hospital. Leg much swollen, especially about ankle. Skin brawny, edematous, tenderness along tibia. Wound of former operation discharging and surrounded with exuberant granulations. Pus showed Staphylococcus pyogenes aureus; autogenous vaccine made and used daily. Fine rales over front of right lung toward apex.

January 10, operation. Incision of skin over tibia from the tubercle of the tibia to the lower extremity of the bone. Periosteum divided and separated from the greatly enlarged bone; bone chiselled and gouged out, forming a trough; one large round cavity found near internal malleolus; a second in the middle part of the leg, and a third near the site of former operation; all necrotic bone removed; cavities scraped out; bone irrigated with H^2O^2 solution; bone surface swabbed with carbolic acid 95 per cent., followed by alcohol; trough packed with iodoform gauze.

January 12, packing changed; no pus; cavity dry and temperature normal.

January 15, packing removed; cavity dried with alcohol and hot air, and filled with a mass of spermaceti, six parts, iodoform six parts, oil of sesame six parts; skin drawn together with three mattress stitches.

January 18, the opsonic index being found low in regard to tubercle bacilli, 7½ minims of tuberculin T. R. was given from now on, once a week, alternating with Staphylococcus pyogenes aureus vaccine also once a week, so that the patient got a dose of one or the other vaccine every third or fourth day.

January 31, the edges of skin were freed on either side and the skin drawn up and closed over the bone, leaving small openings at the ankle and knee, through which the iodoform was gradually extruded as the trough in the bone gradually filled up with granulation.

March 6, patient discharged in good condition, continuing treatment at home, aand eventually recovered full use of the limb, and relief from all pulmonary symptoms.

Case III.—Mrs. A. Child born; normal delivery, November 1, 1907. Two days after delivery began to have pains in lower abdomen, with fever and chill. Entered Cushing Hospital November 28; temperature 105; tender mass low down in pelvis; no fluctuation; pulse 120; severe bronchitis; profuse expectoration; complained of pains in right side of chest.

November 30, developed pneumonia; temperature 104° to 105°; pulse 140. Apparently will die. Digitalin; strychnine, douches; salt solution by rectum; autogenous vaccine; pneumococcus.

December 7, great improvement dur-

ing the week. Pneumococcus vaccine continued.

December 8, temperature 101.° in morning; pulse 106; sweating; stronger.

December 10, temperature and respiration normal.

December 25, sitting up. Pelvic mass much smaller; no pain; no temperature.

December 30, went home.

Case IV.—Charles G. February 12, 1909. Operation on appendix; chronic appendicitis. Appendix removed; wound closed.

February 13, temperature 103°; rusty sputum; rales and bronchial breathing in left back. Autogenous vaccine cultivated from sputum and administered.

February 17, temperature 101°; coughing less.

February 19, stitch abscess opened and drained; lungs cleared up.

March 5, discharged well; wound fully healed.

Case V.—Mrs. B. Delivered in afternoon by her physician, by version of dead child; touched herself with dirty hands; free postpartum hemorrhage; packed; tear of perineum to sphincter; uterus above umbilicus, but hard. Hot, strong permanganate douche; temperature 100°; pulse, 100; permanganate douche every four hours. Perineum covered by greenish slough; temperature 103°.

August 10, 4 minims colon bacillus; autogenous vaccine.

August 12, 4 minims vaccine.

August 14, 10 minims, and on the 12 minims autogenous vaccine administered.

August 16, no pus; slight afternoon temperature; uterus contracting and perineum looking well.

August 22, discharged.

Case VI.—Mrs. C. Mc. P. Entered hospital June 8, 1909. Delivered of first child six week ago; normal labor. One week later had pain in abdomen, chill, headache, fever; temperature came down, but later went up again, with more chills. On entrance, temperature 102½°; pulse 96. Heart and lungs normal. Bowels constipated. Urine, sp. gr. 1022; no albumen; no sugar. Large numbers of bacteria. Cultures of urine show abundance of colon bacillus. Cultures from uterus show one colony of colon bacillus; no uterine discharge.

June 12, colon vaccine, autogenous, sodium phosphate and sulphate.

June 16, temperature normal; vast improvement in general condition. Guinea pig inoculated from urine.

July 3, patient discharged, well.

August 15, guinea pig shows no signs of tubercle bacilli.

Case VII.—Mrs. O. C., aged twenty-eight years. Entered hospital July 28. Miscarried one week ago at two months. Septic; curettage. Heart, lungs and urine normal.

July 29, curettage; shreds of placenta and membranes removed. Temperature 102° to 104°; pulse, 100 to 120. Autogenous vaccine containing colon baccillus and streptococcus made from uterine discharge, and used.

August 3, mass can be felt on right side of pelvis. Patient very ill. Brandy and strychnine every four hours;

August 16, patient much better; mass smaller; less tender. Temperature nearly normal. Mass appears to be pointing in vagina.

August 23, mass almost entirely disappeared; temperature normal.

September 2, discharged well.

Case VIII.—C. M. Married, aged twenty-six years. Labor began at midnight, January 31, 1908. Forceps were applied under ether by several physicians; delivery declared impossible. Entered the hospital February 2. Pains every few minutes. Head jammed in narrow pelvis. Fœtal heart, 140; mother's pulse, 100. Perineum badly torn. Vagina and cervix

were disinfected, and forceps again applied under ether. Head could not be moved. The abdomen was then opened and a Cæsarean section performed. A culture had been taken from the cervix through the vagina, and another was taken from the interior of the uterus through the wound. Girl of eight pounds was delivered. Its neck and left ear were much excoriated by forceps. The uterus was closed with interrupted catgut sutures in the muscle and continuous catgut through the outer layers of muscle and peritoneum. Abdomen closed in layers. Perineum repaired. Cultures bred from the specimens taken showed colon bacillus and streptococcus; vaccines were made from these.

February 3, evening temperature 103°; respiration from 40 to 50; very rapid pulse; no evidence of pneumonia. Autogenous vaccines used every eight hours.

February 4, symptoms better; temperature lower; vaccines continued.

February 6, free vaginal drainage of pus.

February 8, stitches removed; union by first intention.

February 10, wound opened in the middle; pus discharged, apparently coming from adherent uterus.

March 9, patient discharged; nursing her baby; both in good condition.

Case IX.—Mrs. A. C., aged twenty-seven years; mother of six children; last one week old. Admittd January 18, 1909. History showed that placenta was delivered by Crede's method; instruments. Fever started three days previously; has been up to 105°. Heart and lungs negative; abdomen tender; uterus half-way between umbilicus and pubes.

January 18, curretage; much adherent; placenta removed; cultures show no growth. Ordered uterine douches, with alcohol; uterus packed with gauze soaked in alcohol, and kept wet with alcohol through a tube in the gauze. Stock colon and streptococcus vaccines used. Brandy given freely. The reason why cultures showed no growth was probably because an antiseptic douche had been given just before the patient entered the hospital.

January 20, alcohol douches twice daily; colon and streptococcic vaccine every eight hours. Temperature varied from 102° to 104°.

January 30, temperature normal; vaginal douches continued; vaccines omitted.

February 11, discharged, well.

Case X.—Mrs. J. R., aged twenty-three years; mother of three children, last child ten days' old. Admitted May 3, 1909. Fever for the last three days. Heart and lungs negative. Operation; curretage; some placental tissue removed; culture shows streptococcus and colon. Stock vaccines and afterward autogenous vaccines used.

May 5, patient cyanotic; breathing very labored.

May 6, pulse 135 to 140; consolidation of right lung.

May 7, patient died at 12.30 P. M.

Case XI.—Mrs. L., aged twenty-three years. Admitted April 7, 1909. Child born six days previously. Temperature, 99.0°. Uterus curetted; many shreds removed. Intrauterine douche; permanganate of potash with alcohol.

April 8, culture shows streptococcus; autogenous vaccine given. Intrauterine douches ter. in. die. Stimulants, brandy and strychnine; temperature 104° to 105°.

April 12, mass in left side; temperature nearly normal.

April 14, much vaginal discharge and pus; mass in side of pelvis diminishing.

April 20, temperature normal; little discharge.

Apriil 28, discharged in good condition.

RECENT ADVANCES IN OBSTETRIC METHODS.

By H. M. LITTLE, B.A., M. A.

Lecturer in Obstetrics, McGill University, Montreal.

