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Original Communications.

THE USE OF MORPHINE AND SCOPOLAMINE IN LABOR, WITH REPORT OF ONE HUNDRED CASES.*

BY

DR. J. HALPENNY, WINNIPEG, MAN.

Consultant to Grace Hospital, Winnipeg; Surgeon Outdoor Clinic Winnipeg General Hospital; Clinical Teacher in Surgery, Manitoba Medical College; and

DR. C. H. VROOMAN, WINNIPEG, MAN.

Attending Physician, Grace Hospital, Winnipeg; Demonstrator of Histology, Manitoba Medical College.

Common humanity urges the medical man to search for some means to ease the pains of labor. Chloroform has done much to relieve the excruciating agony of the latter stage of labor, but it is also true that accidents have followed its use. In many cases it has, without doubt, become necessary to apply forceps, because of its too early or prolonged use. In how many cases obstetricians have yielded to their own impatience and the importunities of the friends and applied forceps unnecessarily it would be hard to say, but it is certain there would be no small number. That there is an increase in the use of forceps in confinement is almost universally admitted, nor is this increase altogether to be explained by the impatience or meddlesomeness of the modern obstetrician. The reason is, we think, to be found in the lessened capacity of the modern woman to bear pain. On this point Prof. Kronig (6) says: "In private practice it is only in the vast minority of cases that the so-called classical indication calls for the application of forceps; by far the largest number of operative confinements is necessitated by nervous exhaustion on the part

* Read at meeting of Ontario Medical Association, June, 1909.

of the woman and by the want of will power to bear pain to the end. The classical indication for the use of forceps is eclipsed by the so-called deliverance forceps—the application of which has increased in an alarming manner, especially among women of the better class. . . I do not think that in this instance it is a case of 'furor operativas' on the part of the doctor, but in private practice, in contrast with hospitals, we often have to deal with persons of nervous dispositions, who are overcome by such a state of nervous prostration that every normal effort on their part to endure the labor pains to the end is paralyzed."

The decrease of the birth rate which has been so generally observed in the better classes both of the United States, England, and France, cannot altogether be attributed to the dislike of the care of children, but in part to the dread and horror many women have of the pains of labor.

Any drug then which will relieve or abolish the grinding pains of the first stage of labor without injury to either mother or child should be welcomed by both doctor and patient. That this condition is fulfilled by the combination of scopolamine and morphine is evident to anyone who has given it an extended use or gone carefully into the already extensive literature on the subject. That there are disadvantages or possibly some dangers in its use is not to be denied, but they are those which are inevitable in the use of an anesthetic in the hands of those inexperienced in its use and careless of the dosage. There have been and still continue to be fatalities from the use of chloroform, both from careless administration and idiosyncrasy of the patient. The same may, we think, be said of the use of scopolamine and morphine in obstetric work, but if we can prove there have not been more than with chloroform, we submit that they should be given a trial. We do not propose in this paper to consider the use of scopolamine and morphine as anesthetics except in obstetric work, though they have been used as general anesthetics for a great variety of both major and minor operations by many surgeons. Our own experience has been entirely confined to obstetric work.

In 1900, Schneiderlin (23), first reported a series of cases in which he had done a number of operations under anesthesia, produced by scopolamine and morphine. Korff (19) and Blos (16), shortly afterwards reported a series of cases. Their method was to give morphine, gr. 1-6 and scopolamine, gr. 1-100, four hours before an operation, repeat in two hours, and repeat again one half-hour before operation. In some cases they gave as high as 1 gr. of morphine and 1-6 gr. of scopolamine, so that it is not to be wondered at that there were a few fatal cases, though sur-

prisingly few considering the dose. It is to be noted the difference between the doses they used and those considered necessary in ordinary obstetric work.

The pharmacological action of scopolamine has been rather fully investigated by Stella (17), Kochman (18), Webster (12) and others, but we are sorry to say with rather contradictory results. The reason of this is probably because of the rather peculiar idiosyncrasy that the animals generally used in experiments have to the action of scopolamine or the allied drugs atropine, duboisin, etc. It has been found by these experiments that dogs will stand enormous doses of these drugs without apparently any bad effects, while on the contrary man seems, in some cases, to be peculiarly susceptible.

As an example of how resistant dogs are to hyoscine and atropine, we might mention an experiment performed in conjunction with Dr. Webster. We injected into the vein of a dog of fifteen pounds, hyoscine, gr. 1-100; five minutes later gr. 2-100, and five minutes later gr. 4-100; then at intervals of five minutes atropine, gr. 1-20; gr. 1-10; gr. 3-20; gr. 3-10; gr. 6-10, and gr. 1 1-2. At the end of an hour the dog had received hyoscine, gr. 7-100, and atropine, grs. 2 6-10. The dog recovered, and a week afterwards we gave the same dog 1 1-2 gr. of atropine at one dose. The animal recovered from that, so we killed it with chloroform. Dr. Webster, though, tells us that he has killed dogs with an initial dose of hyoscine, gr. 1-100. The animals, if they survive the initial dose, seem to acquire an immunity to the drug, and it can be increased at five-minute intervals without much effect.

In man, one case is recorded in which there was a death after administering gr. 1-20 of scopolamine, but in this case there was a high grade of arteriosclerosis.

The combination of morphine and scopolamine no doubt owes its efficiency as an anesthetic, without unduly depressing the circulation, to the supposed antagonistic action of morphine and scopolamine on the respiratory and circulatory centres.

Atropine has long been used as an antidote for morphine poisoning, and, as proven by Webster and other observers, atropine, scopolamine and hyoscine are practically identical in their action on the circulation and respiration. The reason for the use of scopolomaine or hyoscine, in preference to atropine is, hyoscine and scopolamine have a more sedative effect than atropine. Quite recently Nicholson (37), of St. Louis, has done a number of experiments on animals. He found that by injecting morphine, gr. 1-4, and scopolamine, gr. 1-100, into a rabbit it produced a deep narcosis followed by recovery in four or five hours. Inject-

ing morphine, gr. 1-2, alone did not produce such a deep narcosis, nor could the animal be operated on as when morphine was combined with scopolamine; when morphine, gr. 1-4, and atropine, gr. 1-100, were injected the narcosis was not so deep as when morphine was injected alone. Atropine inhibits in some degree the action of the morphine. He also found that repeated daily injections of morphine and scopolamine produced no degeneration of heart, liver or kidneys. He found that the toxic dose of morphine and scopolamine corresponds very closely to that of morphine alone, and the autopsy findings in animals which succumb to a toxic dose are as those from morphine.

Though we use scopolamine throughout this paper, it is simply for the sake of uniformity, as hyoscine and scopolamine are, as is well known, isomeric chemical, and identical in their physiological action, and as a matter of fact in the cases which we report below, it is the hyoscine tablet of Parke, Davis & Co. which we have used almost altogether.

It might be in place here to refer briefly to the widely advertised tablet of the Abbott Alkaloidal Company of Hyoscine, Morphine Cactin. They make extravagant claims as to the purity of their drug and the originality of their compound. They claim that hyoscine made from hyoscyamus is the only safe drug to use, and that scopolamine is dangerous, and that the addition of cactin is highly beneficial as a heart tonic.

The absolute falsity and brazen effrontery of their claims was thoroughly shown in the journal of the American Medical Association December 21st, 1907. After quoting from manufacturers' letters and results of chemical and physiological investigation they say in conclusion—as to hyoscine and scopolamine:

"1. Hyoscine and scopolamine are synonymous terms for the same aklaloid.

"2. The claim of the Abbott Alkaloidal Company to the effect that the alkaloid it uses and which it calls hyoscine is purer and safer than scopolamine has no basis in fact, for that alkaloid is scopolamine.

"3. No one connected with the Abbott Alkaloidal Company, or for that matter anyone else, is able to detect whether the alkaloid it sells is made from hyoscyamus or from some other plant of the same family. It may be chemically pure or impure, whether marked under the name hyoscine hydrobromide or scopolamine hydrobromide.

"4. The Abbott Alkaloidal Company, therefore, has been misleading the profession of the United States regarding hyoscine in its H.M.C. tablets, and has been doing this either deliberately

with the intention of deceiving for commercial gain or from ignorance of well-known facts."

As to Cactin, in the same article they publish the conclusions of Prof. Robt. A. Hatcher, who made some experiments in the Loomis Laboratory, Cornell Medical College, New York. His conclusions are: "These two preparations (cactin pellets of Sultana Drug Company and Abbott's Cactin) are not only devoid of a digitalis-like or a strychnine-like action, but they are inert when used in animals in doses that are hundreds and even thousands of times as large as those recommended by their exploiters."

"To sum up the facts concerning the H.M.C. tablets it may be said that this mixture is nothing but scopolamine and morphine to which has been added an inert secret article called cactin, thus adding mystery to it all and making this well-known and important combination of scopolamine and morphine a proprietary nostrum."

Morphine and scopolamine were first used in obstetric work by Steinbuchel, when in 1902 he reported 100 cases. Since then a great number of cases have been reported, but chiefly by the Germans. Most notable among these is Professor Kronig, of Frieburg, who has reported 1,700 cases in which these drugs have been used, and he is very enthusiastic in its favor. It is rather remarkable in view of these large number of cases that English and American obstetricians have been so slow in adopting it. In May, 1908, in a personal communication, the Dublin Rotunda report that they had not used it in a single case; the Sloan Maternity, New York, has never used it. Johns Hopkins Maternity in a few cases, but not enough to report.

The only ones in America which we could find who had used it systematically and published results were Dr. Newall, of the Boston Lying-in-Hospital, 12 cases, and Dr. Fenton, of Toronto, 153 cases, and their results have been entirely favorable.

Besides the 1,700 cases reported by Kronig, Preller reports 120, Bunn, 100; Steffen (13), 300; Leopold (27), 200; Bass (36), 107.

The results from the use of this treatment vary greatly, and we are inclined to attribute this lack of uniformity more to the quality of the preparation used than to the method of its exhibition. Kronig's report of favorable results in 1,700 cases is the strongest evidence we know of in favor of this method. Some of his countrymen report very unfavorably however. Giminder (9), in summing up the results observed in 100 cases at Menge's Clinic in Erlangen declares the method to be dangerous to both the mother and child, stating that serious after-hemmorhage

occurred in five cases, while in twenty-seven others the course of labor was disturbed. He regards the measure as presumably responsible for the death of one child, for serious asphyxia in eleven others and slight asphyxia in twelve. Sinclair (3), though having no personal experience with this method, says: "It may now be said to have received its final condemnation as too dangerous, both for the mother and child, and unsatisfactory in most other respects." We are sorry he does not state in what other respects it is unsatisfactory; it is difficult to conceive of any effect it could have except on the mother or child. As an alternative he suggests morphia-alcohol-cocaine anesthesia. We confess that we have never tried this combination. During residence in Winnipeg General Hospital we have frequently seen accident cases from railroads where alcohol has been administered by the companies and morphine given on arrival at the hospital, and we agree that the patient frequently suffered little pain, and hence shock was not increased. In spite of this fact we prefer not to have the inevitable mental after-effects in our obstetrical cases. To argue against the method in obstetrical cases because he finds it unsatisfactory in minor operations of the puerperium, such as "cleansing septic or pseudodiphtheritic and inflamed lacerations," seems to us to have little force. Steffen (13) says, the woman is not able to control the abdominal pressure, and it is very difficult to protect the perineum. We did not experience any difficulty arising from such a cause, neither did we have to resort to abdominal pressure to aid expulsion, which he says is necessary at times. Kirby's (5) verdict is favorable, and his conclusion is that labor is not prolonged, but that the patient's strength is conserved by the rest secured between pains. Newall (14) also makes the same observation. He says: "The pain of the first stage of labor was such that the strain of the expulsive pains was endured with less reaction than in the ordinary patient, and not being exhausted by the pain of the first stage of labor the patients were able to help themselves more efficiently in the final stage."

In a personal communication from Dr. Brodhead, Obstetrician to the New York Post-Graduate School, he gives us a summary of the results of its use in thirteen cases in his clinic. "The cases were all primipara. In seven cases low forceps operation was done, and less chloroform was required to produce anesthesia to the obstetrical degree. Slight delirium was noted in two cases, and in one case where the dose was repeated the delirium became marked, her uterine contractions were normal—low forceps were finally used. In one case there was profuse post-partum hemorr-

hage, requiring uterine tamponade. In twelve cases where note was made of the presence or absence of asphyxia, in six there was none, in four slight, in one moderate, and in one deep. We do not recommend its use, but prefer morphine and chloral hydrate. We do not like the occasional delirium, and we are more afraid of the drug than we are of morphine and chloral. We doubt the advantages claimed for the drug."

Butler (2) quotes from 50 observers, having in all 5,121 cases, in which 8 deaths occurred. Only two observers having 92 cases gave a verdict of "bad." K. Myer (1) in 50 cases summarized his results thus: In but 2 cases was there interference with regular contractions, in 70% there was no hemorrhage, in 24% it was slight, and in 6% it was severe. There was vomiting in 2 cases. In 46% there was complete effect, in 42% fair effect, and in 12% no effect. As to the effect on the child, there was slight delay in establishing breathing in 3 cases. In one case the child was dead with two turns of the cord about the neck, but at autopsy was found to have a large thymus.

We have used scopolamine in 100 cases. The first case in which it was tried (J. H.) was a primipara, aged thirty-eight years. It seemed to be of such benefit in this case we were encouraged to give it further trial. A rigid os seemed to dilate more readily, and this while the patient was in comparative ease. A little chloroform was administered just when the head was born. There was no laceration, and no ill effects on the mother or child.

Operative interference was necessary in 17 cases, 3 occiput posterior, 2 eclampsia, 1 where membranes ruptured 48 hours before pains commenced, 1 in a Jewess who had taken absolutely no exercise after the fifth month, and one in a primipara aged 32. In the remaining 92 cases low forceps were used nine times. On this point Newall says that with the use of these drugs operative interference is lower than usual without their use, having had 14 forceps cases out of 123 patients.

Our method has consisted in using hypodermic tablets, the drugs being in separate tablets. The initial dose of morphine sulphate, gr. 1-4, and hyoscine hydrobromide, gr. 1-100, is to be given when dilatation has well commenced and the contractions are occurring at intervals of five to seven minutes. The room is then darkened and made as quiet as possible and the patient allowed to sleep. In the majority of cases after a period of one to two hours' rest the patient wakes with each pain, only to drop off to sleep again after the contractions have ceased. If the patient wakes completely a second dose of hyoscine hydrobromide,

gr. 1-100, is given, except in neurotic cases where in a few instances the morphine is repeated either with the hyoscine or alone. In this class of patients there may be some incoherent talking, accompanied by flushing of the face, but we have found no real difficulty or danger connected therewith. This has been noticed by various writers with similar conclusions. We do not endeavor to secure surgical anesthesia. What we do aim at is such a condition that the patient does not remember what happened after the drugs were administered. This was secured in about 20%. In one case forceps were applied (C. H. V.) without the administration of any other anesthetic. In about 70% the patient rested quietly for some two to four hours, then wakened with each pain, only to doze off to sleep again between pains. In about one-fourth of these cases a little chloroform was used at the time of the expulsion of the head.

