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A CASE OF CYSTICERCUS CELLULOSÆ OF BRAIN.*

By J. M. FORSTER, M.D.,

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KINGSTON ONT.

IN presenting this case of cysticercus cellulosaë, I desire particularly to describe the cysts found, that I may afford some aid to their future recognition. The pathological condition involved is a very rare one in the human subject, the pig being the common host of this parasite in the cystic form.

The clinical history is obscure, and diagnosis is usually made at the post-mortem table. Griesinger sought to establish symptoms by which it might be detected during life derived from the histories of some fifty cases. These were exceedingly variable. In some, symptoms were entirely wanting. In a second class, epilepsy existed without mental disturbance. In a third, epilepsy was accompanied with mania or imbecility. In a fourth, mental-disturbance occurred without epilepsy. In another class of cases, there was neither epilepsy nor mental disturbance till just before death.

*Read before the Hamilton Medical and Surgical Society, September 11th, 1894.

Elizabeth R.—, æt. 37 years, Canadian, of German parents, admitted to Hamilton Asylum, July 18th, 1882. Three years previous to this she was insane for ten months, under treatment in Minnesota Asylum. She was inclined to be irritable at times, but worked regularly in the sewing-room for years. Bodily health generally fair, never robust, and rather sallow and anæmic in appearance. Nothing of interest, other than the above symptoms, was noticeable until March 28th, 1893, when she began to complain a great deal of headache, and looked poorly, but no especial cause could be detected.

May 21st, 1893. She still suffers from her headache, and is constipated. Cathartics relieved the head symptoms temporarily.

October 20th. Her head was better for a time, but she is troubled again with it. Treatment failed to relieve this.

November 10th. This morning she had an attack of an epileptoid character. There was frothing and also some twitching about the mouth, and unconsciousness with lividity, but not much convulsive action. Her sphincters were relaxed. She was unconscious for about five minutes. After a while she recovered sufficiently to walk about the room to look for a purse that had been taken from her during this seizure by the nurse. She had some difficulty in swallowing, could articulate, and complained of feeling generally miserable.

November 13th. Her headache was very severe all last night. Shortly before 11 o'clock this morning she had another convulsion, in which she died.

Post mortem. Post mortem held twenty-eight hours after death. The body was very well nourished, with rigor mortis established. On removing the skull-cap, the membranes were found to be highly injected and slightly adherent, and a quantity of sero-sanguineous fluid escaped. In the arachnoid space, and lying in the sulci of brain, there were found four small cystic tumors about the size of a hazel nut; at the posterior portion of right parietal lobe, on right frontal near Sylvian fissure, on the left parietal lobe, and at outer anterior corner of left frontal lobe. These cysts were not adherent, and, on being rolled out, left a little depression on the brain substance that would admit the tip of the finger. There was an unusually large quantity of serous fluid found in the membranes of brain and in the ventricles. In front of the pons there was a good deal of inflammatory exudation. No other lesions were noticed.

Liver. The liver was enlarged and congested; no cysts present.

Some quite small fibroids subperitoneal were found in uterus. No other cysts discovered in viscera.

Upon microscopical examination, the cysts were seen to be cysticerci cellulosa, but, before treating of the naked eye and microscopical appear-

ances, permit me a few remarks on the history of tapeworms, or cestodes, for the benefit of those who might not be fully acquainted with the subject.

In this group alternation of generation is strictly maintained throughout, *i.e.*, the cysticercus form generates the tapeworm, and *vice versa*.

The tapeworm consists of a head and neck, to which are attached several segments. Each segment, except those near the head, are sexually complete. These mature segments become detached and discharged from the alimentary canal. They are then broken up and the ova are set free. These ova may be taken into the stomach by infected water, herbs, or other means. (Osler states that in violent vomiting of a person affected with tapeworm segments may be forced into the stomach, and thus the individual becomes infected with the cysticercus.) The protective coating of ovum is digested in the stomach, setting free the little embryo, which may here pass into the blood and circulation. It then lodges in subcutaneous tissue, intermuscular septum, membranes of brain, or elsewhere. In its growth it becomes vacuolated, and an imperfect water vascular system develops.