(Read at Annual Meeting Maritime Medical Association, July 21, 1910)

THE general interest of medical practitioners in obstetrics gives added importance to anything that may be considered as an advance in methods of treatment, particularly the treatment of the various complications of labour and of the puerperium, and I purpose bringing before you certain changes that have been recently suggested, and which have been and are receiving more or less universal attention.

Despite the continued prevalence of puerperal fever, there is little new reported that is of interest to the general practitioner, and if we except recent papers by Whitridge Williams on the ligation of the pelvic veins in pyæmia, by Sampson on the diagnosis of abscess of the uterine wall, and by Knyvett Gordon on the treatment of puerperal infection with Izal, few if any important articles dealing with this subject have appeared recently in any of the English journals. Nor have papers appeared elsewhere to detract from the growing belief that improvement in the morbidity and mortality from puerperal infection must come from prophylaxis, rather than from after-treatment.

The pendulum has swung from active treatment to the most conservative non-interference; and attention is called to the value of abdominal examination as an alternative to vaginal examination. I have brought with me diagrams showing the simplicity of such abdominal examination, and would point out, that in making a diagnosis, there are four important features—the relation of the long axis of the child to the long axis of the mother, the situation of the back of the child, the relation of the bulk of the head to the back (in other words, flexion or extension), and, finally, the situation in one or other quadrant of the pelvis of this bulky part of the head as a clue to the position of the most dependent part. The four diagrams give graphically the four simple manœuvres which may be made use of, and which with a very moderate amount of practice will give most excellent results.

Proficiency in abdominal examination reduces to a minimum the necessity for vaginal examination, which is of value only to determine the amount of dilatation of the cervix. This last can be readily obtained by rectal examination, and with far less danger to the patient. In operative cases, internal examination is, of course, necessary; but here the possibility of thorough disinfection of the vulva after shaving renders the danger of infection less than that to a normal case not so prepared.

In the matter of eclampsia, we are no further towards discovering the true cause of the disease than we were some years ago. One principle has been established, that is the necessity of early interference with the occurrence of certain definite symptoms. The recognition of the importance of epigastric pain, headache, intractable nausea, or continuous high tension of the pulse, and the prompt induction of labour when there is no response to treatment, may be outlined as the most desirable course. If convulsions occur the changes of the child depend on early interference, and this course gives, too, the most satisfactory maternal results. Manual dilatation of the cervix

will be possible in most cases, but it is an operation to be done with great care on account of the danger of tearing the cervix. Where the cervix is tightly closed, the vaginal Cæsarean operation may be employed, but this is an operation for experienced surgeons. Often it may be necessary to temporize, and where the condition is essentially renal, as it so often is in the early months, little is to be gained for the child by rapid delivery, and the danger to the mother is great. Here it is important to bear in mind that the condition is a toxæmia, comparable to uræmia, and amenable to sweating, purging and venesection, all of which are adjuncts to the main principle of immediate delivery. The administration of large quanties of fluid undoubtedly dilute the toxin and make it more readily eliminated. Our own practice is to give the fluids by mouth, or rectum, rarely subcutaneously or intravenously. Salt solution, though theoretically contraindicated, does no harm. The output of fluid should be noted and charted with the intake, and the patient should not be allowed to become waterlogged.

In the control of hæmorrhage, an important advance has been made by a German surgeon, Momberg, by the introduction of the principle of the Esmarch for the compression of the abdominal aorta. A rubber tube, corresponding in size and thickness to the ordinary stomach tube, is tied about the abdomen at the level of the umbilicus, sufficiently tightly to occlude the pulse in the femoral arteries. This procedure is not only followed by almost immediate cessation of the bleeding, but by board-like contraction of the uterus, which obtains as long as the tube is allowed to remain, usually about half an hour. This device, from its extreme simplicity, has found many enthusiastic supporters, but there are not lacking those who contend that its use is not infrequently accompanied by danger to the patient.

M. Fænkel, on December 14th, 1910, reported to the Obstetrical Society of Vienna, the results of a large number of experiments made upon animals for the purpose of establishing the limits of this possible danger. While admitting the difficulty of making an analogy between the animal and man, Fraenkel believes that certain definite conclusions may be drawn.

In the first place, with regard to the hæmostatic effect of the tube. If there is arterial bleeding, the application of the tube stopped the flow of blood at once. If an artery was cut after the application of the tube, a few drops of blood came away, and then bleeding ceased. On the other hand, venous bleeding persisted after the applica- of the ligature on account of the elasticity of the veins, the quantity of this bleeding depending obviously upon the size of the veins, the size of the openings in the veins from which the bleeding occurred, the contractility of the veins and the coagulability of the blood. Incomplete pressure always increased this venous bleeding, and in the absence of sufficient opening for the escape of the blood, there was always a venous hyperæmia below the tube with a certain amount of extravasation. There was never any ill effect upon the intestines or on the nervous system; there was no evidence of embolism or thrombosis, nor is there any report of the occurrence of such accident in the obstetric series reported. The contraction of the uterus seemed to depend upon the accumulation of carbon dioxide in the blood.

Considering the effect on respiration, it was noted that the diaphragm was shoved up to more or less empty the pleural sinuses, and at the same time displace the heart upward and outward, with the resulting frequent superficial respiration. It is evident

that this shoving up of the diaphragm would be less after labour than in a woman or animal not parturient.

With regard to blood pressure, Frænkel found that on tying the tube around the abdomen there was but a slight increase in (radial) blood pressure, accompanied by a smaller pulse, and that on release of the tube there was a correspondingly greater fall, with larger pulse. He suggests that the blood pressure, being dependent upon the vessel area, the quantity of blood and the force of the heart, the application of the Momberg tube makes very little change in the relation of the first two of these factors, and the lessened work of the heart would lead one to expect a lower blood pressure. When the compression is released, the vessel area is proportionately increased and consequently a larger pulse is necessary in order to keep up the pressure. When the heart is normal there is practically no danger from throwing open the much-increased area for circulation.

Momberg has recently suggested that before the larger tube is applied an Esmarch should be placed around each thigh, and that these should be loosened separately after the tube has been removed. This seems rational, because, when the bleeding has been severe, the vessels of the upper portion of the body might be almost emptied by the release of the tube, and if so syncope would result. Where the bleeding is only slight, this danger may be lessened by elevating the pelvis before the tube is applied or by bandaging the thighs.

The practical workings of this device are striking. In two of our cases it undoubtedly saved lives that were in very serious danger. Both labours had been terminated artificially, the indications in each case being danger to the mother. In one case tight packing of the uterus failed to control the continuous oozing, but the application of the tube was followed by board like contraction, continued as long as it was left in place. In the other instance packing was not tried, but the result was equally good, except that the improvised tube caused a superficial injury to the skin of the abdomen, which looked so alarming to the patient and her friends that a law suit was threatened till the actual condition was explained.

In the management of normal labour, a most important advance has been made in the recognition of the influence of the pelvic outlet on the course of labour, both in the causation of difficult labour and in connection with the perineum. A diagram explains this last effect better than words. It will be seen that the anatomical configuration of the pelvis has a marked effect on the position of the head when extension takes place, so that it is frequently impossible to prevent perineal tears, while in certain instances the tearing or separation of the muscles may occur though the skin and mucous membrane remain intact. The value of the perineum is the support it gives to the lower third of the rectum. Over distension of that muscular support is as disastrous in consequences as a tear through the muscles. Under certain circumstances, a clean cut is better than an inevitable tear. When it is obvious that the perineum must tear, an incision made with knife or scissors directly in the median line will allow the passage of the head, and prevent a jagged laceration. This median episiotomy is easy to repair and brings the muscular support into a position more or less the same as that which obtained before the delivery. Its advantage is that the incision rarely extends high into the vagina, and if the wound increases by tearing it does not extend through the

sphincterani, but rather to one or other side.

Much of the hypocrisy in regard to perineal tears arises from a belief in the difficulty of repairing them when they occur.

Three old rules, "a wide bite, a deep bite, and the suture tied loose," will, if remembered, enable anyone with moderately careful technique to obtain excellent results. Let it be remembered that the value of the perineum is as a band of muscular tissue supporting the rectum. There is absolutely no necessity for the isolation of individual muscles in repair, save, perhaps if the sphincter be torn through and the principle involved is to get a good solid musculo-fibrous body, irrespective of the anatomical arrangement.