The drug is not administered when labor is well commenced, and neither is it administered in precipitate cases. We agree entirely with the opinion expressed by Fenton in a private communication, who says: "Do not give within two hours of delivery, withhold after membranes rupture if there is moderate dilatation of the os and when the cervix is completely dilated even though membranes be intact. If labor be progressing unusually rapidly better give chloroform instead." The objection to the late administration of the drug is twofold; first, the anesthetic effect continues too long on the mother after labor is terminated, and second, it is in such cases that difficulty is found in resuscitating the child.

Effect on the Mother.—Apart from the slight mental disturbance already noted, and which was of no consequence, no untoward symptoms were observed. Labor was not interfered with, no cases of post-partum hemorrhage occurred and no untoward after-effects were observed. Rather was it our opinion that in proportion to the success of the anesthesia was the patient freer from symptoms frequently observed in other cases of more or less nervous exhaustion. In one case an observant nurse gave the unsolicited opinion that the patient recovered much more quickly from the effects of labor than in cases in which the drug was not used.

Newall (personal communication), speaking of the results found in his clinic, says: "I have seen no bad results in any of the cases in which it has been used under my supervision, but some of my colleagues will claim that they have had unfortunate results, though as far as I can ascertain there has been no increase in unfortunate symptoms in the cases in which scopolamine has

been used over what we used to meet from time to time before scopolamine was heard of."

Effects on the Child.—Two premature children where labor was induced for eclampsia were born dead; one child in occiput posterior with a prolapsed cord was born dead, and one child was dead about four or five days before birth. All others were born alive and no difficulty was experienced in having to resuscitate the child, except in the case of the Jewess mentioned above. Here difficulty was met with, but it finally came to all right. No other ill effects were observed.

In conclusion we wish to say that we find morphine and scopolamine, when carefully administered, will safely alleviate consciousness of the pains of labor and in many cases abolish any remembrance of pain.

We have observed no bad effects on the mother, though there may be minor symptoms as delirium, flushing of face, etc.

We have observed only one case in which there was some asphyxia of the child, and in this case the symptoms were not dangerous.

We do not think that labor is delayed, but rather that the time is lessened, but we have not had enough cases to judge on this point.

We think the drug should be used only when the patient is in a hospital or is attended by a good trained nurse, this not because we regard the method as a dangerous one, but because the sympathizing friends would not allow the patient to be quiet enough to get the full benefit, and in addition to this the bystanders would be very much alarmed at the little mental disturbance which occasionally occurs.

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OPERATIVE TREATMENT OF RECENT FRACTURES.*

By Chas. B. Shuttleworth, M.D., C.M., F.R.C.S., Eng.
Assistant Surgeon Toronto General Hospital and Hospital for Sick Children.

There are few surgeons of experience who have not been dissatisfied with the time-honored methods in the treatment of fractures. Even when every care has been taken in the effort to correct the existing deformity and to bring the ends of the broken bone into apposition, and to immobilize them with some form of retentive apparatus, a skiagraph usually shows very imperfect coaptation of the fragments.

Before the discovery of X-rays, surgeons were justified in doing the best they could with the ordinary methods, but there is no longer any excuse for not recognizing a faulty adjustment. Patients expect that the surgeon will avail himself of every means at his command to bring about perfect results. It is difficult for the surgeon to escape censure if the results of his treatment have been unsatisfactory and disability ensues from faulty union, if an X-ray picture has not been procured immediately after the injury. It is infinitely much better to recognize the situation and explain it properly to the patient beforehand than to have matters plainly explained afterwards by the patient to the embarrassed physician when a suit for malpractice against him is in progress, for the patient will surely have had a skiagraph taken for the occasion, should any deformity exist.

In certain cases of fracture it may be a physical impossibility to properly adjust the fragments of a broken bone without operation. Not that it is invariably necessary or even desirable to replace bones exactly as they were before fracture, but it is much better to do so, provided no undue risks are taken.

A careful examination of the bones preserved in museums and from observations made in the dissecting room, show that surgeons have been very often satisfied with very imperfect adjustment after fractures and that anything approaching accurate apposition of the ends was obtained in only exceptional cases.

Alteration in the axes of the two fragments results in a modification in the mode of transmission of force through them, with a consequent change in the form of the articular surfaces of the joints both above and below the seat of fracture, giving rise

* Read at meeting of Ontario Medical Association, Toronto, June, 1909.

to pain and disability which so often supervene in fractures, especially of the long bones. Nature is usually very kind in her efforts to restore the normal form of the parts where this is possible, even to laying down the greater part of a new shaft so as to transmit the strain in the normal axis. But should this happy result not ensue, there often follows an enormous physical disability and great financial depreciation in the wage-earning capacity of the individual.

Operations for faulty union and for non-union have been long practiced, but only recently has the operative treatment of recent fractures been performed, no doubt owing to the possible dangers of infection.

The advantages of operative measures in simple fractures are as follows:

(*a*) They at once relieve the pain caused by movement of the fragments upon one another and partly due to the tension of the extravasated blood into the tissues.

(*b*) They greatly shorten the period necessary for repair since union is rapid, perfect, and by first intention, thus shortening the convalescence.

(*c*) They leave the skeletal mechanics in their original condition, and functionally this is very important.

(*d*) Passive movements of the neighboring joints are possible almost from the first, which lessens the atrophy of the soft parts and stiffness of the joints, which is usually so marked a feature after splints have been retained for long periods.

A number of points deserve particular attention in considering the operative treatment of recent fractures.

(1) No operation should be performed when perfect results can be obtained by other means. The surgeon can determine by a careful study of each individual case whether he can reasonably hope and expect to bring about a restoration of the parts to their normal form. If not, then operation should be done.

(2) It is very important to secure the careful adjustment of the fragments in those who follow laborious occupations, or else their wage-earning powers may be much reduced. This is especially true with regard to fractures involving the long bones of the extremities, where excessive shortening, malposition or limitation in the movements of a joint may incapacitate an individual from following his ordinary occupation. This unfortunate result can usually be avoided by a timely and skillful operation.

(3) The danger of sepsis must be given every consideration. No one is warranted in operating who does not approach his case

with an aseptic conscience and is not a master of the necessary technique. All rough handling of the bruised and lacerated tissues through too small an incision are to be deprecated. The dangers of operation increase with the depth of the bone from the surface on account of the amount of manipulation required.

(4) The general state of health, habits, age and resisting powers of the patient must be accurately measured. Old age, however, in itself is no contraindication to operation.

(5) After operation, when the fragments of the bone have been firmly secured, extension is seldom necessary; tight splinting with the dangers of ischemic paralysis is not called for; a rapid restoration of function by early passive movements is made possible, and much suffering and inconvenience is thereby prevented.

(6) The indications for operation vary greatly with the particular bone broken, the character of the break and its position in the bone.

It has been the common practice for a long time to operate on fractures of the olecranon process, patella and the tuberosity of the os calcis, on account of the impossibility of approximating the fragments by any other method. This also applies to fracture-dislocations of the spine and depressed fractures of the skull. Operation is rarely called for in transverse fractures of the shafts of bones, as they can usually be treated by properly applied splints or by extension. When the fracture is oblique or spiral in direction of the shaft of a long bone and especially when a portion of muscle intervenes between the ends, operation holds out the best hope of success. Certain fractures, as those of the clavicle, except for cosmetic reasons, and those of the bones of the hands and feet, and fractures of superficially placed bones, as in Colles' fracture, rarely call for operative interference. Separation of the tuberosities of the humerus and tibia are far better treated by an open operation.

When a fracture takes place close to, or into a joint cavity, operation is strongly indicated. This is necessary on account of the difficulty of otherwise getting the fragments in anything like accurate apposition, if indeed it is possible, or for the purpose of removing small fragments, or to minimize the amount of callous, which will inevitably be formed and seriously interfere with the movements of the joint or even result in ankylosis. This is particularly true in fractures of the upper extremity of the humerus, especially if complicated by dislocation of the head of the bone, and again in fracture of the lower end of the humerus or of the femur, involving the elbow or knee joints.

Technique of Operation.

The most scrupulous care must be taken to avoid infection. The part should be carefully prepared twenty-four hours before operation, and a pad wet with 1-1,000 bichloride of mercury solution left on over night and the preparation of the skin repeated just before the operation. Strong rubber gloves should always be worn, also cap and mask. Good free incisions are imperative, and all manipulations of the soft parts and bones reduced to the minimum. It is better to handle the tissues with instruments exclusively so as to avoid any possible chance of infection, as this is the one great danger.

The bones are secured with wire, pegs, nails, plates, screws or staples. Each of these materials is specially suited for individual cases. The writer has found that silver wire, even when well annealed, is too fragile and would advocate bronze aluminum wire or ordinary stove-pipe wire in preference. Wire may be used for small bones. Staples are suited for spongy bone, such as tuberosities. Screws offer the best means of securing bones together after the fragments have been drilled, either with or without the use of steel plates. Screws are better made with the thread running right up to the head, as they then will hold better in compact bone and are more easily inserted

After all hemorrhage has been controlled, the soft parts, including the deep fascia, are brought together with catgut and the skin with horsehair without drainage.

The various materials used rarely give rise to irritation, but should they do so, they may be removed through a small incision when firm union of the bone has taken place.

In certain cases it may be necessary to use splints for a short time and passive movements are commenced early.

In connection with these remarks I desire to record the notes of one of many cases of fracture treated by the open method.

E. H. S., aged 30, referred to me by Dr. C. J. Copp. On January 14, 1909, he fell 18 feet and sustained a transverse fracture of the femur immediately above the condyles, which latter were split apart into the knee joint, constituting what is usually termed a "T" fracture. There was a large effusion of blood into the surrounding tissues and into the knee joint. An endeavor was made, under an anesthetic, to bring the fragments into apposition, but without the slightest success. Two days later the parts were freely exposed by a semilunar incision on the outer side of the leg commencing seven inches above the knee and passing inwards below the joint, dividing the ligamentum patellae en route, thus freely opening the knee joint. This large flap was

then reflected inwards, giving admirable access to all parts. The clots were first removed from the knee joint and then after a great deal of difficulty, with the aid of two assistants and the powerful leverage of large forceps, the three fragments were fitted nicely together. Two ordinary three-inch wire nails were driven transversely through the condyles, one from either side, thus holding them firmly together. The shaft was then secured to the united condyles by means of a steel plate on the outer side and held in place by four half-inch screws. The two portions of the patellar tendon were sewn together by three mattress sutures of chromic catgut and the whole wound closed without drainage. A back splint was then applied, the knee being slightly flexed. This splint was removed in two weeks and passive movements commenced, and four weeks later the patient was around on crutches.

It was then found that there was little active extension possible at the knee joint, owing to a slackness of the ligamentum patellae. To correct this, a strong silver wire was put through between the lower end of the patella and the tubercle of the tibia, at the same time a portion of the patellar tendon was removed and the two ends brought together again. In one week he could extend the leg perfectly. Unfortunately the patient fell three weeks later and a skiagraph showed the wire to be broken in two places. These fragments of wire caused some irritation and have since been removed through two tiny incisions without an anesthetic. It would have been wiser not to have cut the ligamentum patella, but to have chiselled off the tubercle of the tibia with the tendon attached and to have wired the fragment of bone again into position.

At the present time, four months after the injury, the patient is walking with firm union at the seat of fracture and with a freely movable knee joint.

By no other method than an open operation would it have been possible to have brought these badly displaced fragments together, and to have secured such good functional results.

45 Bloor St. E., Toronto.

THE SPASMODIC TYPE OF SYRINGOMYELIA.*

GOLDWIN W. HOWLAND, M.B., TOR.; M.R.C.P., LONDON.
Service of Medicine, Toronto General Hospital.

Syringomyelia was divided by the great authority on this disease, Herman Schlesinger, into six main types, namely: (a) Typical Syringomyelia, (b) Motor, (c) Sensory, (d) Trophic, (e) Tabetic and (f) Pachymeningitic Syringomyelia.

In 1900, Dr. Pierre Marie presented and identified the first five cases of this type, and shortly afterwards his pupil, Guillain, wrote an elaborate thesis, giving a complete description of these same patients, under the name of the Spasmodic type of Syringomyelia. In 1906, with Alquin and again with Raymond, Guillain added two more cases to the series, while Raymond with Francois reported the eighth example in the same year. Verger followed another case, which showed similar symptoms during life to autopsy and records a central glioma as the actual pathological condition, while in 1908 Alexander Bruce, in the *Review of Neurology*, wrote concerning a patient with some resemblance to Guillain's series, who may probably be regarded as possessing either the same or a related type of the disease.

In presenting this patient, whose symptoms correspond to the typical instances of Guillain, the different features of the case are each described, followed by immediate reference to the corresponding condition in the cases reported.

The most important characteristic of the Spasmodic type of syringomyelia is undoubtedly what may be termed *the attitude of the patient.*

This little girl is 16 years old, and the disease has steadily advanced since the age of five, the slow progress being a feature of this condition.

As she stands up, her deformity is apparent. The head slightly bent forward nestles between the strongly marked borders of the trapezius. The thorax, if viewed posteriorly, arching forwards in its upper part, shows a marked concavity in its superior part in front, and this has been termed thorax en bateau.

The spine exhibits a most extreme degree of scoliosis, the curvature being to the left side.

The arms are drawn to the side of the body, the right, which is at present the most affected, lying across the body with the

* Read at meeting of Ontario Medical Association, Toronto, 1909.

hand towards the symphysis pubis, and exhibiting marked flexion at the elbow, a position in which it is rigidly fixed.

On the left side the elbow is already commencing to present the same signs, but is far less marked in rigidity than the right.

The shoulders are pushed forwards and upwards, slightly rotated inwards.

Contrasting this attitude with that described by Guillain one notes the similarity in all respects as regards head, shoulders, thorax en bateau and position of the arms. Also the unilateral advance was present in four of his five cases, while the scoliosis was marked in one and present in four others.

Turning from the attitude of the patient to the minute study of the arms, emphasis must be laid on the characteristic position at each joint on the right side.

(1) The shoulder raised by the trapezius, pushed forwards on the thorax and rotated slightly in by the pectoralis.

(2) The elbow in a state of rigid flexion, although if the joint is still further flexed then some extension is possible.

(3) A most important sign at the wrist, namely, *hyper-extension of the hand on the forearm*, which will be referred to again.

(4) The position of the fingers, namely the three inner flexed firmly into the hand, while the fourth finger shows incomplete flexion; this being most marked at the terminal phalanx, and with the thumb, which is adducted, forming a position described as a "pair of pincers."

These striking points are the main diagnostic signs of the disease, together with those already referred to under the general attitude of the patient, and they are reported in all the definite cases of the disease, and may be said to be invariably the same.

True, the exact position of the fingers may show some alteration, due to the period and advance of the disease, so that this may be described as the typical position, and in a more advanced case one may expect to find more marked flexion of the fingers, in which the index will be included, as is well shown in one case of Guillain's. This *hand* has been present in the cases examined post mortem, and is characteristic of syringomyelia spasmodique, and while it might possibly be present in pachymeningitis, yet at the present time it is diagnostic of the former disease.

The hyper-extended wrist is also striking and equally important, and it may be produced by syringomyelia, and conditions copying this, as glioma, pachymeningitis and by acute poliomyelitis.

It is easily distinguished from the common cerebral type of hand seen in diplegia and hydrocephalus in which marked flexion frequently is found.