If one be so unfortunate, and it is frequently misfortune, rather than carelessness, as to tear into the rectum, immediate suture will, nine times out of ten, give satisfactory results if the operation be done rationally. The rectal mucosa should be first closed with catgut, the knots tied in the lumen of bowel. After the repair of the bowel muscle (not necessarily the exact ends of the sphincter) from either side should be brought across and sutured, best by chromic gut; finally more muscle (the levator) is brought in to make up the perineal body, but for this silkworm gut, not catgut, should be used. There is no after-care for an ordinary perineal wound; asepsis of the vulva, as after normal labour, is sufficient. Where the tear involves bowel or sphincter, opiates are usually unnecessary, but laxatives must not be given. The patient should be given nothing but fluid, avoiding milk, which tends to produce scybala. At the end of a week, or better ten days a large dose of castor oil is given, followed an hour later by an injection of 6—10 ounces of olive oil. This is a simple treatment, but it gives results.

In the operative treatment of labour in patients with contracted pelves, attention has been drawn away from the operation of pubiotomy to various modifications of the Cæsarean operation. That this should be so was almost inevitable, in that pubiotomy was not an operation suited to general practice. Its performance required considerable surgical skill, and at the same time more obstetric experience with difficult delivery than were often combined. On the other hand, the Cæsarean operation appeals particularly to the general surgeon to whom come those cases where repeated attempts have been made at delivery with forceps and where laparotomy is desired as the only alternative to craniotomy, and where the conservative surgeon employed the Porro operation.

During the past three years four improvements have been suggested as practical alternatives to the Porro. These may be designated as the transperitoneal operation of Frank, the fistula operation of Sellheim, the extraperitoneal operation of Sellheim, and the extraperitoneal operation of Latzko. All have the same object, to lessen the mortality from Cæsarean section, and all have been variously modified.

Frank opens the abdominal cavity by an incision, either transverse or longitudinal, and makes a similar longitudinal or transverse incision in the perineum over the lower uterine segment, then, after suturing or clamping the visceral and parietal peritoneum along the edges of these incisions, opens the uterus in its lower segment and extracts the child. This is the so-called transperitoneal method.

Sellheim goes a step further than Frank in the so-called "fistula" operation, in that he sews the parietal peritoneum to the skin, then, in turn, sews the edges of the peritoneum of the lower uterine segment to the parietal

peritoneum and after union has taken place between these two layers, opens the lower segment. This operation he advises in place of one originally suggested, extraperitoneal operation whereby the lower segment of the uterus was opened after the peritoneum had been dissected off the upper surface of the bladder, and the bladder itself lifted away from the lower uterine segment, to allow room for the delivery of the child. The difficulty in removing the vesical peritoneum made this operation extremly difficult, and it has been rightly superseded by that of Latzko, which consists of blunt dissection of the parietal peritoneum from the abdominal wall after the incision is made in the median line and then an opening of the uterus practically between the folds of one or other broad ligament.

My own experience with Frank's operation twice, and that of Latzko once, has enabled me to estimate their advantages over the old method of section. In the first place, the incision for the Frank operation need not be more than four inches long between umbilicus and symphsis. The peritoneum is not necessarily sewn, as the abdomen can be packed with gauze pads and after an incision is made in the lower uterine segment the child can be readily extracted with the forceps. There is little or no bleeding from the uterine incision, and when after the child is delivered the uterus itself is brought through the abdominal wall for suture, the constriction of the broad ligaments by the edges of the abdominal wound prevents further bleeding, and the sutures can be readily laid. Not only is the bleeding slight, but the danger of general peritonitis is lessened, and the danger of adhesion of the intestine to the uterine incision practically does not exist. While Frank, in a large number of cases, operated on twice, has never seen trouble with the uterine incision in a later pregnancy, in our own two cases the healing and the subsequent position of the uterus left nothing to be desired.

The operation of Latzko was done upon a patient whose previous labour had ended in craniotomy and dismemberment of the child. She entered the hospital after some four or five hours had been spent in attempts at delivery with forceps. Craniotomy was asked for, but as the child's heart was distinctly audible, I obtained permission to do a section. After an incision had been made in the median line, through skin and fascia, the parietal peritoneum stripped readily both from the abdominal wall and from the uterus, allowing exposure of the thin lateral segment. The child was very large but was delivered through the wound by means of a small forceps. It was alive, but unfortunately died some short time later. During the resuscitation of the child I had the one misfortune of the operation. A large sponge placed in the uterine wound to prevent oozing was lost sight of when the placenta was expressed, and the uterine wound was closed without its detection. The whole extrauterine field was cleansed and closed in the ordinary way without drainage. For two or three days convalescence was uninterrupted; then the lochia suddenly decreased and there was a slight rise of temperature. The patient was examined, nothing was found; but after the examination the lochia was freer and the temperature fell slightly. Two days later the temperature again rose and when she was taken to the operating room for more careful examination a corner of the lost sponge was seen projecting from the cervix. It was easily drawn out, and allowing the escape of a considerable quantity of foul lochia, from that time on recovery was uneventful.

One topic has been left untouched—the question whether patients should rise early in the puerperium or late. Early rising was first suggested as a means of the prevention of thrombosis and embolism, and as one of the many ways of "getting back to nature." The occurrence of thrombosis and embolism depends largely upon the technique observed at the close of confinement, and "getting back to nature" is not a simple thing, but may be compared to more or less of a hurdle race, in which male pelves and straight front corsets may be regarded as two of the greatest obstacles. If labour could always be natural and uncomplicated, it is possible that uniformly excellent results might be obtained by allowing patients to get up early, should they so desire. What is to be gained, though? Admitting that drainage from the uterus is better with the patient up, is not the danger of descent of the heavy subinvoluted uterus infinitely greater than if she kept at rest? Where there have been extensive perineal tears, or where labour has been prolonged in the second stage, there is no doubt that allowing the patient up without a properly-applied bandage to the abdomen, increases the possibilities of enteroptosis. Early rising has found much favour I believe on account of the unfortunate results which have followed our ordinary treatment of puerperal patients. If one was given the choice of allowing the patient up on the second or third day or of keeping them in bed flat on the back, with a tight abdominal binder, and not allowing them to move for many days, there is no doubt that the former would be infinitely preferable.

The rational treatment seems to be somewhere between the two. To allow the patient to move about as much as she will, but to keep the body more or less horizontal, in order to prevent the descent of the uterus, and yet to make no pressure on the abdominal wall which will tend to interfere with the involution of the uterine ligaments. Of course, there can be no objection to the patient being propped up to avoid this, and the more she is encouraged to use the abdominal muscles the better. If this is done at the end of the first week the uterus will be well within the pelvis and of such weight that it can be properly supported and any perineal tears will have united. Dr. Burgess, the present superintendent of the Montreal Maternity Hospital, tells me that where a number of patients were allowed to get up on whatever day post partum they chose, the majority preferred to spend at least one week in bed, and it would appear that this makes a very fair average stay, and that the results are probably better than when they arise earlier. Nearly all of you will have seen cases where early rising was permitted as advisable or even necessary. It is fortunate to have demonstrated that this course was pursued without serious danger to the patient.

THE VALUE OF OPTIMISM IN MEDICINE.

BY E. L. TRUDEAU, M. D.

Saranac Lake, New York.

(Address at the Eighth Congress of American Physicians and Surgeons, held in Washington May 2, 1910.)

I HAVE been sorely puzzled in the selection of a topic for my address to you tonight. I preferred not to impose on a general Congress of Physicians and Surgeons a subject relating to my own specialty; I had not confidence enough in my powers, and too much consideration for you, to attempt a more or less ambitious and comprehensive historical review of the advances, achievements and possibilities of medical science, so that I finally decided simply to look back on the personal experiences of my own medical life and select from them some topic on which to say a few words to you.

As I look back on my medical life, the one thing that seems to stand out as having been most helpful to me, and which has enabled me more than anything else to accomplish whatever I have been able to do, seems to me to have been that I was ever possessed of a large fund of optimism; indeed, at times, optimism was about the only resource I had left with which to face most unfavorable conditions and overcome serious obstacles; and it is, therefore, on the value of optimism in medicine that I want to speak to you tonight.

Optimism is a product of a man's heart rather than of his head; of his emotions rather than of his reason: and on that account is rather frowned upon by many physicians whose scientific training naturally leads them to depend solely upon the qualities of the intellect, and look with suspicion upon any product of the emotions. We doctors are too apt to look upon "brains"—that is, a man's purely intellectual attainments—as the criterion of his chances for achievement in life, and to ignore and even deprecate those qualities which are closely related to his emotions as rather likely to mislead and hamper him in his career. And yet optimism is a prominent factor in anything a man may achieve in life. It is a mixture of faith and imagination, and from it springs the vision which leads him from the beaten paths, urges him to effort when obstacles block the way, and carries him finally to achievement, where pessimism can see only failure ahead. Optimism means energy, hardships, and achievement; pessimism, apathy, ease, and inaction. Optimism may and often does point to a road that is hard to travel, or to one that leads nowhere; but pessimism points to no road at all.

I have come in contact with many men of splendid attainments and opportunities who, by habit and education, have suppressed imagination and faith until their usefulness has been greatly impaired, and who accomplished little in life because the chill of pessimism ran in their blood, and the "qui bono" was the early deathblow to every impulse at accomplishment. Lack of faith and imagination has quenched achievement in many men whose intellectual attainments promised most fruitful careers.

It is, perhaps, true that the great majority of physicians, outwardly at least, appear to incline neither to pessimism nor optimism, and seem merely to float with the tide, without aspirations or ideals; but in reality few of them, in the innermost recesses of their ego, are entirely free from some degree of imagination and faith which

they habitually quench, and which, if cultivated, would at least broaden the sphere of their activities, and make life less colorless.

The doctor, whether he be a scientist and his life wholly given to scientific investigation in a laboratory, where reason and intellect reign supreme, or whether he be wholly a practising physician and surgeon in daily contact with suffering humanity in its struggle with disease, will need all the optimism he can cultivate, if his life is to be as fruitful in results as it can be made. The scientist without optimism may be an admirable intellectual machine, who, it is true, is not likely to be led astray from the well-worn road of demonstrable and generally already demonstrated facts, and as such he will have his place in life; but he will never climb above the rock, he will create and achieve little in the field of original research, unless faith in his own powers furnishes the incentive to constant effort and imagination leads him into an unexplored region to new methods and untried lines of investigation.

The professor of medicine and the laboratory director need optimism if they are to inspire their students to do their best work, aand they should beware how they quench, too often, unfortunately, with ridicule, the optimism of the young men who look to them for direction. Over-enthusiasm is not a very serious fault in a young man, and can easily be kept within bounds, and optimism in a student is a better incentive to work than pessimism.

The practising physician and surgeon must have optimism if he is to develop a full degree of efficiency in meeting the terrible emergencies of acute illnesses and accidents, or the long-drawn-out struggle with lingering and hopeless disease, and at the same time inspire his patients with a degree of optimism which means everything to them in the ordeals they have to pass through. To the practising physician and surgeon optimism is even more necessary than to the scientist, for besides moulding the doctor's character and guiding him in his decisions as to the case, his optimism is at once reflected to the patient and influences his condition accordingly. How great this influence may be we are learning more and more to appreciate. In his hour of need the patient has no means of judging of the physician's intellectual attainments; it is the faith that radiates from the doctor's personality that he seizes upon and that is helpful to him. Any encouragement that emanates from the physician will help keep up the patient's courage and carry him through long days of illness and suffering to recovery; and, where recovery is impossible, if the doctor's optimism—that is, his faith—is of the kind that extends to the future, not only here but hereafter, it may dispel for the patient much of the darkness and despair which brood over the end of life, and perhaps even illume for him that vast forever, otherwise so shrouded in impenetrable gloom.

Ian Maclaren's optimism was of this kind, and Dr. Grenfell's optimism is every day helping him to heal not only the sick bodies, but the broken spirits of men as well. This is the highest type of optimism the doctor may attain to, as its influence may reach not only to the physical, the intellectual and the psychical, but even to that dim ethereal region of the spiritual, from which spring man's most sacred and cherished aspirations. This side of the doctor's life of service to humanity is known but to himself and to those who in the hour of death have turned to him for help; to the world this is a closed book, but what is written in its pages has helped to make the medical profession a benediction to mankind.

Perhaps the most brilliant and striking examples in our time of the value of optimism, each representing one of the two extremes of the medical profession—that is, experimental science and practical medicine and surgery—are Pasteur and Grenfell. I have chosen these two men as examples of optimism, each in his own sphere, because, widely different as have been their fields of labor, they each represent a type of optimism in medicine which, to a greater or less degree is the ideal of so many doctors' lives—the humanitarian type. The moving force in both Pasteur's and Grenfell's lives has been the relief of human suffering, and their intellectual attainments have been consecrated to this end. Personal ambition, the pride of intellect, or the love of fame, has had little or no influence in urging them to their great achievements.

The man who, standing at the very threshold of the discovery of the germ origin of disease, did not hesitate to say, "It is within the power of man to cause all infectious diseases to disappear from the earth," must indeed have been an optimist. Pasteur's optimism led him unerringly to the solution of every experimental problem he started to solve, because his faith made him see nothing ahead but success, and his imagination led him to a solution of the most difficult problems when his reason alone would have failed. His hydrophobia work is a striking example of this. Who but an optimist would not have been discouraged at his repeated failures to find the specific microbe of hydrophobia, which, in the light of all previous knowledge, was the first requisite to success in evolving a method of immunization? His faith saw in this no cause for discouragement, but only urged him to renewed effort, while his imagination led him to leave the usual methods, ignore the microbe, and search for the seat of the poison in the rabid animal; and when he had located this in the medulla, and not in the saliva alone, as hitherto believed, devise a method whereby the toxic medullas could be attenuated and transformed into a vaccine of graded virulence. But of what practical use would a vaccine be that had to be applied before the individual was bitten? No vaccine applied *after infection* had up to that time ever been found to be successful. That Pasteur was an optimist and had a vision is shown by his own words in April, 1884: "What I aspire to is treating a man after a bite, with no fear of accident." And you all know that his vision became a reality; and that practically the conquest of this most dread disease is an accomplished fact.

The moving force in the great medical humanitarian achievements of Dr. Grenfell is the highest type of optimism; a faith which includes not only that which is seen and temporal, but the unseen and eternal as well; and on this, which to the pessimist would seem an uncertain and emotional basis, he has built up a work which has arrested the attention and won the admiration of the civilized world. That kind of optimism which extends to the hereafter is in Dr. Grenfell no mere idealist's vision, but a very real force to be reckoned with in this world if it enables a man in so few years to accomplish what he has done. It has enabled him in the face of constant and imminent dangers, by land and by sea, to bring skilled medical and surgical treatment to a suffering and helpless community; single-handed, without modern aids and appliances, to perform delicate and difficult surgical operations under most unfavorable conditions; to throttle entrenched vice in its stronghold and cast it out; to turn aggregations of squalid huts and drunken, poverty-stricken and despairing people into thriving, well-ordered and

productive communities. Had Dr. Grenfell lacked an inexhaustible fund of optimism, had that faith in God and man, which to him is the most present reality in life, not been his, had he believed only in "that which could be reduced to a formula," had the "knowable" been for him the "only real," in spite of his intellectual attainments the world would have lost the inspiration of his matchless career, and the inhabitants of the Labrador Coast would have remained plunged in the gloom of degradation, despair and misery.

It is to this high type of optimism that we owe, through the untiring efforts of Richard Cabot, the social service department of the tuberculosis dispensary. The success of Dr. Cabot's work has been due primarily to his own personality, which so strongly reflects his faith and his ideals, and which has inspired those whose efforts he directs. This new departure in medical work is not scientific in its character, but Christian and humanitarian. It is being taken up as a regular part of every modern dispensary and hospital, and extended to relief measures among children, chronic invalids and convalescents, and promises in time to revolutionize the whole character of hospital and dispensaary methods. The degree of its success will always greatly depend, however, on the personal faith and enthusiasm of the physician as communicated to those who work under his direction. The far-reaching possibilities of this new departure in humanitarian medicine may be gathered from the following sentences taken from a recent address of Dr. Milton J. Rosenau: "The object of preventive medicine is, perhaps, not so much to save as to prolong life, and there is no use in prolonging life unless we can make healthier, better, cleaner, happier lives."