Considering now the muscular power of the right arm. Movement at the shoulder is limited; elevation is possible, but adduction and abduction are very weak, while no power of rotation is present. At the elbow a very small extent of flexion and extension is possible, and, strange to say, if the power is tried, despite the contracted condition of the biceps, yet the extension of the triceps is greater than the biceps power, and if the arm be still more flexed it is noticeable that the extension is the stronger. So that the muscle in contraction is weaker than the muscle which has given way. The same fact applies to the other arm.

At the wrist slight extension and flexion are possible, and here the contracted extensors are more powerful than the flexors at the reverse condition to that in the upper arm.

The last three fingers can be flexed to a certain degree and partially extended; the first finger to a greater extent and the adducted thumb also to a certain degree.

But the characteristic pincer movement is better shown by the less involved hand, as the right, while presenting the same position has passed into a condition of rigidity where the movement of the thumb is difficult.

In Guillain's series, the muscular power varied according to the extent and stage of the disease, but he also lays stress on the fact that it is the spastic and rigid condition far more than the atrophic condition which causes the loss of power.

The trophic condition of the muscles is such that no actual wasting of any group of muscles beyond disuse wasting can be made out and the condition conforms to an upper rather than a lower motor condition. True, the biceps is in a peculiar contracted condition, and the triceps is extremely small, and the extensors appear wasted, but there is no valid proof that such is the case with the exception that I have observed fibrillation of the left triceps, and this is characteristic of a lower motor neurone disease.

But to offset this important point it must be stated that despite the equally spastic condition of the legs, yet there is no corresponding atrophic condition there, and they look large and well nourished, although one must bear in mind that their affection is much more recent.

Secondly, it is necessary to add that the cases described by Guillain showed the same position of the upper extremity, and

he claims that such is always a sign of local lesion in the cervical region of the cord and is produced by local processes only.

Thirdly, it appears to me to be characteristic of a type of syringomyelia to have atrophic muscles present with much diminished muscular power; without demonstrable wasting of a lower motor neurone type, and by that I mean, for instance, with interosseal paralysis; without markedly hollowed out spaces between the bones, and with electrical reactions which are not typical of degeneration.

The explanation must be that in this disease either certain fibres of a muscle waste and those remaining give the electrical reaction, or else there must be a situation between the pyramidal tract and the nerve cells of the muscles, whose destruction causes the spasticity of the first and the peculiar wasting of this type of case without changed electrical reactions.

Guillain's cases evidently were of the same type, for with the same advanced condition of paralysis he only describes actual wasting in a few muscle groups, usually the small muscles of the hand or isolated forearm groups, although late in the disease more marked atrophy occurs.

This condition of spasticity and rigidity with moderate wasting and with no reaction of degeneration, in a disease making very slow advance, negatives the diagnosis of amyotrophic lateral sclerosis, and may be said to be decidedly characteristic of syringomyelia of this particular type.

The electrical reactions are most interesting, for all muscles react to faradism and to galvanism.

There is no polar change and no sluggish contraction, and in fact the muscles reacted to a current that was approximately normal.

In no case did the authority prove any R. D., even when marked wasting was present, although a stronger faradic current was required for some of the more advanced muscles or when there was definite atrophy.

The condition of the left arm will not be described, except to say that it is beginning to show in an early condition the same tendencies as the right. The elbow contraction is already present and adhesions at the joint are easily broken down. The hand shows the typical three-finger flexion and pincer position of the first two digits, and the wrist is commencing to show the extension position. Fibrillation has been observed in the triceps.

The muscles of the back must be extremely weak, since the scoliosis is so marked, but the abdominal muscles are apparently normal.

The lower limbs are well nourished and are spastic and rigid, particularly at the knees and ankles. There is no wasting. Movements are possible at all joints, no fibrillation is visible.

The gait is rather that of a double hemiplegic movement, taking place from the spine and sacro-iliac joints by rotation.

Such a gait is perhaps more typical of a syphilitic pachymeningitis, but the scoliosis, the anesthesia, the age, the slow advance of lesion, the arm position and the height of the lesion, together with the absence of cerebral specific manifestation, negative that diagnosis. The more marked affection of both pyramidal tracts would also explain its presence here.

The reflexes are as follows: Eyes, normal; jaw jerk, present; biceps, present; left, slightly; right; triceps, present; left, slightly; right, probably due to extreme rigidity of the right side.

Knee joints both increased. Ankle clonus present, and double extensor plantar responses, *right more marked than left.*

In the reported cases the reflexes of the lower limbs have been increased in some cases and decreased in others, while those of the upper limbs were absent in three cases and increased in one.

The bladder and rectum are at present normal; there was a period when micturition required to be performed more frequently, but she has recovered from this. The bladder is frequently affected in the later stages, as the patient may suffer from incontinence and from cystitis, due to trophic disturbances, such as trophic abscess and bleeding.

Sensation.—In Guillain's groups, four of the cases gave syringomyelic areas, although in one case he had difficulty apparently in making out temperature sensations, which were more markedly defective as regards heat.

In the fifth case, early in the disease, no sensory impairment was noted beyond slight anesthesia in the upper part of one thigh. Before death, 21 years later, touch, though retarded, was normal except over the left hand.

Pain was lost over some part of the body and retarded generally. Temperature over the whole body was either interpreted as touch or more frequently as cold.

Turning to this patient one may state that correct judgment of anesthetic areas is difficult, as the child is a foreigner. There is much retardation, particularly in certain areas, and especially of temperature.

No tactile anesthesia was made out.

Analgesia was also absent, though there was an area on the right thigh where it apparently was doubtfully present.

But to temperature sensation much importance is due, as while cold seemed everywhere present and no definite mistake was made, yet heat, as in Guillain's case, was affected.

Frequently heat was termed cold, at other times touch, and this all over the body; while on another test the mistake was rectified in places, not in others. An extension of the area, stimulated in certain cases, produced a correct reply.

On the right side one error was practically constant, namely, below the waist and above the thigh, heat was termed touch, but in passing upwards gradually it was called cold, while above the nipple it was recognized as heat. If the temperature was raised to a higher point the test was less successful and the reply might be correct.

On the left side the same phenomena occurred, but less clearly. Finally to a faradic current, the right side was claimed to be more sensitive than the left from the mid line.

Two features require impression here, as they are of great value in these syringomyelic cases.

1. The retardation of sensation.

2. The non-recognition of heat as such, but its perception without temperature association as touch or otherwise as cold.

3. One may note that in early cases sensation may be normal, that temperature disassociation may appear first and that beyond a difficulty in distinguishing heat as such, that no definitely bounded area may be involved, and that retardation may be a distinctive character.

No trophic areas have been discovered, except a large burn scar on the arm and one on the leg, from which no conclusion could be drawn. In Guillain's group, whitlows were present in some cases.

The cranial nerves are normal with the exception that an undulating movement is present on the tongue, which may be abnormal. It is interesting to note that the same condition, an undulation, not a fibrillation, is quoted in one other case. Some of the other patients have had cranial nerve signs, as wasting of the tongue, etc., though they are uncommon.

The mental condition is absolutely normal and unusually bright and clear.

Regarding the diagnosis it is unnecessary to expand, as each possible case has been referred to as corresponding signs appeared. Taking the attitude, the arm condition, the scoliosis, the spastic legs, the fibrillation, the normal electrical reaction, and the irregular disturbances of sensation, there are the two diseases which remain to be differentiated, namely, syringomyelia

and pachymeningitis cervicalis. Guillain believes their separation in most cases is impossible, as either by themselves or together they may lead to a similar set of signs. But in this case, the marked scoliosis and the leg condition, with the absence of definite atrophic wasting, all point to the correctness of the disease being a definite case of the Spasmodique type of Syringomyelia.

In conclusion, let the history end where most commence, namely, with the course. It began at the age of five and she is now sixteen. Pain in the back of the head and the curving of the spine were together the earliest signs; and one of Guillain's cases which went to autopsy commenced with the same pain. These disappeared in the girl's case. Gradually at the age of six the arm began to be affected and she complained of difficulty in moving it. The legs were attacked at about ten years of age, and the right arm has only shown any affection for three years. For the last year there has been slight difficulty in micturition, frequency being increased.

THE DEVELOPMENT OF THE STUDY OF MEDICINE FOR WOMEN IN GERMANY, AND PRESENT STATUS.*

By Dr. Franziska Tiburtius, of Berlin, Germany.

There is a proverb in Low-German: "Wer lang slöppt and flink löppt, kümmt ook noch mit." It means that people who sleep long but run quickly, may still arrive in time. Maybe there is expressed in this proverb some peculiarity of German character, at least as it was up to several decades ago, and as other nations are accustomed to imagine it, though under the influence of changing political and social circumstances other features have come forward in the national character to such a degree that good old Michel of former days is scarcely to be recognized. To enter into a special explanation would take too much time in this short sketch. Willingly and freely we admit that the first impulse for medical study for women came to Germany from other countries. The success of the first American women doctors, Elizabeth and Emily Blackwell, was known in our country; seventy years ago international communication across the ocean was not so easy and frequent as nowadays, and a sort of misty cloud hung over the apparition of the female doctor in America, even when a German woman, Dr. Marie Zackerewska, acquired a good position in the profession in Boston. So it was in the middle of the last century.

When I began to study medicine in 1870 it was entirely hopeless to try to get admission to German universities, even to apply would have seemed absurd and ridiculous. There was no other way but emigration. The nearest place where I could pursue my plan was Switzerland, and I chose it, as the Swiss universities resemble the German universities. This little republic was the first one to open her academic institutions to women and foreigners, and gave them opportunities to show to their own country that sex was no insurmountable obstacle.

When in the year 1876 I began practice in Berlin, success seemed more than doubtful. I met with the same objections as all the first women doctors, even in your country, only twenty-five years before our time—it would be entirely hopeless in a conservative country like ours—women would not have con-

* Read at meeting of International Council of Women, Toronto, June 30, 1909.

fidence in women in the professional way, and so forth. But every theoretical opposition attracts the attention of the public, and I really think it possible that the discussion was useful to the movement.

But still, the first ten years were heavy, uphill work. It was nearly fifteen years, about 1885-90, before younger women, who helped to strengthen and enlarge the work, entered the profession. Already in the first years a dispensary and the embryo of a hospital, a small place of four beds, was founded with the help of good friends and patients. Practical work did not find much opposition from the side of legal authorities, though German universities were not open to women students; little by little women began to feel that those who wished to be treated by one of their own sex had a right to this privilege. Almost at the same time, as in Germany, women physicians appeared in France and Scandinavia, and a little earlier in England and Russia.

Now, it does not depend on individual will to decide at what time a change of opinion and of institutions shall take place in a large community. The deciding factors generally lie in the whole order of things. And to defend the authorities of my own country against the suspicion of short-sighted obstinacy, I must give some of the fundamental reasons why academic study and the woman physician appeared rather late in Germany. It is generally known that Germany, up to a late date, was a poor country, and that even now public and private wealth is not nearly so large as in other countries, especially on your continent. Besides, it has a preponderance of women. When, about the middle of last century, steam engines and the work of machinery began to enter into the home and to provide more and more for the wants of the family, the work and the bread was taken out of the hands of the unmarried women, and for them the question of economic independence and the possibility of existence became more and more pressing. There was good reason for a German novel-writer to call the woman's movement "The Revolution of Aunts." Before the time of the steam engine there was in nearly every German house a warm place for the unmarried sister or friend, who gave for the shelter and protection of the home her work and her love. She was one of the family. Now there came a change; the aunt became superfluous and felt herself to be so. I well remember that when I was young there was only one way open to women of the educated classes to earn their bread—the calling of the teacher or governess. But this calling, more than any other, requires a special talent to secure satisfactory results for the children as well as for the teacher. And so it is easily

understood that the first aim of the so-called woman's movement in Germany was the opening of new callings in the line of practical work, outside the family, for unmarried women. It is especially the merit of private institutions, like that Lette-Verein in Berlin, which is still flourishing and spreading, to have opened the way to practical work and callings. When this was founded the question about scientific cultivation and academic study for women arose, which happily cannot be considered in the first instance as a bread question. In surveying the general development, it appears that between 1880 and 1890 there arose in Germany a larger number of women, claiming to share in the precious riches of science, who would not be satisfied by the communication of the results of scientific work, but claimed to take part in the work itself.

So, as I have explained, one reason for the relatively late appearance of women in academic studies was rooted in the social and economic conditions of Germany. Another reason arose from the regulations of German universities, which are entirely different from the institutions of this country. We have no quasi-private medical colleges; the study of medicine is carried on from the beginning to end at the State universities, and based on regulations of historical foundation. I fully understand that in this country many of those regulations may appear antiquated and not corresponding with modern ideas. But even then it is not to be denied that these old institutions have done good and admirable work, and no institution of historical origin is entirely antiquated, as long as it produces good work. There is in the German character a tendency to conservatism and respect for everything of historical growth which I would not disapprove, though at one time I had to suffer under it: that is always the fate of those living in a time of spiritual revolution.

The principal reason on which the resistance of German universities was founded was that women had not acquired the necessary scientific preparation. Perhaps you know that up to the end of the last century the admittance of Germans to the universities of their own country and to the State examinations depended on their having passed the final examination of a German gymnasium, corresponding to your best Latin schools and academies; while the admittance of foreigners was under scarcely any restrictions. Now these gymnasiums were closed to women, as the idea of co-education, as yet not universally accepted even in this country, at that time was out of the question. So our young women could at first not satisfy the conditions of admittance. But they soon found they had to help themselves

by private institutions. At first in Berlin, then in Karlsruhe, Hanover, Leipzig, women's gymnasiums and supplementary scientific courses were founded on the syllabus of men's gymnasiums. Pupils came from all sides, and when towards the end of the last century the first women had passed the final examination there was no longer any valid reason for objection. For several years women were not yet admitted as matriculated students, but only as hearers, but it was understood that this was only temporary. And in 1904 the right of women to enter on academic studies was legally confirmed. Since the beginning of this century the number of female physicians in Germany has steadily increased. There was only one danger threatening from afar for a time—the idea of the foundation of medical colleges for women only. But it did not become imminent. We fought against it by voice and pen, well knowing that medical women who took a degree from these institutions would, rightly or wrongly, be considered second class. Now it is as easy for women to enter on the study of medicine in Germany as it is in your own country. In Berlin, with its two millions of inhabitants, there are about thirty women physicians at work; most of them have passed the examination of a German university; only a few, like myself, belong to the elder generation of Switzerland. In nearly all larger provincial towns there are women physicians. Also in surgery there are names which are generally known and esteemed. That little embryo of a hospital founded many years ago has developed into a very efficient and well-arranged private clinic. As yet we have not a special women's hospital, with different departments for internal, surgical and gynecological diseases, under the guidance of female physicians; but we are at work, and as we have found much interest and good-will among the public, I do not doubt we shall in a few years have an establishment in Berlin like those in New York, Boston, London, and Zurich.

Nearly all the larger establishments for hydropathy and nervous diseases have among their staff a female physician. The woman doctor has gained a good place among the physicians employed by the mutual benefit societies against sickness and invalidism of communities and professional leagues. This system of mutual insurance is well organized and in every way forwarded by the Government in Germany among the working classes. Those who take an interest in it may hear about it in another section of this congress. I may only mention the union of business women, which has in Berlin alone nearly 50,000 members; among the staff are nine or ten women physicians.

Also the life insurance companies have long found out that it is in their own interest to employ women physicians, as a great many women would rather resign than submit to the medical examination by men. I myself have worked for nearly twenty years for different life insurance companies. But of more importance than all this is the path which the female physician takes in the *social work* for promoting general social welfare. There are a good many points in modern life which we would rather not see, because they appear like blots in the character of nations. But in one respect certainly the ethical standard has been raised to a higher level than in former centuries—the social duties among the different classes are understood in a higher way.

In former days, giving for and supplying physical wants was considered almost the only social duty. "I give the tenth part of all I have to the poor," said the rich youth of the Bible to Christ, "but what more have I to do to gain eternal life?" There were few who put this last question; for the average man to have given was sufficient to clear his conscience. Now we are not satisfied with giving. I may even say there is a tendency to restrict giving. Social care, which does not apply to the individual, but to whole classes of the population, will take more and more the place of charity work, and, we hope, in the course of time will render it still more unnecessary. The great advantage for the individual is the preservation of self-respect and self-dependence.

During the last twenty or thirty years this principle is emphasized more and more in the legislation, and communities and social unions pay attention to it. We see it expressed in the social care for the young. A striking symptom of it is the appearance of the school physician.

At first it was the school boards of larger cities who summoned women physicians to their high schools and girls' gymnasiums. In respect to damages arising from unhygienic organization of the house and those arising from the crowding together of many individuals, the duties of the women physicians to schools do not differ from those of the men. Her work as a woman begins in the contact with the individual. Like every other public institution school life brings some risks with it for a certain number of individuals who fall above or under the average, physically or mentally. The special school illness of girls in our time is nervous debility, depending mostly on poverty of blood, anemia, aggravated by the air and the social life of the metropolis; symptoms of physical and mental debility,

often showing themselves in seemingly reduced capabilities or increased irritability, which may take the form of capriciousness and bad temper. In order to find out the cause of the change and prevent serious and lasting damage, it is essential that teacher and school doctor should act from the same point of view, and therefore good understanding and mutual confidence between these two is the first condition of beneficial work. Every school doctor should go through some special courses in neurology. A woman physician of good sense and good professional standing will often, *by being a woman,* find it easier to understand the very highly developed nervous organism of girls and succeed in influencing capricious and often strange dispositions. In the same way, being a woman, she may be very useful in giving hygienic instruction in the upper classes. Up to our own day there remain in the minds of women in every station of life a good many dark, medieval ideas about natural occurrences, and even mothers of the so-called educated classes are not always sure to give proper explanation and instruction to their daughters in some critical questions. The hygienic lessons in the upper class may teach the young girl to consider such things from a natural point of view, to preserve mental balance as well as physical health. It is easy to understand that in these years hygienic instruction should be in the hands of an efficiently trained woman, rather than in those of a man, however careful and refined he may be. It seems to me that if this instruction in hygiene is carried on in the right way and on a high level the whole question about sexual explanation to the young would be solved in a natural way. To represent the changes of certain years from the hygienic point of view, to presume as already known and natural what every young girl of average intellect instinctively feels is, I think, the best way to prevent harm.

In this way the woman physician has found a place in the school board of the higher schools—not yet everywhere, but in a good many cities of Germany, and we hope that she may find a still more extensive field. As to her work in the primary schools, it has just begun, but it seems to me that here it might be still more necessary. The young girl of the working class, who at fourteen or sixteen has to take up factory work or enters into another family as servant, needs still more than the upper class girl the knowledge of some hygienic principles. Perhaps in some ways she may not be quite as ignorant; but it is not the knowing in itself that gives protection and preserves self-respect; that is only the effect of knowledge, imparted and taken from a higher standard.

And not only in the higher classes, but also at the beginning of school life, the work of the woman physician may correspond to the principle, "Preservation is better than help." It is a fact that in all classes of population a certain number of children are found who, by disposition or by retardation of development, at the age of six years are not yet able to follow the lessons, and therefore become a heavy burden for the school, while, by not being able to follow the instruction, discouragement and timidity render them unhappy and still more incapable. (I may just add in a parenthesis that in many German schools there are separate classes for these mentally inferior children.) In the educated classes this intellectual inferiority is often already found out by a careful mother or by the family physician; but in the working classes, where very often the mother has no time to take special care of the child, the queer behavior is considered as self-will and capriciousness, or is not at all observed. A woman physician whom I know told me a practical formula she had found out to judge about the state of mental development of the six-year-old child (Every child that enters school has to pass a medical examination.) There are several questions put in a friendly and easy way—not like an investigation:

"What is your name? Where do you live? What calling has your father?"

Then she tries to find out whether the child has any conception of family:

"Have you got a grandmother? an aunt? an uncle? In what way are they related to you?"

"Which is the nearest way from your house to the school?"

"Can you give me the name of an animal with four legs? One with two legs? One with no legs at all?"

"From where does your mother get bread? Do you know from what bread is made? Where does the corn grow?"

"From where does your mother get meat? Are there different sorts of meat?"

"What color has the sky? this dress? etc."

A child of six years who is capable of answering these questions may be considered as of average mental development and intelligence; by the manner in which these questions are answered there may be even gained insight into character and temperament. Only when this quite pleasant conversation is closed, the bodily investigation takes place according to the general instructions of school physicians, where most attention is paid to anomalies of the eyes, of the ear, symptoms of physical degeneration, predisposition to chest diseases, etc.

The school physician has to visit every class several times a year, and a condition of successful work is, as I said before, mutual confidence between herself and the teacher, who gives her notice when in the course of school life any bodily or mental peculiarity attracts attention. Then she must try to find out the cause; she is *not* authorized to undertake medical treatment of the case, but has to give notice to the parents and advise them, if necessary, to put the child under medical care. In this respect her task does not differ from that of any school physician.

There are a good many connections, bridges leading from the primary school and the sphere of the school physician and the teacher into that of the social help union for the young. None better than the teacher and the physician may judge by observation whether a child has in its own home the necessary bodily care; there are children sent to school tired and overworked, without breakfast, in a state of thorough bodily neglect; in other cases it is the moral atmosphere of the house that proves fatal to mental development up to a degree that the question arises whether it is necessary to remove the child from these influences. In these rare cases teacher and physician have to apply to the Union for the Aid of the Young. The case is thoroughly investigated, and when it is found that there is no hope to alter the conditions of the house, a new law permits the union to remove the child and put it under the care of communal institutions or in another family. I may add that this new law is applied seldom and only in extreme cases; for there is one thing which can atone for many mental dangers of the house, and which not even the best public education can give—the love of a mother. Even if it seems unreasonable and fallacious, it gives warmth and may lessen the bad effects of the ethical surroundings.

The work of the woman physician to schools is not an easy one; it requires a woman with open eyes and clear judgment and a good deal of tact and good breeding; besides, she must have some knowledge of and connection with other social institutions. But among our German women physicians there are a good many who fully satisfy these requirements.

Another institution for the benefit of the young, where in future the woman physician may take an active part, is the juvenile courts; as in your country, these tribunals follow the aim to put education in the place of punishment, though there may be a difference in some details. It is easily understood that in the judicial proceedings against young female delinquents the judgment of a woman doctor, of the school physician, taught in

neurology, may be of great importance. I have to state that as yet I know of only one case where it has been taken (and has acted for the benefit of the young delinquent—quite recently)—I hope it may be a first step into a prosperous future.

You see, also in our country there are still a good many wishes and hopes for the future; but, all in all, we now have safe ground under our feet.

And though I was only able to give you a summary sketch of the state of things in Germany, I hope you will join me in the opinion—

Wer lang slöppt and flink löppt,
Kümmt ook noch mit!

IS LYING EVER JUSTIFIABLE IN MEDICAL PRACTICE?

By John Hunter, M.B., Toronto.

Judged from the ethical standpoint, only one answer can be given—an emphatic "No." Call a man a liar, and is he not willing to risk serious, if not even mortal injury, in defence of his integrity? Yet when physicians sit down and calmly discuss this question, does not the little word "but," with all its potentialities, obtrude itself here, as in so many other questions in our professional life? "But," are there not conditions when the frank statement of the truth, by the medical attendant, might produce a shock that would have disastrous effects on the patient! "But," is the honor of the family not to be protected from the wayward acts of one of its members! "But," why hang "a sword of Damocles" over the head of the victim of tuberculosis, or cancer, when you can send him away under the impression that "it is a heavy cold settled on the lungs" or "there is a little tumor which you can have removed easily if it grows any larger." It would be an easy task to multiply such questions, but the above will suffice for our purpose.

A mere academic discussion of this subject would prove altogether unprofitable, as it would probably end in as many different opinions as there were men to discuss it. Any answer to it, to carry conviction, must rest upon facts gathered from everyday practice. The statement that there are no cases to be injured by a frank expression of the truth on the part of the physician would doubtless clash with some of our hazy convictions. Let the aged physician go back over his own experience, and is it not absolutely true that the more thoroughly and impartially he investigates the record, the greater will he find the paucity of cases that the truth would have injured in any way? Could he not fill pages with the records of patients who, instead of being injured by the truth, were actually benefited by it—patients, like patriotic soldiers, who met their fate heroically?

Any physician who feels that he is justified in lying to his patients for a humane purpose ought to spend a few months at one of our Southern health resorts. Let him ask patients "far spent" with tuberculosis what they think of the reputation, wisdom or even common honesty of the physicians whose early diagnosis was "a cold settled on the chest." Is it any wonder such

patients become the prey of the avaricious quack, for they feel that they were grossly deceived by their own family physicians? Why it has taken us so long to learn that lying about tuberculosis is simply a culpable crime, is an inscrutable mystery. With the great immunity aseptic surgery furnishes, practically the same statement may be made about "dilly-dallying" with tumors of a suspicious character, that are in a position to be safely removed. What holds true of tuberculosis and cancer holds true in regard to every other disease. If we cannot tell our patients the truth, it is on account of our crass ignorance, avarice, or unwillingness to take the time and trouble necessary to impart some knowledge of the natural history of their diseases. A case in point: A healthy man when at business was seized with quite acute pain in lower portion of abdomen a few hours after a pretty sumptuous breakfast. He rather suspected the meal, but, having some dread of appendicitis, he consulted a well-known physician, who told him that the trouble was due to indigestion in lower portion of bowel; gave a prescription for two pills, to be taken at bedtime, followed by a dose of salts in the morning. Fee, five dollars. The patient met his family physician a few days after, and related his experience. All he wanted to know when ill was that the attack was not appendicitis. He simply sneered at the physician for "giving him something," but said "that was one of the tricks of trade with doctors."

This brings up the question of "always giving the patient something"—the placebo lie. The virtue of drugs properly used is not questioned. We do not give a placebo, or "something," for any virtue in the thing itself. We conjure up an imaginary psychic condition of the patient and prescribe for this. We say, "Oh, they won't be satisfied unless we give them something." How do we know? Have we told them frankly the truth about their case? Until we have done so it is purely an assumption on our part. What a moral uplift it is to the physician himself to give the patient minute instructions about the taking of a "bread pill" ! ! ! It is as true in medicine as in morals that "we reap what we sow." We have taught our patients that the great thing in the healing of the sick is the taking of medicine. Herein have we laid the broad foundation on which the whole brood of patent- and quack-medicine fakers have built. The sick say, "Well, if I send for the doctor he will give me some medicine for the blood, or liver, or kidneys. Why can't I save his fees by taking some of the blood, liver or kidney medicine advertised in the papers?" A bottle of some quack

compound is procured. When physicians stop lying in the way of the placebo, etc., tell patients the actual facts, as far as they can be properly understood, and that the cure of disease and the preservation of health depend almost entirely upon good habits, sunshine, pure air, wholesome food, baths, exercise, sleep, the whole fabric of quack- and patent-medicine will be given a mortal blow. The "giving something" delusion that has taught the public to rely so implicitly on the taking of medicine has built up the millionaire patent-medicine vendor at the expense of the doctor, and to the great injury of the health of the people. Lying in medical practice, as in everything else, begets its own Nemesis.

Remedial Measures.

The cynic may say, "Well, are you obliged to tell your patient all you know?" Certainly not; the greater part of the physician's knowledge is technical, and would be incomprehensible to the patient, and, therefore, useless to him. We know that prognosis is—in many cases at least—very favorably helped by a correct early diagnosis. The cordial co-operation of the patient and friends is our powerful ally in the battle against disease. How can we expect to get this help if we use deception? The more competent the physician is, and the more pains he takes to make an accurate diagnosis, the less tempted he is to resort to deception. The more ignorant and unscrupulous the physician, the more readily he resorts to all the arts of duplicity. We may be told that "we will always have liars in our ranks, the same as every other calling has." This, of course, is true, for the care of the sick is entrusted to men with all the common human frailties, of which lying is one of the most universal and degrading. We are not discussing the common vice, but the professional lie told for a humane purpose. There is growing an ever-increasing consensus of opinion that this form of lying ought to be done away with, and this suggests a problem, viz., as to the best means to be adopted to accomplish this much-to-be-desired result. We must, first of all, have men in medicine who have a profound regard for the truth as an essential Christian virtue; for it would be as absurd to expect to find truthfulness among physicians who regard a lie lightly as it would be to look for honor among unscrupulous politicians. A high standard of literary and technical training. All forms of falsehood and of deception are far more abhorrent to men familiar with the best in literature, art and science than to the ignorant and uncultured. The cultivation of the scientific spirit. One of the

most pernicious influences that affect medical men is the apathy, or want of zeal, begotten by the drudgery of routine work. Invite a distinguished man to give an address at the Academy of Medicine, or other medical gathering, and only a very small percentage of practitioners will attend this scientific treat. The mass are quite satisfied with what little knowledge they have, so long as they can book an extra visit or two that evening. This incessant "wear and tear" impairs the moral fibre, as truly as it does the physical, and to the effects of this drudgery much of the lying and deception in medical practice can be charged. The physician who is zealous in the search for scientific facts spurns falsehood and deception. Herein is a great field for the medical journalists and for our medical leaders. Let the former, by "line upon line, line upon line," and the latter, by "precept upon precept, precept upon precept," seek to kindle within the minds of readers and students an insatiable thirst for the truth, so that when physicians have formed their opinions they can afford to stand by them "with good-natured inflexibility, the more so when the cry of voices is against them."

Let editors and teachers give the same admonition to readers and pupils that Polonius gave to his son Laertes:

> "This above all: to thine own self be true;
> And it must follow, as the night the day,
> Thou canst not then be false to any man."

Selected Article.

THE CLINICAL FORMS OF ARTERIO-SCLEROSIS.

By Professor H. Huchard, M.D.,
Of the Faculty of Medicine of Paris.

Although the question of arterio-sclerosis has been under discussion for the last forty years, it is still far from settled, as has been shown by various recent contributions. This is because it is one of the questions that are not based on any exact definition on which observers can come to an agreement. If, as I suggested, there are few contradictory data but many contradictors, this may be ascribed to the fact that some observers regard arterio-sclerosis merely as an anatomical lesion, and do not pay the clinical evolution the attention it deserves.

To hold that the disease is constitutional and at the same time that it is limited to the smaller blood-vessels, or to admit that it invariably commences by endarteritis or mesarteritis, is both to unduly narrow and also to unduly enlarge its scope. To confuse it with atheroma is to take the lesion for the disease. Then, too, to maintain that we may hope to learn the pathogenesis of arterio-sclerosis by experiments with agents that heighten arterial tension is to ignore the fact that hyper-tension is in no wise a necessary accompaniment of arterio-sclerosis, overlooking the fact that we meet with cases of arterio-sclerosis which run their course with a lowered tension (intestinal arterio-sclerosis).