If there is no room for pessimism in the doctor's individual career there is no room for pessimism in our profession, for its ideals and the goal toward which it is moving so rapidly are pregnant with optimism. The conquest of disease by prevention, though disease is the source of the doctor's livelihood, the placing ever at the disposal of the poor, without money and without price, the greatest gifts of learning and skill at our command, the strangling of deception and quackery in our midst by education of the people, are standards which only can be inaugurated and upheld by the highest type of optimism.

Optimism is the one thing that is within the reach of us all, no matter how meagre our intellectual equipment, how unpromising our outlook at the start, or how obscure and limited our careers may be. It was about my only asset when I built my first little sanitarium cottage on a remote hillside in an uninhabited and inaccessible region. Viewed from the pessimist's standpoint, that little cottage, as an instrument of any importance in the warfare against tuberculosis must have appeared as a most absurd and monumental folly. Optimism made me indifferent to neglect and opposition and blind to obstacles of all kinds during the long years of struggle before the value of sanitarium treatment became generally recognized. It enabled me to undertake the culture of the tubercle bacillus, and delve in the complex problems of infection and artificial immunization, though I had no knowledge whatever of bacteriology, no laboratory, no apparatus or books. It has steadily upheld my faith in the possibility of ultimately attaining to an immunizing treatment for tuberculosis, in spite of many discouragements and years of fruitless work.

Optimism enabled me to assume for over a quarter of a century the financial support of my work, and though the little cottage grew to be a village,

and the workroom in my house became a well-equipped laboratory, though their support each year required large and increasing sums each year, these have ever been forthcoming.

In a long life which has been lived daily in contact with patients beyond the reach of human skill, who through months and even years of hopeless illness, looked to me for help, I have indeed had need for all the optimism I could cling to. It has ever been a precious asset to me, and I hope to those about me as well, and has never entirely failed me.

Let us not, therefore, quench the faith nor turn from the vision which, whether we own it or not, we carry, as Stevenson's lantern bearers their lanterns, hidden from the outer world, and, this inspired, many will reach the goal; and if for most of us our achievements inevitably must fall short of our ideals, if when age and infirmity overtake us "we come not within sight of the castle of our dreams," nevertheless all will be well with us; for, as Stevenson tells us rightly, "to travel *hopefully* is better than to arrive, and the true success is in labor."

SOME REFLEX NEUROSES.

THE writings of Dr. McKenzie, of London, and Mr. Moynihan, of Leeds, within the past four or five months, have done much to place both medical and surgical treatment of disease on a more scientific basis than has hitherto been the case. This has been done along the line of better interpretation of symptoms. When we remember that symptoms is the language of disease, it becomes obvious that he who learns best how to interpret their meaning is the best fitted to understand the nature and cause of disease. It is through the nervous system mainly that organic and functional derangement are made manifest by symptoms.

The laboratory has done much—but the clinical observers have done more—to bring about this condition. Work in the former is necessarily confined to the few, but the wider field of clinical observation is open to us all. To try and prove the meaning of certain symptoms is our common duty, and if we would add our quota in this work we must ever be on the alert. In this society we meet to compare notes. In this connection I simply wish to narrate some cases of reflex neuroses which have occurred in my practice and have come under my observation during the past few years. To make symptoms of practical utility in treatment, they should be verified. Loosely or ill defined symptoms are vague and indefinite and often misleading. It is only when verified they are of practical utility in pointing to the malady we are endeavouring to treat. The vast majority of the symptoms we find are reflex, and to verify some of these is the object I have in narrating the following cases.

Some years ago a patient consulted me, suffering with the following symptoms:

She was a well nourished lady, about forty years of age, strongly built. She complained of a feeling of numbness in her hands, felt as if too large, could not sleep more than half the night, had to get out of bed by times and rub and work with her hands to get relief. On examination I observed her hands were abnormally large. They did not only feel large, but were really larger than ordinarily. I was somewhat puzzled with the case. On further examination I ascertained she suffered with periodic headaches.

The pain in head began in back of neck and behind the ears, sometimes spreading over back of head, but most severely behind the ears. This headache lead me to make further examination as to conditions of the cervix. As I had observed in several cases that this headache was the accompanyment of lacerated cirvix, I advised the patient to have the cirvix repaired, as it would relieve the headache. To this simple operation she readily consented. To our mutual delight both headache and sore hands disappeared after the operation. Here was a reflex neuroses cured by the simple operation of repairing a lacerated cirvix.

Another case: A young woman was brought to my office by a friend who remarked in speaking of the case, "I fear you can do nothing for her as she is becoming insane." On examination I found a healthy looking young woman, mother of three children. She

was about thirty years of age. Patient seemed quite despondent. She said she had a confused feeling in her head; could not settle her mind on any work as formerly—sleepless, restless, could not remain quiet any length of time. On questioning her further, she said she had headaches of the characteristic symptoms described in other case.

This suggested examination of cervix, when I found an extensive laceration, no leucorrhœa nor other symptom suggesting such a condition. I told her I thought by repairing the cervix her symptoms would improve. She was placed in hospital and after the simple operation all her symptoms passed off. After remaining for two weeks in hospital she went to a friend's house for three weeks rest, and from there she went home to her family as well as ever she had been and she remained so ever since.

A third case I saw some four or five years ago: She had been confined some eighteen weeks previous, since then had not felt well, nervous, weak, did not regain her usual strength. I prescribed some tonic treatment and advised her to keep in cheerful company and she would soon be all right. Two weeks later she returned saying she was no better. I then advised weaning the baby and gave some change of medicine. In a week's time her husband came to tell me that she had become insane as she gave away her children and started for Boston.

After very careful examination I discovered she was suffering with the characteristic headache. She said she had confused feeling in her head, and sleeplessness and restlessness had grown worse. I advised repairing the cervix, which was done in hospital, when all her troublesome symptoms grew better. Headache left, so did confused feeling. In three weeks she left the hospital and went home. She was home but a short time when all the symptoms returned, but with less severity. I was disappointed at result. On examination I found what I had suspected, viz., that the repair in cervix had not been complete. One of the stitches near the os had allowed the laceration to open for nearly one-half an inch. This caused the return of her symptoms. From my experience I found in order to get the best result, the operation must be thoroughly done. The cervical canal must be made small enough to barely admit a sound. Otherwise some of the nerve endings will be covered with cicatrical tissue and will produce a reflex neuroses. The operation must be well done to be successful. In my experience silk or silkworm gut should be used in these cases. Cat gut I have used as it saves the trouble of removing stiches, but it cannot be trusted as it absorbs before union has become complete.

I have selected these three cases out of many to show the benefit I have received in treating those cases from following striking characteristic symptoms.

All cases of lascerated cervix do not produce those symptoms, and operation for them would be needless, were it not for the recognized danger of its being the means of causing cancer.

Another case of reflex which interested me very much occurred in the case of a woman aged about fifty. A strong, seemingly well nourished, hard working woman consulted me some two years previous, complaining of frequent attacks of headache, biliousness, belching of gas, vomiting, etc. She informed me she had been suffering with these symptoms for over fifteen years, and as she made her living by keeping boarders she would

give anything to get rid of these attacks. She said attacks were always worse when she worked hard. After studying her case, I diagnosed simple indigestion, endeavoured to regulate diet, gave some alkaline mixture and asked her to report in two weeks. She returned stating she felt better for a short time then got as bad as ever. For eighteen months I treated her off and on, trying various remedies, stomach lavage, etc., but still attacks would come on. Finally she said she was going to try a doctor in a neighbouring town who said the stomach should be washed out every day for a month. At this time I happened to read in the *British Medical Journal*, Mr. Moynihan's article on Appendix Dyspepsia. I at once thought on my troublesome case and went to see her in order to make a careful physical examination. After carefully going over region of stomach, gall bladder and appendix, I could find nothing to suggest organic disease in either organ, but the condition of stomach suggested that the whole trouble might be reflex and from some other organ. Previously I had examined the stomach contents but failed to find any clue to the trouble as there was a simple increase of acid in its contents, so I frankly told my patient that I suspected the trouble was not in the stomach at all, but in some other organ,—either gall bladder or appendix.

I said if she would consent, I would open the abdomen and endeavour to find out. As she was ready to do anything to get relief, she readily consented. So I had her placed in hospital and on opening the abdomen found stomach and gall bladder normal, but on extending my incision downward I came on an appendix firmly adherent to secum through its entire length which was fully four inches. The tip of appendix seemed to be covered over with peritoneal coat of intestine, and I had some difficulty in dissecting the appendix off from the secum. There was a portion of appendix near the tip somewhat congested along the mucosa. The organ was abnormally large, otherwise seemingly healthy. After its removal, patient's stomach became settled and during time she was in hospital no return of symptoms. I watched her carefully for three weeks and found that with care she could get along all right, but could not eat meat. Soon this passed off, in six weeks time she could take any food with impunity and to-day she is seemingly in perfect health.