To assert on the other hand that arterio-sclerosis is under the dependence of the nervous system, in other words, a trophoneurosis, appears to me to be begging the question by mixing up the pathogenesis with the etiology.

Let us turn now to hypertension, which is so often invoked as a cause of arterio-sclerosis. Whatever its importance may be it is far from being the *primum movens* of arterio-sclerosis in the sense of being directly a consequence of the intoxication, and therefore the underlying influence in determining the clinical course of the disease. Arterial cardiopathies commence with intoxication, they continue with intoxication, and they end with intoxication. Without overlooking the manifold and grave dangers associated with hypertension, I hold that it does not explain

the whole symptomatology of arterio-sclerosis in which the disturbances due to the intoxication, along with the cardiopathy, are the principal factors. When hypertension is consequent upon intoxication, the latter is usually of alimentary origin, no better proof whereof is necessary than the toxic dyspnea, the predominant symptom in arterial cardiopathies, which disappears so readily on milk, or even lacto-vegetarian diet.

With reference to the cases of arterio-sclerosis which run their course in hypotension, it appears to me that the disease is consequent upon what, seven years ago, I called " portal hypertension." These patients suffer from " abdominal plethora " with enlarged liver, are liable to recurrent pulmonary congestion and have a readily dilatable heart. The damaged liver no longer fulfils its antitoxic function, so that toxic substances find their way into the circulation and irritate the walls of the vessels. This stasis and portal hypertension are amenable to abdominal massage, which yields excellent results.

On the strength of Josué's experiments, sundry observers have tried to show that arterio-sclerosis is of suprarenal origin, but my own view is that experiments cannot possibly afford us an explanation of the pathogenesis of arterio-sclerosis, for the simple reason that, although we may succeed in determining an arterial lesion, we cannot reproduce a disease with all its sequelæ. To set up generalized arterio-sclerosis in an animal we should have to inject various predetermined toxins along with the hypertensor agents, indeed, I need not insist on the differences between experimental or spontaneous atheroma and arterio-sclerosis. Atheroma remains limited to the large trunks and medium-sized vessels, whereas arterio-sclerosis, a disease of intoxication, affects especially the viscera. This difference in the lesions explains how it is that atheromatous patients remain vascular subjects with a minimum of symptoms, whereas the subjects of arterio-sclerosis promptly become " visceral " subjects, and are exposed sooner or later to the gravest toxic accidents.

Of some 15,000 cases that I have collected, I have carefully investigated 1,980, with the following results: The most frequent etiological factor was gout and its manifestations, gravel lithiasis (393 cases); then rheumatism (254 cases); syphilis (237 cases); alimentary habits (205 cases); and tobacco (188 cases). There were 57 cases following infective diseases, diabetes (51 cases); alcoholism (31 cases); malaria (23 cases); and the menopause (21 cases). Moral and nervous causes only accounted for 19 cases.

Whatever we may think of the value of statistics, these have

an eloquence of their own. They show that tobacco, syphilis and alimentary habits cannot be discarded, as certain authorities would have us do, from the etiology of arterio-sclerosis. The present confusion on the subject of arterio-sclerosis is especially due to authors not having sufficiently defined the limits of the disease, which they seek to describe on the strength of its anatomical characters rather than by its clinical characters. If we keep to the clinical aspect we shall recognize three principal forms of cardiac-sclerosis—cardio-renal, which is the most frequent; cardio-sclerosis of myovalvular origin; and sclerosis of the cardio-bulbar type (Stokes-Adams' disease).

With regard to its clinical course, cardio-sclerosis may be divided into four stages: a first stage characterized by heightened arterial tension of toxic origin (pre-sclerosis); a second, cardio-arterial stage with cardiac degeneration; a third, mitro-arterial, and a final stage, which may be wanting, characterized by disturbances due to cardiectasis.

The dominant symptom during the pre-sclerosis stage is hypertension, presumably of renal origin; this prepares the way for, and causes, the vascular lesions of arterio-sclerosis. At this stage the arterial lesions are reduced to a minimum, so that the disease is perfectly curable. This stage is characterized by hypertension, visceral meiopragia and intoxication, the last-named being consequent upon renal insufficiency, which is the constant and early symptom of arterial cardiopathies, even in the absence of albuminuria. The painful symptoms comprise angina pectoris, rheumatoid pains in the limbs, side stitch and intercostal pain, the arterio-spasmodic origin of which is shown by the success of the vaso-dilatation treatment inaugurated by Weber and Jaquet.

Towards the end of the first stage cardio-sclerosis is accompanied by tachycardia and arhythmia. This tachy-arhythmia is soon accompanied by a *bruit de galop*, which is not easy to distinguish in consequence of the rapidity of the heart-beat. Then, too, there is alimentary toxi-dyspnea, which must not be mistaken for uremia. The latter does not disappear rapidly, as does the dyspnea of cardio-sclerous patients on a suitable diet.

This brings me to speak of the asthma and emphysema which it used to be thought might determine asystole by dilatation of the right heart, but personally I have never seen asystole follow asthma or emphysema. Asystole only supervenes in asthmatic, emphysematous subjects who have developed arterio-sclerosis. The heart only becomes dilatable in consequence of pre-existing myocardiac lesions.

In the myovalvular form, in addition to the arterial lesions, we get lesions of the aortic or mitral valves. Clinically, this form manifests itself by the same toxic or meiopragic phenomena. The mitral lesion may lead to narrowing or insufficiency of the auriculo-ventricular orifice, a tolerably frequent consequence. In order to be enabled to distinguish the physical signs of mitral stenosis, it is necessary to lower the aortic tension by rest, diet and hypotensive medication, and to slow the heart by giving digitalis. We then detect doubling of the second sound, attenuated and intermittent, presystolic *roulement* and diastolic snoring, as in all arterial cardiopathies. The functional disturbances are here of capital importance for mitral stenosis, itself productive of dyspnea, is doubly so when complicated by arterio-sclerosis.

Mitral stenosis in the subjects of arterio-sclerosis is accompanied by symptoms which are not met with in pure mitral stenosis, they being consequent on the extension of the arterio-sclerosis to various organs and tissues. I need not insist on aortic stenosis and insufficiency, but it must not be forgotten that it is not the aortitis that does the harm in aortic insufficiency in the subjects of arterio-sclerosis, but the kidney, which by the imperfect discharge of its functions favors the production of toxic disturbances. The disease is in the heart, but the danger is in the arteries, and especially in the kidney.

Arterio-sclerosis may be of aortic origin, as in syphilitic arterio-sclerosis, and it may remain for some time apparently a merely local disease, which, however, in the course of months or years, is followed by the usual symptoms of arterial cardiopathy.

Many physicians attach great importance to the sinuosity and hardness of the temporal artery as a sign of the existence of arterio-sclerosis, but this state of the temporal artery is met with in pure hypertension without any vascular lesion, or it may be due to atheroma without concomitant arterio-sclerosis. Cerebral hemorrhage again has been put forward as a consequence of arterio-sclerosis, but it only occurs when the disease is complicated by interstitial nephritis.

Then, too, we must distinguish between the senile heart and the arterio-sclerous heart, for the proliferation of connective tissue that takes place in the cardio-vascular system of the aged presents many points of difference with that of arterio-sclerosis.

With regard to the therapeutical indications, I need only remark that during the first stage, that of so-called pre-sclerosis, we must deal with the intoxication of renal origin and the hyper-

tension, the former by milk or lacto-vegetarian diet, and the administration of diuretics; theobromine and thyminic acid; the latter by massage, muscular gymnastics, carbo-gaseous baths and vaso-dilators.

In the second stage milk diet is *de rigueur*, or we must, at any rate, reduce the introduction of alimentary toxins to a minimum

In the mitro-arterial stage we must enjoin milk diet and the administration of theobromine and digitalis, diminishing the amount of liquids. At this juncture I should like to enter a protest against the abuse of certain drugs, which are only indicated at the end of the first stage and during the second stage, such as iodide of potassium, anti-sclerous serums, and certain mineral waters.—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, AND BREFNEY O'REILLY.

Ontario Experience of Vaccination.

[From Dr. Charles Hodgetts' interesting booklet on Vaccination, we extract the following article.]

In concluding this important part of the subject, I would sum up my experience of twenty years' work in Ontario, during which time, either personally or through the aid of assistants, over 40,000 vaccinations have been performed, and often in the most unsanitary conditions. I have never known a fatality follow vaccination; I have never seen a life in jeopardy by reason of the inoculation of vaccine, and I have yet to see the first case where illness of either a temporary or permanent character could be ascribed to glycerinated bovine vaccine. Further, in those cases where any illness has followed the operation, it has always, in my experience, been due to contributory negligence allowing of a secondary infection, which could have been prevented had the sufferers observed even the elementary principles of cleanliness, and in the majority of cases a simple abrasion of the skin minus the vaccination would have been followed by precisely similar conditions.

During these years many opportunities have presented themselves to study the question in all portions of the province in outbreaks attended with a mortality rate rivalling any of the serious epidemics of history, as well as in others in which the mortality has been as low as any on record. The immunity to the writer has come from a primary infantile vaccination, a revaccination before the twelfth year of life, both with humanized lymph, and from subsequent revaccination—and to this fact alone is due the immunity he possesses.

During this time over five thousand cases of smallpox have been examined, and several hundred treated personally by the writer, and in not a single instance has the disease been seen in a person presenting a typical vaccination scar, the result of a primary vaccination within seven years of the attack of

smallpox; and no instance has presented itself where the patient had ever been revaccinated—while on the other hand, in hundreds of families, the immunizing effects of vaccination have been exemplified, in perfectly protecting those vaccinated against smallpox.

During these years I have only met with one example of a person being apparently a natural immune. Again, I have repeatedly seen the vaccinated father and mother nurse a family of unvaccinated children through weeks of smallpox, without themselves contracting the disease, even in a modified form, although that one vaccination had been made in the case of many parents more than forty years before.

In the schools of the province several instances have occurred where the pupils of a form have all been exposed for days to the infection of smallpox, and the disease has attacked only the unvaccinated scholars.

During the epidemic which prevailed some five years ago in New Ontario, chiefly among the shantymen, a staff of fifteen officials were exposed daily for more than two months to smallpox, but in no single instance did any of these officials, all of whom were revaccinated before engaging in the work, contract smallpox.

In one camp which had to be quarantined owing to a case of smallpox having occurred therein, all the employees (forty-six in number) but one were immediately vaccinated, the one who refused stating he was prepared to swear he had been vaccinated, and also had suffered from smallpox, although no evidence of either vaccination or smallpox could be found. Under these conditions he was allowed to pass unvaccinated. The forty-five proved immune to the disease, while the one ignorant and conscientious (?), but unscrupulous objector developed smallpox, and within three weeks of my visit died a horrible death, an object-lesson to all of the same ilk.

Dilute Renal Excretions.

Macallum and Benson undertook to solve the question as to the filtration or secretion theory of the formation of urine by analyzing the dilute urine produced by drinking large quantities of water. They reason that if the production of urine is due simply to filtration, such urine having passed through the tubules too rapidly to be modified by reabsorption should contain the inorganic salts in the same proportion as does the blood plasma. They found, however, that the relative value of potassium and chlorin is never that which obtains in the blood plasma, and is

usually much greater than that which is obtained in the concentrated urine, formed immediately before the experiment began. This increase in the value of potassium as related to chlorin is due to a "lag" in the diminution of the secretion of the potassium, as compared with that of the chlorin during the decrease in the concentration. This lagging behind, or "hysteresis" may be found again, though not always, when the urine begins to increase in concentration, the value of $\frac{K}{Cl}$ then falling because the potassium slowly, and the chlorin (especially of sodium chlorid) rapidly, increases. In some cases, notably toward the end of a series, the rate of the excretion of the potassium, relatively to the chlorin, may rapidly increase or rapidly decrease. The elimination of water is due not to filtration, but to the physiologic activity of the renal membranes involved in the elimination. The removal of potassium salts and of chlorids from the blood by the kidneys is due not to filtration, but to forces which may be termed "secretory," that is, it is caused by an activity which is apparently selective, or differential, but which may be explained as due to difference in solubility of the different inorganic constituents relatively or absolutely, or both relatively and absolutely, would be altered by changes in the constitution of the membrane brought about by the action on it of unusual constituents of the plasma or of constituents of unusual proportions.—*Jour. Biolog. Chem.*, May.

Ice Test for Vascular Reactions.

Josué and Paillard have been seeking a test for reactions on the part of the vessels less fatiguing than the tests by severe muscular exertion or extensive application of heat or cold, and claim that their new ice test is a simple and reliable means for ascertaining the functional capacity of the blood vessels. It consists merely in the application of a piece of ice to the bend of the elbow; the patient is reclining with the arm exposed and the palm up, and all the muscles of the arm relaxed. Every two minutes the pulse is counted for a quarter of a minute, after which the arterial pressure is recorded with a mercury sphygmomanometer (the modified Potain apparatus). The pulse and arterial tension are thus recorded three times in turn at intervals of two minutes. After an interval of another two minutes the ice is then placed in the bend of the elbow. The pulse and tension are recorded again the moment the ice is applied and again after two, four and six minutes. After two

more minutes the ice is removed, the skin wiped and the pulse and tension are recorded again after two, four and six minutes. The ice must not exert pressure on the arm which would interfere with circulation, but must be held. Among 100 persons to whom this test was applied, it was easy to distinguish the arteriosclerotics and the tuberculous, as in them the reaction always differed so decidedly from normal. With normal conditions in the arterial system, the arterial pressure adapts itself to the influence of the ice, and there is no modification in the pressure, but the pulse varies, or the pressure may vary and also the pulse, but always according to Marey's law; namely, that the pulse grows slow as the pressure increases and faster as the pressure diminishes. In case of functional incapacity on the part of the vessels the pulse does not vary, but the pressure fluctuates, or both fluctuate contrary to the Marey law. This abnormal reaction occurs frequently in arteriosclerosis, especially with involvement of the aorta. The same abnormal reaction occurs also in tuberculosis, but with the difference that the pressure declines progressively during and after the application of the ice, while in arteriosclerosis the pulse remains stable, while the pressure drops, but the latter rises again as the ice is removed. Among the practical points learned by this test is that arteriosclerotic patients presenting normal curves with the ice test have a more favorable prognosis. The test also throws light on the mechanism and action of digitalis in heart disease amenable to digitalis. The ice test further refutes the common assumption that the arterial pressure keeps at a constant level in the individual; on the contrary it is liable to vary within wide limits even from mere emotions. This shows the necessity for caution in ascribing to the effects of treatment any reduction in the pressure observed afterward. Twenty-five typical curves are given to show the reaction in various conditions. One curve shows remarkable fluctuations in the pulse, while the pressure was practically stable; this subject was a healthy girl of 18, very emotional.—*Arch. des Mal. du Coeur.*

Editorials.

THE INTERNATIONAL COUNCIL OF WOMEN.