In this case there was no symptom that would suggest in any way operation for diseased appendix by palpation as there was no pain over any part of the abdomen. Both Mr. Moynihan and Dr. McKenzie point out one symptom which would suggest appendix dyspepsia, viz., a twitching at pyloric end of stomach. They both claim that on opening the abdomen if this symptom is found in stomach they can at once locate the trouble in the appendix. Now this twitching would explain the feeling of uneasiness and discomfort. Inability to take meat is another characteristic symptom. In my case meat always brought on an attack. Patient said, "I had better not eat meat for a while, as it always brought on attacks."

A careful study of these symptoms verified by many would enable a diagnosis to be made with some degree of certainty.

Here is another reflex the study of which is most interesting and instructive. I have recited these cases, as I have already said, mainly for the purpose of illiciting discussion in this hopeful field of investigation.

OUR PORTRAIT GALLERY.

DR. ALEXANDER PRIMROSE.

WE conclude the series of portraits which we have presented to our readers during the year with that of a Maritime Province man, Dr. Alexander Primrose, Associate Professor of Clinical Surgery in the Universdlesex Hospital, and was Resident Surgeon in the Paddington Green Children's Hospital under Cheyne and Brunton (now Sir W. W. Cheyne and Sir T. Lauder Brunton). Returning to Canada in 1888, he settled in To-

ity of Toronto.

Dr. Primrose was born in Pictou, Nova Scotia, eldest son of the late Howard Primrose and Olivia Campbell. He was educated at Pictou Academy, proceeded to Edinburgh University, where he graduated M. B. and C. M. in 1886, and afterwards spent some time in Midronto, and soon became connected with the anatomical department of the Medical School of Toronto University. In 1896 he became Professor of Anatomy, but retired in 1907, when the chair was endowed, and was succeeded by Prof. J. Playfair McMurrich.

Soon after coming to Toronto he was appointed Surgical Registrar in the Children's Hospital, founded by Mr. Ross Robertson; then was Surgeon to the Out-patient Department, and then Visiting Surgeon. In all, he served for twenty years on the staff of the hospital, and is now a Consulting Surgeon. He had been an assistant Surgeon in the Toronto General Hospital, and on its reorganization in 1908 he was ap-

pointed one of the chiefs of service. Since 1898 he has been Associate Professor of Clinical Surgery, and since 1892 his practice has been restricted entirely to surgery.

He has been president of the Pathological Society of Toronto, president of the Toronto Medical Society, and is chairman of the Surgical Section of the Academy of Medicine. He is a Fellow of the American Surgical Association and a member of the Pathological Society of London. He is a member of the Examining Board of the Ontario College of Physicians and Surgeons, and is secretary of the Medical Faculty of the University.

The teaching and practice of Dr. Primrose are characterized by a precise and thorough knowledge of anatomy and patho egy; not in the special realm of surgical work only, but in their widest sense in comparative anatomy and pathology. His lectures are models of lucidity and conciseness. We have a strong conviction that his very thorough and indeed laborious work in the anatomical department did much to develop the growth and reputation of the medical school of the University, now one of the largest and most efficient in the world. The illustrious professor of anatomy of Edinburgh, Sir William Turner, on a visit to Toronto some years ago, declared that he had nowhere seen more admirably arranged and managed anatomical laboratories than those presided over by Professor Primrose.

Dr. Primrose has contributed papers of much interest to the medical press here and in Britain, among which we may mention one on a case of blastomycosis of the skin, admirably illustrated, which appeared in the Journal of Surgery, Gynaecology and Obstetrics. In June of this year he read a paper by invitation before the American Medical Association at St. Louis, on compression of the spinal cord causing paraplegia, and its treatment. His chief contribution to surgical literature, however, is the article on tuberculous diseases of the bones and joints in the American Practice of Surgery. This is one of the best monographs on the subject with which we are acquainted; it is particularly good in dealing with the disease in children, due, doubtless to the author's long experience in the Children's Hospital, and the illustrations are unusually well chosen and instructive.

Dr. Primrose holds a high place in the esteem and confidence of his colleagues, and is a great favorite among the students. From a man so highly gifted, so well-trained, with such full experience and such ample advantages as are now supplied in the hospitals of Toronto, and who is not yet fifty years of age, we may reasonably hope for many contributions to the science and art of Surgery.

BOOK REVIEWS.

THE SURGERY OF CHILDHOOD, including Orthopedic Surgery, by De Forest Willard, A. M., M. D., (Univ. of Pa.), Ph.D., Professor of Orthopedic Surgery, University of Pennsylvania, Etc., Etc. With 712 Illustrations, including 17 in Colors. J. B. LIPPINCOTT COMPANY, Philadelphia and London.

This handsome volume of 800 pages was sent to us some time ago for review. The name of the author and the reputation of the publishers make it almost unnecessary to say that the book is of standard excellence.

The frequent references in surgical text books to the special features of surgical disease in children, frequently to modifications in treatment conditioned by the circumstances of childhood, suggest the devotion of a work to the surgery of childhood and we feel quite sure that those who purchase this work will find it full of interest, and also full of practical suggestions. To those who have to do with hospitals, especially children's hospitals, such a book is a necessity; and the wideawake general practitioner, who takes special interest in his surgical cases, and who is or should be competent to carry out the treatment recommended in this book in the great majority of cases, will find it a veritable mine of sound advice. The large number of illustrations, the great majority of which are exceedingly well done and well selected, add greatly to the interest and value of the work.

In the chapter on anæsthesia we are struck by the following sentences: "Every hospital should employ trained and skilled anesthetists, and not entrust this most serious cause of post-operative complications and death to inexperienced internes. The author recalls with pleasure a resident who was honest enough, when requested to etherize a patient for a prolonged abdominal operation, to confess that he had never anesthetized a case." We wish to ask how the resident could possibly have had experience if, in his hospital, the anæsthetic was given by "trained and skilled anesthetists," and never entrusted to "inexperienced internes"?

We note, too, in the paragraph on "Chloroform" that "authorities differ in their conclusions as to whether respiratory failure precedes that of the heart." We have no hesitation in saying that the greatest authorities on chloroform anæsthesia hold that the respiratory function is first affected in the immense majority of cases, and that if the respiration is attended to chloroform is safe. We agree with the author that the safest method of administration is by continuous dropping on gauze, but if this is dropped "slowly," and the gauze is held "several inches" from the face, there will be great waste of time and of chloroform.

In the chapter on cleft palate, the methods of Lane and Brophy are fully described; as also the device employed by the Mayos of holding the palate flaps together with tapes, a method improved upon by F. N. G. Starr, of Toronto, who uses strips of aluminum. We note also a most extraordinary statement in the mortality statistics. Bryant is quoted as stating that the mortality in clefts of soft and hard palate operated on before the fourth month is 50 per cent., while Brophy claims that in 575 operations there were only two deaths!

In discussing operations for empyema, it is stated that "free drainage cannot be secured with the removal of a portion of a rib." If drainage is required for a long period, this may be true; but in many cases, especially of empyema following pneumonia, resec-

tion is unnecessary, and the tube may be removed in two or three days.

The chapter on appendicitis is very well written; diagnosis and differential diagnosis are given tersely, and the author well says it is the surgeons "duty to use his brains before employing the knife; the reverse seems to be the rule with some surgeons at the present day." "As soon as the diagnosis is even reasonably certain" operation should be done.

The articles on orthopedic surgery are excellently done, appropriate gymnastic exercises are fully described, and the figures of apparatus clear and intelligible. These articles alone would make the book valuable.

Finally, we would draw attention to the various sections on tuberculosis as it affects various parts of the system, and particularly to the discussion of bone and joint tuberculosis. Wise insistence is laid on general therapeutics and fresh air. Iodine is praised, and iodoform, with its "vile odor," depreciated. Dr. Willard uses it only in tuberculosis. The various operations called for are described clearly and in detail.

The price of the book is not noted.