The series of important meetings held recently in Toronto was marked by an earnest and thorough discussion of many problems of preventive medicine and public health. The water supply, the milk supply, the training of nurses, infant mortality, factory legislation, housing, and pure food were among the subjects upon which the delegates spent most time and in which they showed most interest. Indeed, so much was this the case that the medical ladies among the delegates, many of whom naturally wished to see the Toronto hospitals and to enquire about medical matters in that city, found it difficult to do so, because the chairmen of their sections were unwilling to give them leave of absence. "You are our experts," said the ladies thus clothed with authority, "and we must have your advice on these matters. We cannot do without you." However, it was arranged so that brief visits were paid to the General Hospital and the Children's, and also, by the kindness of Mr. John Ross Robertson, to the unique and beautiful "Lakeside," where afternoon tea and a cordial welcome awaited the delegates every day for a week.

The medical delegates not only added greatly to the dignity and success of the meetings; they also preserved the Congress from pitfalls on more than one occasion so skilfully that even our respected contemporaries, the daily press of Toronto, never knew that something nearly happened. Stealing an opportunity, one of the speakers none too wisely threw down the gauntlet and, dropping her disguise, appeared as an anti-vivisectionist. The chairman sent for assistance, and, acting under medical advice, applied the closure so swiftly that no harm came of it. At another meeting another still more difficult subject arose, in which the lay point of view and the medical point of view are apt to be mutually exclusive. The chairman, who happened this time to be a medical lady, decided that "this important matter should be referred to the executive," and the danger of an unwise debate passed. (It is a pity this does not happen oftener.)

Never before, probably, have the medical women of Toronto spent a happier fortnight. Charming professional sisters from Berlin, from Stockholm, from Hull, from Brighton, from New York and elsewhere, bore well their part, not only in the business but in the social events of the Congress. The able paper from the pen of Dr. Tiburtius, which we print elsewhere, is worthy to be regarded as an example of the papers on medical subjects, and at the same time shows the high standing and the real progress and service which the medical women of the world are attaining.

THE CANADIAN MEDICAL ASSOCIATION.

The 42nd Annual Meeting of the Canadian Medical Association will be held in Winnipeg, August 23, 24 and 25, under the presidency of Dr. R. J. Blanchard.

Members are directed to purchase first-class tickets to Winnipeg for themselves and their families, paying single fare (plus 25 cents for a standard convention certificate).

These certificates should be placed in the hands of Dr. C. H. Vrooman, Winnipeg, at the transportation office. When signed by him they will entitle the holders to reduced transportation on return journey. East of Port Arthur, if fifty are present with certificates, return will be free.

Single fare to Winnipeg from towns in Ontario between Windsor and Toronto, inclusive, is $26.05; from Ottawa, $32.60; from Kingston, $30.95; from Peterboro, $27.95; from Montreal, $36.00; from Quebec, $40. On Upper Lakes $4.25 additional each way.

Tickets going and returning via Chicago.—Arrangements have been made for tickets routed via Chicago and Northwestern Railway for ten days' stop-over at Rochester, Minn., on payment of $1.75 extra fare St. Paul to Rochester.

The annual fee for membership is $5.00 this year, which should be paid to the Treasurer, Dr. H. B. Small, of Ottawa. Those who wish to become members shounld apply to the General

Secretary, Dr. George Elliott, 203 Beverley Street, Toronto, or in the office at the meeting.

The annual meeting of the Canadian Medical Association will be held on the afternoon of Wednesday, August 25th, when the President, Dr. R. W. Powell, of Ottawa, will submit his report.

From the provisional programme which has been issued we learn that many papers have been promised. In addition to the general sessions there will be sections for medicine, surgery, obstetrics and gynecology, ophthalmology and oto-laryngology, and pathology.

The reading of all papers will be limited to fifteen minutes each; discussions, five minutes. Abstracts of papers should be in by August 1st. Address same to Dr. Harvey Smith, Canada Life Building, Winnipeg.

THE NEW HOSPITAL AND UNIVERSITY OF TORONTO.

We are told by the lay press of Toronto that a certain agreement has been arrived at between the Governors of the University of Toronto and the General Hospital Board. The University will secure the southwest portion of the new hospital site for Medical Buildings, and make an annual payment of something like $15,000 to the hospital for forty years.

In return, the chief Professors of Medicine and Surgery are to be entitled to be heads, each of one service in the hospital, and also the heads of the special departments in the hospital are to be filled by the chief professors in corresponding departments in the University. Other appointments in the hospital are to be made on the recommendation of a joint committee, consisting of four members of the Board of Governors and four members of the Hospital Board.

In substance, therefore, the proposed change is that the University becomes entitled as a right to have her chief professors appointed as heads of the several special departments, and her chief professors in medicine and surgery as heads of two of the

six services in the hospital. The University is entitled by statute and agreement to avail herself of the clinical facilities of the hospital for teaching purposes.

It is expected that the new hospital, according to present plans, will cost approximately $2,200,000. The amount of cash and subscriptions to date is about $1,200,000. As to the balance, it is expected that the old hospital property will bring about $300,000, and the agreement between the University and Hospital can be used as collateral security for at least $300,000 more.

Our statements as to this agreement are founded on an article which appeared in the *Toronto News*, July 2nd.

THE OLD HOSPITAL PROPERTY.

Many suggestions have been made respecting the use to be made of the present General Hospital property after the new hospital is erected on College Street.

Some think it is likely to be used as a Roman Catholic institution by the removal there of the present House of Providence. Others think it will be formed into a hospital for special treatment of nervous diseases, etc.

A number of physicians and surgeons, especially in the eastern part of Toronto, think it should be retained as a General Hospital to supply the needs of the eastern part of the city, which is growing very rapidly. Those who favor this scheme say that the new hospital will not accommodate more than 450 patients, which is only fifty more than the present buildings can accommodate. They say the Western Hospital is overtaxed, Grace is filled and St. Michael's has no more room. Therefore, a hospital for the east end will be absolutely necessary within a comparatively short time. Considering the rapid growth of the city, which appears likely to continue for some years to come, we believe that those who think the city will soon require more hospital accommodation are correct.

INTER-PROVINCIAL RECIPROCITY.

We clip the following letter from the *Western Canada Medical Journal:*

To the Editor of the Western Canada Medical Journal:

Dear Sir,—Thirty years ago, more or less, I attended a meeting of the Dominion Medical Association, where I heard the subject of Dominion Registration discussed and finally referred to a committee with instructions to report the following year:

Eleven years passed before I had the privilege of again attending a meeting of the same Association, when the subject was again discussed and again referred to a committee.

I have good reason to believe, during these eleven years and for about eleven years after my second meeting, Dominion Registration was a hardy annual, coming up at every meeting, having a year's rest in committee and bobbing up at the next with unfailing regularity.

Then came Dr. Roddick with his bill and we all hoped. It was a good bill. Dr. Roddick put into it, and the effort to make it effective, years of arduous work, and intellect of a high order, and energy and influence which would almost have served to ensure success, but at the last it was balked by the jealousies and rivalries of the educational institutions of Ontario and Quebec. And so we settled down to the *status quo,* hoping for something to turn up, but pretty well despairing of realizing the ideal.

The last couple of years, we in the West have thought it possible that we might have a partial sort of Dominion Registration (a misnomer of course) by an arrangement of the four Western Provinces to have a common examination and a common registration—that is, one examination for the four provinces, the passing of which would entitle one to be registered in any of them on payment of the prescribed fee.

It would seem that there could be no valid objection to such a scheme, but during my tenure of office as president of the Alberta Medical Council, when tentative propositions were made in this direction, one province agreed to the principle only if registration were made retroactive, and another turned it down altogether.

Perhaps because I am by nature optimistic I still believe that there is a strong sentiment through the mass of the profession that the present situation savors more of the petty jealousies of little parish councils than of the standing and dignity of a

learned profession, and that there should be found some way of at least bettering the condition of affairs which is a continuous reproach to us as a body of intelligent and educated men.

I venture, therefore, to make a suggestion:

I believe that one of the difficulties—perhaps the main one—has been that we have wanted to legislate for ourselves. We have wanted reciprocity, or a common registration, because we might want to practise in another province by ourselves. Suppose that we sink the idea of self altogether, and try and make it better for those who come after us. Let our status remain as it is, or if we want to practise in another province, pass the prescribed examination—if we can.

But from now on, is there any earthly reason why there should not be one examination for the four Western provinces, held simultaneously, say at Winnipeg, Regina, Calgary or Edmonton and Victoria, the passing of which would enable a man to practise in Manitoba, Saskatchewan, Alberta and British Columbia on payment of the registration fee? Such an examination conducted by the best men in the four provinces would command respect. It would ensure British recognition. It would remove a standing reproach, and—who knows?—it might almost bring about Dominion Registration.

You have always taken a keen interest in matters such as this, and the Journal reaches probably more of the men living in the four provinces than any other. May I hope, then, that you will give my proposal your serious consideration, and if it seems good and feasible to you, present it to your readers with more debate and argument than can be compressed in the scope of a letter.

I have still another suggestion. The Dominion Medical Association meets in Winnipeg next summer, and it would seem to be an opportune time for a meeting of, say two representatives from each of the four Medical Councils to discuss the matter, and if possible arrive at some basis of agreement. There are now six months to work in, and it ought to be possible in that time to find out whether the plan proposed finds favor in the eyes of the profession in the West.

Yours truly,

Macleod, Alta. G. A. KENNEDY, M.D.

The above letter speaks for itself. We are heartily in accord with its spirit. However, the Medical Council of British Columbia are really not anxious for reciprocity; at least they were not a short time ago, as they rejected a proposal from the On-

tario Medical Council to jointly consider a means of arriving at reciprocity. During July a committee met, at Vancouver, B.C., composed of representatives of the Medical Councils of Manitoba, Saskatchewan, Alberta and British Columbia, to discuss reciprocity between these Provinces. The Ontario Medical Council, at its session in July, at the request of the Medical Council of Manitoba, appointed a committee composed of Doctor Spankie, of Wolfe Island, and Dr. Ryan, of Kingston, to meet a committee of the Medical Council of Manitoba in Winnipeg during the meeting of the Canadian Medical Association. We sincerely hope that some means may be devised to secure the much-desired reciprocity.

NOTES.

The International Congress of Nurses was held in London, Eng., July 20th to 23rd.

The sixty-seventh Annual Meeting of the British Medical Association was held in Belfast, July 27th to 30th.

The members of the International Council of Nurses visited Windsor, July 24th, and by the gracious permission of His Majesty King Edward, Miss Snively, President of the Canadian National Association of Trained Nurses, placed a wreath on Queen Victoria's tomb at Frogmore.

The authorities of McGill University received on Dominion Day a cablegram from Lord Strathcona, announcing a donation from him of $500,000 towards the funds of the University. Of this amount, $450,000 is to be used for completing the new Medical Building, and the remaining $50,000 towards the augmentation of the salaries of professors. Lord Strathcona's total benefactions to McGill University amount to over one million dollars.

The annual meeting of the Niagara District Medical Association was held in Welland, July 1st. Dr. Llewellyn F. Barker, of Johns Hopkins, delivered an interesting address on "New Methods of Diagnosis in Diseases of the Heart."

The following officers were elected: President, Dr. Frank W. E. Wilson, of Niagara Falls; Vice-President, Dr. J. Sheahan, of St. Catharines; Secretary-Treasurer, Dr. N. Walker, of Niagara Falls.

University of Toronto, Medical Examinations, Fourth Year.

The following are the results of the fourth year examinations in medicine for the University of Toronto:—

Final examination—Degree with honors—1, W. J. M. Marcy; 2, F. J. O'Connor; 3, R. McTavish.

Medals—Gold, C. B. Parker; silver, 1, W. H. Tytler; 2, W. J. M. Marcy; 3, A. G. Brown.

Graduates in arts, in natural sciences or in the biological and physical sciences—H. W. Baker, I. R. Bell, H. R. Holme, W. L. C. MacBeth, A. B. Macallum, C. B. Parker, R. S. Pentecost, E. A. Rae, L. B. Robertson, L. J. Solway, C. R. Totton, W. H. Tytler, N. J. L. Yellowlees.

Group I.—Medicine, clinical medicine, pathology and therapeutics—1. C. B. Parker; 2, W. H. Tytler; 3, F. J. O'Connor; 4. W. J. M. Marcy; 5, C. A. Harvie.

Group II.—Surgery, clinical surgery, surgical anatomy and pathology—1, C. B. Parker; 2. J. A. Johnston; 3, R. McTavish; 4, W. J. M. Marcy, W. H. Tytler; 6, C. A. Harvie.

Group III.—Obstetrics, pediatrics, gynecology and pathology —1, W. J. M. Marcy; 2, C. B. Parker; 3, W. H. Tytler; 4, C. A. Harvie; 5, R. H. Thomas; 6, F. J. O'Connor; 7, R. V. B. Shier; 8. L. A. Douglas; E. A. W. Morgan; 10, G. N. L. Earle; R. D. Lane; 12, J. H. McIntosh; 13, H. R. Holme; 14, I. R. Bell, J. A. Johnston; 16, J. R. Christian; 17, R. McTavish.

Group IV.—Medical jurisprudence, toxicology, hygiene and psychiatry—1. A. G. Brown; 2, R. D. Lane; 3, R. H. Thomas; 4, C. B. Parker; 5, W. F. M. Adams, W. H. Tytler; 7, J. L. Graham; 8, J. R. Christian, G. J. Whetham; 10, W. W. Terman, W. S. Verrall; 12, A. E. Sutton; 13, H. M. Clarke; 14, L. B. Robertson; 15, R. McTavish.

Fourth year—Pass—G. W. Anderson, C. F. Atkinson, G. O. Barclay, G. Belfie, J. S. Boyd, R. W. Breule, R. J. R. Bright, N. E. Culbertson, J. D. Cunningham, D. V. Currey, R. E. Davis, W. Davis, T. A. J. Duff, E. J. Eacrett, W. M. Ecclestone, H. H. Eady, S. Ellis, H. G. Emerson, H. B. Ewens, E. S. Fish, V. S. Francis, J. C. Gandier, J. R. Gibson, G. A. Glionna, C. W. Graham, G. C. Gunn, M. J. Haffey, B. Hannah, E. C. Harris, E. K. Henderson, B. H. Hopkins, W. Jamieson, D. B. Jamieson, W. G. Leggatt, R. W. Lynn, R. O. Miller, H. H. Moshier, K. M. Murray, C. J. McBride, D. McCaffery, W. L. McCullough, R. J. McEwen, S. F. McEwen, J. A. McInnis, W. T. McLean, J. D. McPhee, A. E. Naylor, S. W. H. Nelson, G. B. New, H. M. Nicholson, K. J. O'Neill, T. S. Orr, T. W. Peart, W. C. Pedlar, W. G. Penney, G. R. Philip, J. W. Pilcher, Miss B. T. Pullan,

J. N. Richards, L. A. Richmond, W. L. Ritchie, F. N. Robertson, W. H. Robertson, N. W. Rogers, J. A. Simpson, W. D. Slater, Miss J. Smillie, F. C. D. Smith, J. G. R. Stone, H. A. Taylor, N. Telford, N. L. Terwillegar, W. M. Thomas, J. T. Thomas, H. L. Turnbull, V. L. Turrill, G. H. Wallace, E. R. Wells, L. B. Williams, J. S. Wray, D. A. Campbell is granted ægrotat standing of the fourth year.

A number of students are required to pass supplemental examinations in the subjects mentioned against their names in a list given below.

Success in Supplementals.