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LIPPINCOTT'S NEW MEDICAL DICTIONARY. A Vocabulary of the Terms used in Medicine and the Allied Sciences, with their Pronunciation, Etymology and Signification, including much Collateral Information of a Descriptive and Encyclopædia Character. Edited by Henry W. Cattell, A.M., M.D. Published by the J. B. LIPPINCOTT COMPANY, Philadelphia and London.

There is no better index of the enormous advance which has recently been witnessed in medicine and the allied sciences than the multitude of additions to our terminology. Much of the literature of to-day would be almost unintelligible to a medical Rip Van Winkle just awakened from sleep. And nothing impresses one more with the progress of medicine than an examination of such a work as that under review. The new dictionary is but to show itself to any physician in order to convince him of his absolute need for it. It is a book of more than 1,100 pages, convenient in size, nicely and substantially bound. The paper is thin, but quite opaque, and the type, though small, is clear and easily read. The matter is exceedingly well arranged, making reference very easy. One is appalled by the number of words, and is edified by a perusal of any page. We are pleased to find a conservative attitude in the orthography, and note, with commendation, the general retention of the diphthong—which some moderns consider antiquated and useless. The whole work evidences thorough scholarship and most careful preparation, and is really invaluable to him who wishes to real with understanding the medical literature of to-day. We have referred to it freely since it has come to our table, and have not yet found it to fail us. In fact, we have several times been surprised to find it so thoroughly up-to-date—as, for instance, in definitions of the various new tuberculin tests, Much's reaction, etc., etc., and we have no hesitation in recommending it to those who desire a practical and useful dictionary of medical terms.

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INTERNATIONAL CLINICS:—A Quarterly of Illustrated Clinical Lectures. Volume III, Twentieth Series, 1910. Published by J. B. LIPPINCOTT COMPANY, London and Philadelphia.

No volume of the *Clinics* is perused without interesting and valuable information being received. We, therefore, in bidding adieu to our readers, once more recommend the *Clinics* as an investment worth securing. The present volume has a number of articles well up to the standard of previous contributions, such as: "The Treatment of

Senile Gangrene, by Superheated Air," by G. Dieulafoy, M. D., of Paris; "Unna's Paste in the Treatment of Leg Ulcer," by B. A. Thomas, M. D., of Philadelphia; "The Present Status of Bacterin Therapy," by the same author; "Uncinariasis, or Hook-Worm Disease," by M. H. Fussell, M. D., of Philadelphia; "What Vivisection Has Done for Medicine," by D. M. Hoyt, M. D., of Philadelphia; and "The Physician's Part in the War Against Venereal Diseases," by John B. Roberts, M. D., of Philadelphia.

The illustrations are numerous and excellent,—one of the many good features of each volume published.

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ELECTRO THERAPEUTICS AND ROENTGEN RAYS: By Mihran Krikor Kassabian, M. D., Director of the Roentgen Rays Laboratory, Philadelphia General Hospital, Vice-President of the American Roentgen Rays Society, Second Edition, 1910. Published by J. B. LIPPINCOTT COMPANY, London and Philadelphia.

In reading this book one is naturally filled with sadness. The author, Dr. Mihran Krikor Kassabian, has crossed the great divide and joined that noble army whose names are engraven on the roll of martyrs to science. Dr. Kassabian was one of the earliest workers with the X-Ray and received permanent damage before the deadly effect of the rays was known.

This is a second edition of Dr. Kassabian's book, and to those who are familiar with his first edition the rapid strides which have been made in this branch of the Medical Sciences are quite apparent.

Instantaneous Skiagraphy and Teleroentgenagraphy are dealt with, and a clear description of the technique given.

The work covers a clear and concise description of all methods of Electrotherapeutics with indications for treatment in those diseased conditions which may be benefitted or cured.

The book is practically a necessity to the specialist and should be read by all general practitioners who desire to give their patients the opportunity of advanced methods of treatment.

This is the last writing that we shall have from Dr. Kassabian, but we predict that the original work contained therein will stand as a modern method for some time to come.

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NORMAL HISTOLOGY, with Special Reference to the Structure of the Human Body, by George A. Piersol, M.D., Sc.D., Professor of Anatomy in the University of Pennsylvania, 438 Illustrations, many of which are in colors. Eighth Edition, Re-written. J. B. LIPPINCOTT COMPANY, Philadelphia and London.

We have much pleasure in recommending this admirable text book to students and all who are interested in the fascinating study of Histology. The fact that the book has reached its eighth edition is sufficient proof of the high standing and of the satisfaction it has given to teachers and students; and if proof were required that the author is in earnest in making his book perfect we have it in the fact that the work is entirely re-written.

Not the least notable feature of the book is its wealth of illustration, few works on histology can compare with it in this respect; many of the illustrations are colored, but this is not so worthy of notice as the delicacy of the drawings in black and white, many of which are drawn with the aid of the camera lucida.

Beginning with the structure of the cell, and including a very clear account of its vital activities, the origin and differentiation of the body cells is given, and this section ends with a description of the ovum and the germ layers.

Then the elementary tissues are taken up, but we note that the blood, which as John Hunter said, is a "living tissue" is considered in the section dealing with the blood-vascular system. In the discussion of the lymphatic system the

author inclines to the view, now, we believe, generally held in opposition to the views of Kolliker and VonRicklinghauser, that the "lymph spaces" do not communicate directly with the lymphatic vessels, but that the lymph capillaries commence as blind tubes. The drawings in this section are notably good.

In view of the fact that Histology is now one of the primary studies of the Medical course, the author judiciously, as we think, prefaces the Histology of the various organs, with a brief note on the macroscopic anatomy. A knowledge of the structure of the lungs, the general architecture of the Kidney, the gross anatomy of brain and spinal cord must prove of assistance to the junior student in his study of the minute anatomy of the various parts of these organs.

The practitioner who may feel disposed to review his fading acquaintance with such important facts as the structure of liver, kidney or nerve tissue cannot do better than secure this book.

The price of the book is not stated.

SOME POSOLOGICAL HINTS AND OTHER USEFUL INFORMATION, is the title of a neat little booklet just issued by the Fellows Company, which will, we are sure, be most favorably received by the medical fraternity. A large amount of very practical information is attractively presented within a small compass. The hints given on frequency of administration, common errors in combination, etc., being both valuable and acceptable. The booklet will shortly be posted to the various physicians in Canada.

Pope said,

"The learn'd reflect on what before they knew."

As the winter approaches, conditions prevalent with the season will present themselves for the consideration of the physician.

At this time it might be well to recall that Antiphlogistine, applied thick and hot, will offer unmeasurable relief in those cases of Bronchitis: Tonsillitis; Laryngitis; Pleurisy and other throat and chest affections you will be called upon to treat.

Satisfactory therapeutic results invariably follow the application of Antiphlogistine and to guard against substitution, it is well to specify an original package, thus protecting your patient as well as yourself.

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A TRIUMPH IN PILL-MAKING.

Parke Davis & Co., confess that their soft-mass pill, which is now receiving so much favorable attention from the medical world, was for a long time a "hard nut" to crack. They had set out to produce by the soft-mass process a pill that should be a credit to their house and to manufacturing pharmacy. The task at first seemed simple enough. Here, as elsewhere, theory and practice were at variance. As a matter of fact, a good deal of experimentation had to be done. Time was consumed. Money was expended. In the end, of course, ingenuity triumphed.

In structure the soft-mass pill, as manufactured by Parke, Davis & Co., consists of a plastic mass encompassed by a thin, soluble chocolate coating. It may be flattened between the thumb and finger like a piece of putty. An important advantage of the soft-mass pill is the readiness with which it dissolves or disintegrates in the digestive tract. Another commendable feature is that, no heat being applied in the process, such volatile substances as camphor, the valerianates, the essential oils, etc., are not dissipated, so that any pill embodying one or more of these substances may be depended upon to contain just what the label says it contains.

Parke, Davis & Co., are putting out close to twenty formulas by the soft-mass process—all of them listed, we believe, in advertisements now appearing quite generally in the medical press.

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POST-GRIPPAL COMPLICATIONS.