The following students have completed supplemental examinations in the following subjects: Medicine—J. J. Field. Clinical medicine—J. E. Haight, G. W. Ross. Surgery—J. A. Campbell, J. J. Field, R. E. Humphries, R. R. Walker. Clinical surgery—R. L. Hurst. Pathology—R. E. Humphries. Gynecology—J. J. Field, C. F. W. Ross, A. A. Thompson, R. R. Walker. Ophthalmology, otology, laryngology and rhinology—A. A. Thompson.

Must Pass Supplementals.

The following graduating students are required to pass supplemental examinations before completing the fourth year in the subjects named: Medicine—D. V. Currey, W. M. Eclestone, S. Ellis, H. B. Ewens, J. R. Gibson, C. W. Graham, G. C. Gunn, D. B. Jamieson, Miss M. Morden, K. M. Murray, W. L. McCullough, W. T. McLean, S. W. H. Nelson, H. M. Nicholson, G. R. Philp, J. N. Richards, W. L. Ritchie, N. W. Rogers, Miss J. Smillie, J. G. R. Stone, N. Telford, J. T. Thomas, G. H. Wallace, E. R. Wells, L. B. Williams.

Clinical medicine—G. W. Anderson, W. M. Ecclestone, S. Ellis, H. B. Ewens, G. A. J. Glionna, C. W. Graham, B. Hannah, W. Jamieson, K. M. Murray, W. L. McCullough, W. T. McLean, I. D. McPhee, S. W. H. Nelson, H. M. Nicholson, W. G. Penney, W. H. Robertson, N. W. Rogers, W. D. Slater, Miss J. Smillie, J. G. R. Stone, N. Telford, J. T. Thomas, E. R. Wells, L. B. Williams.

Surgery—G. C. Gunn, R. O. Miller, W. T. McLean, J. D. McPhee, S. W. H. Nelson, H. M. Nicholson, E. R. Wells.

Pathology—H. B. Ewens, G. C. Gunn, D. B. Jamieson, J. N. Richards, W. L. Ritchie, N. W. Rogers, H. A. Taylor.

Hygiene—N. Telford.

Pediatrics—G. A. J. Glionna, B. Hannah, R. O. Miller.

Ophthalmology, otology, laryngology and rhinology—S. Ellis,

J. R. Gibson, G. A. J. Glionna, C. W. Graham, G. C. Gunn, W. L. McCullough, H. M. Nicholson, W. G. Penney, W. D. Slater, J. G. R. Stone, H. A. Taylor, J. T. Thomas, G. H. Wallace, E. R. Wells.

Clinical surgery—J. R. Gibson, W. Jamieson.

Obstetrics—H. H. Moshier, H. M. Nicholson, G. R. Philp, W. L. Ritchie.

Ontario Medical Council.

The following candidates passed the recent examinations of the Ontario Medical Council:

Primary.

Charles C. Alexander, Ivan E. Annett, Albert H. Baker, Harold R. Barker, Newton J. Barton, Cecil C. Birchard, Richard Blanchard, William O. Bonser, Frederick Boyd, Franklin C. Bracken, John C. Bradley, Lawrence F. Brogden, Frederick T. Bryans, Fred. S. Burke, Harry W. Benson, John A. Campbell, William C. Campbell, William R. Cann, Duncan Carmichael, Geo. W. D. Carleton, John P. S. Cathcart, William E. Caven, Stanley G. Chown, Neil A. Christie, John R. Christian, William A. Claxton, Llewellyn H. Coates, Morley G. Cody, William M. Cody, Hugh M. Cooke, Leo J. Corrigan, William E. Cruickshank, Stella A. Cunningham, Robert D. Defries, David L. Dick, Roy D. Douglas, Archibald S. Duncan, Charles F. Dumfield, Allan S. Eagles, Harry G. Emmerson, Edgar V. Emery, Donald T. Evans, Ronald M. Fergusson, David J. N. Ferrier, Susie L. Fotheringham, Carlos L. Fuller, Harry G. Furlong, Thomas M. Galbraith, John A. Gardiner, Nelles T. George, William O. Gliddon, Howard Gordon, Raymond Gorssline, Lawrence O. Griffin, Richard E. Guyatt, Louis G. Hagmeier, Walter R. W. Haight, John F. Hagmeier, Gordon M. Hanna, Alfred P. Hart, Horace H. Harvie, Clarence W. Henders, George L. Hodgins, Philip H. Huyck, Gordon Hyland, Cecil G. Imrie, Lloyd A. Jones, Dennis Jordan, James V. Jordan, Ephriam E. Kells, Charles B. Kelly, James K. Langford, William James Leach, Arthur V. Leonard, Maurice Levy, Oliver R. Mabee, Archie Macdonald, Ewen A. Mackenzie, Lloyd P. MacHaffie, William J. Mackenzie, William Mainprize, William Geo. Martin, John LeRoy Mavety, Elmer W. Mitchell, Herbert B. Moffatt, James K. Mossman, Giles B. Murphy, Chas. J. McCabe, Albert M. McCormick, John F. McCracken, Gordon L. McFarlane, Edwin Henry McGavin, Thos. C. McLaren, Archie McMurchy, John Albert McPherson, Robert

Dick Orok, Bryson C. Patterson, Henry H. Pirie, Albert Gower Poole, George Wesley Pringle, Byron C. Reynolds, Ernest A. Richardson, Deardon Rigg, James Frederick Rigg, Harold L. Rountree, Frank Ramsay Scott, Norman S. Shenstone, Ross Lester Shields, Charles W. Sinclair, Wilfred Davy Smith, William Wallace Smith, Robt. Scott Smith, Leon Judah Solway, Frank E. Spencer, Elizabeth L. Stewart, Robert Roy Stirrett, James D. Struthers, Dennis Sweeney, Paul Joseph Sweeney, Thomas Snyder, James Thomson, Frank L. Thompson, Sydney E. Thompson, Wilfred Thurtell, William R. Tutt, George Napier Thomas, Merritt C. Vaughan, Ambert H. Veitch, Carl W. Waldron, Marchant B. Whyte, Warren E. Wilkens, William M. Wilkinson, John P. Wilson, Harold C. Workman, Herbert M. Yelland, Norman J. L. Yellowlees, Clarence R. Young, Ernest W. Zumstein.

INTERMEDIATE.

The following candidates have passed the intermediate examination of the Ontario Medical Council: William Francis Adams, Charles F. Atkinson, Gerald Belfrie, Julian S. Boyd, James G. Bricker, James B. Brown, Duncan Carswell, Duncan Carmichael, James Roy Childs, John R. Christian, Hugh M. Cooke, John Donald Cunningham, Leon Alex. Douglas, George N. L. Earl, Harry G. Emmerson, Arthur W. M. Ellis, Stuart M. Fisher, Joseph C. Gandier, James Lorne Graham, John P. Harrison, Charles A. Harvie, Matthew J. Haffey, Charles Gordon Heyd, Herbert R. Holme, Bruce Holmes Hopkins, Joseph Raul Hutubise, Reuben L. Hurst, Edwin F. Jeffries, John A. G. Johnston, Arthur Clifford Johnston, Richard Donald Lane, Robert Wesley Lynn, Oliver R. Mabee, Archie Macdonald, William J. M. Marcy, John H. MacIntosh, Chester N. Mooney, Edward A. W. Morgan, Heber H. Moshier, Giles B. Murphy, James J. F. McCann, William A. McClelland, Robert J. McEwen, Alex. Dunbar McKelvey, Albert M. McCormick, Thomas C. McLaren, Andrew McMillan, Robert McTavish, William McIlmoyle, Archibald E. Naylor, Gordon B. New, Fred. L. Neeley, Fred. J. O'Connor, Robert Dick Orok, Charles B. Parker, Paul Poisson, Osman A. Pogue, James Stafford Quinn, Edgar Rae, Lawrence B. Robertson, George Westlake Rogers, Charles W. Sawers, Norman S. Shenstone, Robert V. B. Shier, Leon Judah Solway, Charles G. Sutherland, Norman L. Terwillegar, Roy Hindley Thomas, William E. Tindale, William H. Tytler, William Gordon Wallace, Rene E. A. Weston, Edward C. Wilford, Francis D. Wilson, Norman J. L. Yellowlees.

Final.

The following candidates passed the final examination of the Ontario Medical Council: Byron E. Biggs, Herbert McG. Bowen, Henry K. Bates, James G. Bricker, James B. Brown, Duncan Carmichael, Hugh M. Cooke, David Wesley Clarke, Duncan V. Carswell, Samuel V. Carmichael, Alex. Douglas Campbell, Andrew L. Campbell, Oliver S. Craise, W. Elmore Cameron, Harry Lloyd Emmett, William R. Fader, Francis J. Folinsbee, Jordan M. Fowler, William F. Fielding, Joseph C. Gandier, John P. Harrison, Charles Gordon Heyd, Herbert R. Holme, Joseph Ravul Hutubise, Reuben L. Hurst, James Graham Harkness, Laura S. Hamilton, Clarence Edgar Hill, Bertrand B. Horton, William Arthur Harvie, Victor S. Kaufman, Joseph M. Kelly, Weston Krupp, John Elwood Keyes, Murray A. McDonald, Oliver R. Mabee, Archie Macdonald, Giles B. Murphy, Charles R. Mackenzie, Allan James MacKinnon, Fuller S. Macpherson, William Mabee, Adam Hume Millar, Albert M. McCormick, Alex Dunbar McKelvey, Thos. C. McLaren, William A. McClelland, Andrew R. McMillan, James A. McGibbon, Leo George McCabe, William Geo. McCulloch, Fred. L. Neely, Robert Dick Orok, Charles B. Parker, George H. Patterson, Osman A. Pogue, Wallace Pratt, Edgar Rae, Lawrence B. Robertson, George W. Rogers, William Alex. Robertson, Allan Ross, Leon Judah Solway, Charles W. Sawers, Norman S. Shenstone, Chas. G. Sutherland, John Masson Smith, William E. Tindale, William H. Tytler, Clarence P. Thompson, William Gordon Wallace, Rene E. A. Weston, Edward C. Wilford, Francis Douglas Wilson, Garnet W. Williams, James Henry Wood, Norman L. Yellowlees.

Personals.

Dr. T. Shaw Webster, of Toronto, sailed for Europe, July 14th.

Dr. Brefney O'Reilly of Toronto sailed from Quebec for Ireland July 24th.

Professor A. Primrose, of Toronto, sailed from New York for Liverpool, July 15th.

Dr. Fred. Grasett returned to Toronto, June 21st, after a three months' visit to Great Britain.

Professor I. H. Cameron, of Toronto, sailed on the *Canada* from Montreal for Liverpool, July 17th.

Dr. Herbert Bruce left Toronto for England July 12th. He expects also to go to Vienna and Budapest.

Prof. John Chiene has tendered his resignation as Professor of Surgery in the University of Edinburgh.

Dr. Samuel Johnston, of Toronto, left on a short holiday in Quebec, July 17th, and returned July 26th.

Doctors A. W. Mayburry and E. Herbert Adams left Quebec for Liverpool on the "Laurentic," June 29th.

Hon. Dr. Reaume went to England in June. After visiting London and Paris he left for a tour through Italy.

Dr. W. B. Thistle, of Toronto, left for the Pacific Coast, July 1st, and will spend the greater part of the month in Seattle.

Dr. A. H. Garratt returned to Toronto, June 17th, after a trip to Bermuda with Mr. H. C. McLeod on the yacht "Ambrita."

Dr. R. M. Coulter, Deputy-Postmaster-General, returned to Ottawa, June 26th, after a six months' trip to Australia and New Zealand.

Professor J. T. Fotheringham, of Toronto, left on a trip to the Pacific Coast, July 14th. On his return he will take in the Winnipeg meeting.

Dr. John McCollum returned to Toronto, June 17th, after spending three years in post-graduate work in London, England, and the continent.

Dr. Oswald Dinnick sailed on the "Megantic" for Liverpool, July 3rd. He expects to remain in London during the summer and return to Toronto in October.

Dr. H. J. Hamilton, of Toronto, sailed on the "Canada" from Montreal for Liverpool, July 17th. After spending some time in England, he will go to Vienna and Budapest.

Dr. R. A. Reeve, of Toronto, sailed from New York for Liverpool, July 1st. After spending some time in London, he will go to the continent and attend the Budapest Congress.

Dr. W. H. B. Aikins and Dr. G. Sterling Ryerson sailed from New York for Hamburg, July 15th. After spending some time in Wiesbaden they will go to Berlin, Vienna and Budapest.

Sir Felix Semon, physician-extraordinary to the King, is about to retire from practice. He was entertained at a banquet given by his professional friends at the Hotel Metropole on July 2nd.

Dr. Jas. F. W. Ross, of Toronto, left for a motor trip through the Northwest Territories, July 11th. He will take in the Winnipeg meeting on his return. He has as one of his guests Dr. Fisher, of New York.

The British Columbia Medical Council struck the name of Dr. William H. Willson off the register because (it was alleged) "he had, while in a state which rendered him unfit to attend any patients, attended a case of confinement, in which the patient died."

Obituary.

P. E. JONES, M.D.

Dr. Jones, ex-Indian Agent of the Mississaugas, died at Hagersville, June 29th. Dr. Jones graduated from Queen's University in 1866. It was chiefly through his efforts that the claims of the Chippewa Indians against the Dominion were admitted.

WILLIAM GREIG RATCLIFFE, M.B.

Dr. W. G. Ratcliffe, of St. Catharines, died of typhoid fever July 12th, aged 31. He graduated in medicine from the University of Toronto in 1899, and practised in St. Catharines from 1902 up to the time of his last illness. He was surgeon to the Niagara, St. Catharines and Toronto Railway, and was a member of the staff of the General Hospital.

Book Reviews.

OXFORD MEDICAL PUBLICATIONS. COMMON DISORDERS AND DISEASES OF CHILDHOOD. By George F. Still, M.A., M.D. (Cantab.), F.R.C.P. (Lond.), Professor of Diseases of Children, King's College, London; Physician for Diseases of Children, King's College Hospital; Physician to Out-patients, Hospital for Sick Children, Great Ormond Street; Honorary Member of the American Pediatric Society. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C. Toronto: D. T. McAinsh & Co.

No book has appeared this year that excels this new work of Still's. Written in a lucid and readable style, the author has given his own opinions and observations, which makes the book very valuable, in striking contrast to the volumes which appear on this side of the Atlantic, compiled chiefly by means of the scissors and mucilage pot. Every subject considered is treated in a thoroughly scientific manner by a man who is a teacher, and who has the faculty of making things clear.

HYDROTHERAPY. A BRIEF SUMMARY OF THE PRACTICAL VALUE OF WATER IN DISEASE FOR STUDENTS AND PRACTICIANS OF MEDICINE. By William H. Dieffenbach, M.D., United States Delegate and Vice-President of the First International Medical Congress on Radiology and Ionization at Liege, Belgium; former Professor of Bacteriology, New York Medical College and Hospital for Women; Professor of Hydrotherapy, New York Homeopathic Medical College and Flower Hospital; Physical Therapeutist to Volunteer St. Gregory's Hospital; Electro-Therapeutist to Flowe and Hahnemann Hospitals; Member of the National Society of Physical Therapeutics, American Electro-Therapeutic Society, New York Physico-Therapeutic Society, American Roentgen Ray Society, American Institute of Homeopathy, Academy of Pathological Science, etc., etc. New York: Rebman Company, 1123 Broadway.

Few students, when they leave college, have any adequate knowledge of hydrotherapy, and as a result this valuable side of our armamentarium is sadly neglected. It is to assist the practitioner who is aware of his defective education that this book is written. We can strongly recommend it.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. June 1, 1909. Philadelphia and New York: Lea & Febiger. $6 per annum.