If there is one particular feature which characterizes the genuine influenzal attack, it is the decided and sometimes intense prostration that remains after the subsidence of the acute symptoms of the disease. This general vital "set back" is oftentimes entirely out of proportion to the severity of the original grippal attack, and the most robust patients are sometimes the most severely prostrated. In addition to the general devitalization, La Grippe is extremely likely to be accompanied with or followed by such troublesome complications as otitis, neuritis, sinus inflammation, gastro-intestinal derangements, resistant and obstinate bronchial catarrhs and, more dangerous than all, a peculiar, more or less characteristic, asthenic form of lobular pneumonia. The skill of the physican and the vital resistance of the patient are often taxed to the utmost in a combined effort to induce final recovery. Anemia, to some degree, is almost always brought about by the combined devitalizing power of the disease and its complications, and convalescence is likely to be tardy and tedious. An easily borne, readily assimilable hematinic does much to hasten recovery and Pepto-Mangan (Gude) is an especially eligible method

of introducing the much needed ferric and manganic elements, without producing or increasing digestive difficulty. In no condition does this well tried hematic remedy evidence its undoubted reconstructive power more certainly than in the treatment of post-grippal convalescence.

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THE DIFFERENCE BETWEEN MORPHINE AND CODEINE AND HEROIN.

A short time ago the Board of Health of the city of New York, promulgated an ordinance providing that "No cocaine or salt of cocaine, and no morphine or salt of morphine, either alone or in combination with other substances, shall be sold at retail by any person in the city of New York, except upon the prescription of a physician." Immediately every druggist in the city stopped the sale of all preparations containing any derivative of opium and raised such a furore, that the Acting Commissioner of the Board of Health felt called upon to explain what every druggist ought to have known, viz: that "Heroin and Codeine are not salts of morphine, and therefore are not included in the proscribed list."

In order to make this matter perfectly clear, the following on the subject of opium is submitted for the information of the many who have been laboring under the misapprehension that Codeine and Heroin are salts of opium or of morphine.

Opium, besides wax, fat, glucose, gum, pectin, resin, etc., contains about 20 alkaloids, among them being Morphine, Codeine, Thebaine, Narceine, Papaverine, Pseudo-morphine, Narcotine, etc., all occurring in varying

amounts according to the grade of opium. While Morphine is an analgesic, it does not follow that Trebaine is an analgesic simply because it is also derived from opium. One might equally as well say that Acetanilid and Diamond Dyes have similar therapeutic effects, because both are derived from coal tar. Heroin, as is well known to every druggist, is a synthetic preparation and is not an alkaloid of opium. There are no salts of opium; there are active principles or alkaloids from which, by the addition of acids, salts are formed, which become, not salts of opium, but salts of morphine, salts of codeine, etc. All chemists know this and all druggists probably know it, but fear of transgressing the law made the New York druggists take a position contrary to that which their knowledge of chemistry would indicate to be the correct one. Codeine and Heroin are not salts, either of opium or of morphine, the one being an active principle, and the other a synthetic compound. Furthermore, Morphine and Codeine have widely different properties; Codeine being entirely devoid of the evil effects of Morphine, not locking up the secretions or causing constipation; and the Codeine habit is a thing unknown in medical literature. In fact, all authorities agree that Codeine does not create habit.

From all the above we glean the following facts:

1. Opium and derivatives of Opium, except Morphine and its salts are not in the proscribed list under the Regulation of the New York Board of Health.

2. Codeine and Heroin are not salts of Opium.

3. Codeine and Heroin are not salts of Morphine.

—*Apothecary and New England Druggist, October 1910.*

SPECIAL SYPHILIS NUMBER.

The Editors of the *Interstate Medical Journal*, St. Louis, announce the publication of a symposium number on Syphilis for January.

The list of articles reads as follows:

The Influence of Syphilis on Civilization—William Osler, M. D., Oxford University.

Present Status of the "Noguchi Test"—Hidego Noguchi, M. D., New York.

On the Means of Finding the Spirochaeta Pallida, with Special Reference to the India Ink Method. (From the Laboratory of the Michael Reese Hospital)—J. S. Cohn, M. D., Chicago.

The History and Methods of Application of Ehrlich's Dioxydiamido-arsenobenzol. (From the Royal Institute for Experimental Therapeutics) — Lewis Hart Marks, M. D., Frankfort, a/m.

Recent Progress in the Treatment of Syphilis—H. Hallopeau, M. D., Paris.

Treatment of Syphilis with Ehrlich-Hata "606"—Abr. L. Wolbarst, M. D., New York.

Syphilis of the Nervous System—Ernest Jones, M. D., Toronto.

Syphilis and Pulmonary Tuberculosis—Robert H. Babcock, M. D., Chicago.

Syphilis as a Cause of Pauperism—A. Ravogli, M. D., Cincinnati.

Giant Cells in Syphilis—John A. Fordyce, M. D., New York.

Personal Observations with the Ehrlich-Hata Remedy "606"—B. C. Corbus, M. D., Chicago.

Syphilis and the Public—Isadore Dyer, M. D., New Orleans.

Sanitary Regulation of Prostitutes—Prince A. Morrow, M. D., New York.

In addition to the above, there will be four "Collective Abstracts" (critical reviews of recent literature in collective form) on (1) Ehrlich Hata "606", (2) the Cerebrospinal Fluid in Syphilis and Parasyphilitic Disease, (3) Serum Diagnosis of Syphilis, (4) Diagnosis of the Osseous Lesions of Syphilis by the X-Ray.

CORRESPONDENCE.

Editor The Maritime Medical News:

SIR,—We ask your kind assistance in the way of disposing of a false impression which may have been created in the minds of your readers by wholly erroneous reports which have appeared in the Montreal Star (December 17), the Toronto Globe, the Toronto Star, and the Toronto News, (December 15).

All four of the papers mentioned, made the picturesque announcement that we had just declared a cash dividend of 15 per cent, and that, in addition thereto, we had paid during 1910 30 per cent. This is perfectly ridiculous. During 1910 we paid exactly the same dividend that we declared in 1909, namely 12½ per cent. of the par value of the stock, plus an extra dividend of 2½ per cent. That is all there is to it. In other words, we are paying for 1910 15 per cent. instead of 12½ per cent. There is no "melon" in the case. Would that there were!

The purchaser of our stock at present prices receives a return of less than 4 per cent. on his investment. Why an industrial stock—and as you know, "industrials" are by no means the pets of prospective investors—should command a selling price so much above its par value, may be explained by reasons which are perfectly familiar to those who have employed our products; modesty forbids us to recite them!

Very truly yours,
PARKE, DAVIS & Co.,
WM. M. GRANT, Mgr.

Walkerville, Ont.,
Dec. 22nd, 1910.

"I now specify Soft Mass Pills P.D.&Co. exclusively"

Therapeutic Notes (Sept. 1910) tells of a physician who had prescribed a certain brand of A. S. and B. pills for years, under the impression that no others would give him equal satisfaction. Casually he learned of our Soft Mass Pill No. 984 (A. S. and B.). He tried it. Note what he says:

"I am getting incomparably better results from your Soft Mass A. S. and B. pill than I did from Blank's hard pills. There is absolutely no comparison between them. I NOW SPECIFY SOFT MASS PILLS, P. D. & CO., EXCLUSIVELY."

Our Line of Soft Mass Pills.

No. 969—Quinine Sulphate, 2 grs.
No. 970—Cascara Compound No. 3 (Dr. Hinkle).
No. 971—Ferrous Carbonate (Blaud), 5 grs., U. S. P.
No. 975—Cholelith (round).
No. 976—Ferrous Carbonate (Blaud), 3 grs.
No. 977—Ferrous Carbonate (Blaud), Modified.
No. 978—Ferrous Carbonate (Blaud), Modified, ℞ "2."
No. 979—Ferrous Carbonate, Laxative.
No. 980—Ferrous Carbonate, Laxative, ℞ "2."
No. 981—Ferrous Carbonate (Blaud) Compound, ℞ "C."
No. 984—Aloin, Strychnine and Belladonna, ℞ "A."
No. 985—Aloin, Strychnine and Belladonna Compound, N. F.
No. 986—Cathartic Compound Granules, ¾ gr.
No. 987—Emmenagogue, Improved.
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No. 992—Opium and Camphor, N. F.
No. 993—Quinine, Iron and Zinc Valerianates.
No. 1001—Alophen.

NOTE.—In the soft-mass process no heat is applied, hence such volatile substances as camphor, the valerianates, the essential oils, etc., are preserved in full measure.

SOFT MASS PILLS (P. D. & CO.) dissolve readily in the digestive tract. They are attractive in appearance. They keep well. They are absolutely true to formula. Ask your druggist to dispense them on your prescriptions.

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