The contents of Volume II. are: Hernia, by Dr. Coley; Surgery of the Abdomen, exclusive of hernia, by Dr. E. M. Foote; Gynecology, by Dr. Jno. P. Clark; Diseases of the Blood, Diathetic and Metabolic Diseases, Diseases of the Spleen, Thyroid Gland and Lymphatic System, by Dr. A. Stengel; Ophthalmology, by Dr. E. Jackson. These will all be found to be up to the high standard set by *Progressive Medicine* many years ago, and make a most complete summary of the progress of the last twenve months. As we have often said, this is the work for the busy man.

MYOMATA OF THE UTERUS. By Howard A. Kelly, Professor of Gynecology in the Johns Hopkins University; Gynecologist-in-Chief to the Johns Hopkins Hospital, and Thomas S. Cullen, Assistant Professor of Gynecology in the Johns Hopkins University, and Associate Gynecologist to the Johns Hopkins Hospital. Philadelphia and London: W. B. Saunders & Co.

This fine volume, dedicated to the late Dr. Sweetman, of Toronto, "a man of rare surgical judgment, and a true friend," will, it goes without saying, receive a most cordial welcome from the profession. Nothing at all has been spared, either work, thought, time, material or money, by the authors and the publishers, to make it as nearly ideal as a book can be made.

This applies also to the work of the illustrators, Mr. Horn and Mr. Becker, which is so good that any adequate description of it would seem too laudatory. The illustrations are magnificent.

For twenty years the authors have been collecting material at the John Hopkins and elsewhere for this great work. Their own cases and their own experience, first and last, form the basis of the volume—1,674 cases in all. Taking the cases from 1889 to July 11, 1906, the mortality was about 5 per cent. But from July 1, 1906, to January 1, 1909, during which time there have been 238 myoma operations, the death-rate has been only 1 per cent—a splendid record.

Out of 993 hysteromyomectomies, only 24 were by the vaginal route. It is considered by the authors that although recovery is more speedy, and the patient has less immediate discomfort after the vaginal operation, yet the final result to the patient is made better after the abdominal operation.

The book is a mine of information. Though the authors have to say that "We still know practically nothing as to the cause of uterine myomata," still they have preserved valuable data on many points which cannot but be useful to workers after them in the field.

The youngest patient was 19 years, 26 patients were under 25 years, the oldest was 71 years, and the great majority of the patients between 28 and 52 years of age.

No aspect of the subject is neglected, nor any which, though side issues, may help to elucidate the main topic. Among specially useful chapters to the general practitioner may be mentioned Differential Diagnosis, Pregnancy and Uterine Myomata, and the Bladder in Cases of Uterine Myomata.

We have examined this book, which is worthy to mark an epoch in American gynecology, with the greatest interest and pleasure, and offer our sincere congratulations to the authors upon it.

A System of Syphilis. Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.C., F.R.C.S., in six volumes. Each volume is fully illustrated with original illustrations, many of them direct color photographs, and is complete in itself. Price, $12.00 each, or to subscribers, $66.00, complete. Canada: D. T. McAinsh & Co., Toronto.

Volume II.—This volume deals with the "Surgery of Syphilis," by D'Arcy Power; "Treatment of Syphilis and an Outbreak in Virgin Soil," by Col. F. J. Lambkin, R.A.M.C., and "Syphilis in Obstetrics," by Dr. William J. Gow.

The second volume of this series is certainly as comprehensive in its treatment of the subjects as the first volume. The "Surgery of Syphilis" is most elaborately dealt with, and the historical account (while brief) comprehensive. In speaking of the microorganism of syphilis, on page 9, Mr. Power describes the method of staining and demonstrating the *spirocheta pallida*. It has not been our experience, however, to succeed as easily as this paragraph would lead one to believe is possible. It is unnecessary to refer to the numerous aspects of syphilis in detail, but we know of no work that deals with the subject in such a concise manner.

The chapter on the "Treatment of Syphilis." by Col. Lambkin, where the whole subject is reviewed and brought thoroughly up to date, even in matters of treatment that have only been in use since 1907, has been handled critically and favorably. The use of compounds of arsenic in syphilis has been followed by some very striking and beneficial results. These are all pointed out in this chapter, and, while the subject is certainly new and in an experimental stage, yet theoretically it appeals to one, and is certainly entitled to much further investigation.

Dr. Wm. J. Gow, F.R.C.P., in a short chapter, deals with "Syphilis in Obstetrics." a most important aspect of the disease. The volume is illustrated in a very exceptional manner, and the typography and binding could hardly be improved.

THE AFTER-TREATMENT OF OPERATIONS. A Manual for Practitioners and House Surgeons, by P. Lockart Mummery, F.R.C.S. (Eng.), B.A., M.B., B.C. (Cantab.), Senior Assistant Surgeon, St. Mark's Hospital for Fistula and other Diseases of the Rectum, and to the Queen's Hospital for Children, London. 3rd edition. London; Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1909.

We are glad to welcome the third edition of this useful little book, which we find thoroughly revised and brought up to date. For instance, in the chapter on Shock, the experiments and observations of Dr. Crile are noted and practical use made of his conclusions. The volume is of the utmost assistance to anyone doing surgery, for it is founded upon the author's own experience.

An advance notice informs us that the current issue of the *Annals of Surgery* will contain 344 pages, about two and one-half times the usual number, with a large number of illustrations, and at no additional cost to the subscribers.

The *Annals of Surgery* is undoubtedly one of the most progressive medical journals of the day. They spare no expense in illustrating articles and only secure the best articles. They have previously issued single numbers that were undoubtedly equal to volumes that would cost $5.00. When we think that this journal does this frequently, and the subscribers to it receive that benefit, it is not surprising to know of the high standing of the journal. We are looking forward to the coming number, and we are satisfied that it will be the biggest and best yet.

International Clinics. A quarterly of illustrated clinical lectures, and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Volumes I. and II. Nineteenth series. 1909. Philadelphia and London: J. B. Lippincott Company.

Four times a year we have awaited the *"Clinics"* to find always some leading articles of the greatest interest, such as "Splenomegaly," by Parkes Weber, in Vol. II., or "Absorption From the Peritoneal Cavity," by W. G. MacCallen, in Vol. I., besides a large number of others to choose from, and something for every practitioner, no matter what his special interest may require. These quarterlies are so well known that they need no comment from us. They grow more valuable each year.

Writing the Short Story. By J. Berg Esenwein, A.M., Lit. D. Editor of *Lippincott's Monthly Magazine:* author of "How to Attract and Hold an Audience." Cloth, 12mo. 448 pages. Price, $1.25. Published by Hinds, Noble & Eldridge, New York.

Although this work is hardly in place on the desk of a medical journal, where there is scarcely time to *read* a short story, let alone *write* one, yet we have found many interesting and instructive points, which could well be assimilated by the contributors to this and other medical magazines. Mr. Esenwein has had a long experience as an editor, and he tells the writer-to-be, in twenty-five chapters, precisely what the story-teller should know.

A Handbook of the Diseases of the Nose and Throat. By Eugene S. Yonge, M.D. (Edin.), Physician to the Manchester Hospital for Consumptives and Diseases of the Throat; Physician to the Crossley Sanatorium. Edinburgh and London: Wm. Green & Sons, Medical Publishers. 1909.

Previously it was the criticism that English books (by which, of course, we mean British) were full of "good stuff," little of it stolen from other authors, but their book-making and illus-

trating were away behind the American publishers. However, the present volume refutes all this, the illustrations being thoroughly up-to-date. In fact, the publishers have done it not wisely, but too well," in at least one instance (plate X.), where they have unnecessarily given pictures of head mirrors. But the work, as a whole, is excellent, well written, and full of sane advice on the various topics which are discussed.

Elementary Practical Treatise on Diseases of the Pharynx and Larynx. By DR. E. J. MOURE, Surgeon in charge of the Nose, Ear and Throat Department of the Faculty of Medicine, Bordeaux. Translated and adapted by J. MALCOLM FARQUHARSON, M.B., F.R.C.P. (Edin.); Lecturer on Diseases of the Nose, Ear and Throat in the School of Medicine of the Royal Colleges, Edinburgh: Surgeon, Ear and Throat Department, Royal Infirmary, and Senior Surgeon to the Ear, Throat and Nose Department of the Eye and Ear Infirmary, Edinburgh. With 210 illustrations. Price, $4.00. New York: Rebman Company, 1123 Broadway. 1909.

In presenting this excellent work to the medical profession, Dr. Moure, while modestly offering it for the use of the general practitioner, has conferred a boon upon the specialist. The fact of confining himself to the narrower field of the pro-pharynx and larynx, has enabled him to enter more fully into the minutiæ of the diseases of these organs. Possibly this detailing particularly in reference to the pharynx, may have been carried to excess, as the outcome of many years of experience devoted exclusively to the subjects with which he deals. On running rapidly through Dr. Moure's pages, one is struck with the wide difference which exists between some of his methods of surgical treatment and those of his English and American confreres, particularly in regard to pharyngeal disease. While the electro-cautery knife is with many going into desuetude, it is with Dr. Moure a much favored instrument. Whether he wants to open a peri-tonsillar abscess, or remove hypertrophy in lacanar tonsilitis, or destroy the vegetations of a pharyngeal lupus, or take away the enlarged faucial tonsil, or a calculus from a soft palate, it still holds its honored place, and after a long and wide experience he prefers it to all others.

While the writer's divisions of pharyngeal abscess are possibly too elaborate, his study upon the subject of the lingual tonsil opens up a new field, well worthy of keener investigation than it has hitherto received.

The division devoted to diseases of the larynx is brought down to the most recent date, Killian's methods of examination are admirably portrayed and described. Tracheoscopy and bronchoscopy are duly dealt with, as well as the double electro-photophore, the stroboscope.

Tumors of the larynx receive a fair amount of attention. and the whole work is well illustrated. many of the cuts being new.

If there is any serious criticism, it might be relative to the index. For instance: "Diseases and Traumatisms of the Larynx" are confined to a single chapter, covering 230 pages. while the index, alphabetically arranged, prevents the reader from making a classification for himself. Still, the book is gotten up in excellent form, and the translator deserves our thanks for placing so valuable a work from the French before us.

The Ideal of Service.

The ideal for you to realize is the ideal of service. Your very bill-heads will remind you constantly of this, for will they not read "Mr. John Smith, to John Jones, M.D., Dr. For Professional Services" so much?

It is a clumsy way of reckoning, however, for who can reckon in coin of the realm the service rendered by the saving of a precious life to kindred and to the community? Who can transmute into paltry dollars the care and skill and learning that shut the door on death? Moreover, to whom shall Flexner and Jobling or Rosenberger render a bill for "professional services to mankind" by the discovery of the antiserum for cerebro-spinal meningitis or by the discovery anent the tubercle bacillus? Who will pay it? No one! Remember that "only the lower things of life are sold; the higher things are always given."

The service you will render will always be a personal service. often at the expense of sleep, of comfort, of home joys, of recreation; but, believe me, it pays, as personal service always does. Remember that yours is not a trade, but a profession. "The object of a trade is to make money; the object of a profession is to bless mankind." This ideal of personal service can never be fully realized by others, or, indeed, rendered by others, but only by those of our own guild.—W. W. Keen in *J. A. M. A.*

Swabbing the throat with 20 per cent. iodine in glycerine will quickly relieve a pharyngitis.—*American Journal of Surgery.*

Selections.

Pneumococcic Influenza. By Prof. Curschmann, *Münch. Med. Woch.*

Influenza is clinically a term applied to various acute catarrhal conditions of the upper air passage, which are accompanied by more or less severe circulatory and nervous disturbances, are eminently infectious, and tend to assume endemic or epidemic proportions. The disease is attributed by pathologists to the organism known as the influenza, or Pfeiffer's bacillus, which has usually been found in previous epidemics. But the writer's investigations show that a disease clinically indistinguishable from influenza may be due to the pneumococcus of Fränkel.

In the autumn and winter of 1907 and the early spring of 1908 a complaint was prevalent in Leipsig which was universally regarded as influenza. The onset was usually marked by shivering or chilliness, and occasionally by a definite rigor. Almost all patients had violent headache, with general muscular pains, most marked in the lumbar or sacral regions. There was frequently great prostration from the first, and in half the cases complete anorexia. Gastric pain, nausea, and vomiting, were rare complications. In almost all cases there was pain in the throat, with marked redness and swelling of the pharyngeal mucosa. Not infrequently there were also coryza, conjunctivitis, and hoarseness. In every one of 77 typical cases seen at the hospital by the writer there was acute bronchitis with or without expectoration. The latter variety was the less common and was characterized by a violent spasmodic cough often resembling that of pertussis. Bronchial asthma, and occasionally emphysema, were also observed. In 17 of the 77 cases broncho-pneumonia occurred. The patches of consolidation were mostly small and scattered, and lobar pneumonia was rare. Cardiac symptoms among the younger patients were seldom disquieting, but among those with former heart disease and among the older patients they were often alarming. Twenty-two of the 77 patients were apyretic when admitted to hospital. In the remainder the pyrexial period varied from a few hours to three or four weeks. The duration of the disease varied, as a rule, between one and three weeks. Of the rarer complications pleurisy and peripheral neuritis with severe neuralgic pain may be mentioned. All the hospital patients recovered, but a considerable number of fatal cases, especially in elderly patients, occurred in the town.

The above is a description of typical influenza. But in not one of 49 cases, in which an exhaustive examination of the sputum was made, was Pfeiffer's bacillus present. In almost all (46) cases the pneumococcus was found. It was quite typical as to capsule formation, extracellular occurrence, and staining and cultural reactions. It was often present in almost pure culture and invariably preponderated so as to allow of no doubt as to its etiological importance. Streptococci and staphylococci were also occasionally present in small numbers. The diplococcus was virulent in mice, which died with the usual symptoms of pneumococcic pyemia. Pure cultures were obtained from the blood and tissues of the infected animals. That all the cases in this epidemic were due to the pneumococcus was shown by the fact that in the few instances in which a bacteriological examination of the sputum was made in Leipsig, outside the hospital the same result was obtained.

As this pneumococcus disease is clinically indistinguishable from influenza due to Pfeiffer's bacillus, Prof. Curschmann holds it best to retain the name of influenza even in the absence of the usual influenzal organism. Lazzatto has also reported a small endemic which occurred in the children's wards of the Graz Hospital. The patients, who were all under 3, had symptoms indistinguishable from influenza, but, instead of Pfeiffer's bacillus, the diplococcus pneumoniæ was found. Influenza thus appears to belong to the group of diseases which includes dysentery and pernicious anemia, having more than one exciting cause.—*The Medical Review.*

Pain in the back or extending down the leg, and sometimes simulating sciatica or lumbago, may be due to chronic prostatic disease. It is wise never to make an offhand diagnosis of sciatica until every source of possible reflex pain from local organic disease has been eliminated by careful examination.—*International Journal of Surgery.*

In many instances where a patient is supposed to have merely a sprain of the ankle there is some fracture around or in the joint. Signs of fracture should be carefully sought for. Where nothing can be found around the ankle on examination and the patient still continues to complain of pain and weakness, a skiagraph may show a transverse fracture of the os calcis which is held in place by the flexor muscles.—*American Journal of Surgery.*