The embryo, as it develops in its new situation, becomes thickened at one point, where invagination takes place, this process going on until complete invagination is accomplished. Thus, it forms a double-walled sac, open at the point of invagination; externally the outer wall or capsule, internally the inner wall, derived from the invaginated portion, and within this the scolex. Looking into the sac, within inner wall, from opening at point of invagination, you first perceive the hooklets (if these be present in the parent tænia), then elevations or suckers, usually four, showing this to be the head of the cysticercus. This constitutes the cystic form.

Secondly, when these cysts are taken into the stomach of man by means of mealy pork infected with the cysticercus described above, the cyst wall is digested away, and thus allows the head to become evaginated, or protruded. Passing into the intestine, the hooklets with which it is armed fasten on to the intestinal wall and attaches the head to it. It is then nourished through the suckers and produces the segments, when it matures into a perfect tænia solium.

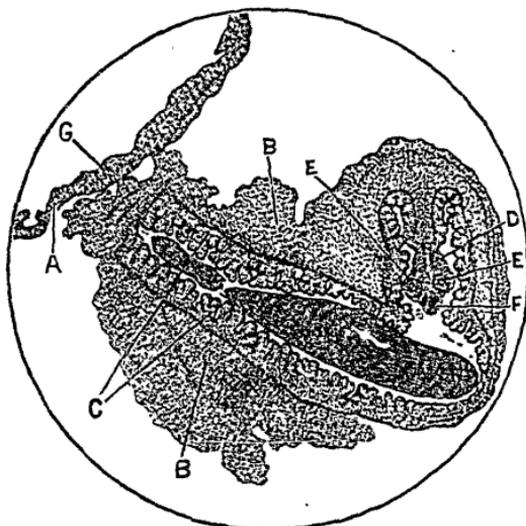
To return to case in point. Gross and microscopical appearances:

Cysts: There were four of these, rather uniform in size, and, as stated previously, about as large as a hazel nut, either circular or oval, and semi-translucent in appearance. Upon section, these proved to be cystic.

The capsule was firm and tense; attached to this was a little body, extending into the cystic cavity, turned on itself at right angles, irregular in outline, about one-quarter of an inch in length, and of a grayish color.

After hardening in Muller's fluid for a month, microscopic sections were made and stained with hematoxylin and eosin.

The cyst wall, of which a small portion is shown at *A*, is well developed, consisting of fibrous tissue, with granular deposits. The inner wall, *B*, is vacuolated, and its lining membrane, *C*, is thrown into folds. At *D* the head is seen with two suckers, *E* showing the radiating fibres.



Cysticercus cellulosæ (section). x 50.

There are only two in this section. Anterior to these on the head is the rostellum, *F*, around which are arranged the hooklets. These could not be shown with the same magnifying power of microscope as this figure represents.

The hooklets were very apparent on another section. There was but one row of them around the rostellum. This fact, together with their size, is characteristic of the *cysticercus cellulosæ*. These are larger than the *echinococcus* hooklets, for which they might be mistaken, and of a different shape, as seen by the accompanying drawing of a *cysticercus cellulosæ* hooklet. At *G* the section is close to the opening in capsule or outer cyst wall where invagination took place. This point was clearly demonstrated by another section.



Hooklet, *Cysticercus cellulosæ*.
x 500.

In conclusion, I might state that the treatment of these cases is not altogether without hope, for a period of eight months is said to be amply sufficient for the setting in of calcareous degeneration, a process which speedily causes the death of this parasite. Rest, mental and physical, tends to assist nature in this regard.

SHOULD ANTISEPTIC VAGINAL DOUCHING BE MADE A ROUTINE PRACTICE DURING THE PUERPERIUM?*

BY ADAM H. WRIGHT, B.A., M.D.,
TORONTO.

IT is not exactly correct to say that Semmelweiss was the first who informed the obstetric world as to the true source of puerperal septi-cæmia ; but his name stands out so prominently in connection with the various discussions on the subject that he is, by almost general consent, considered the father of modern antiseptic midwifery. In 1847 he clearly and positively enunciated the view that puerperal fever was caused by the introduction of putrescent substances deposited in or about the genital tract of the parturient woman. The confrères of Semmelweiss were somewhat slow in accepting his views ; but many earnest workers in various parts of the world in the course of years proved conclusively that they were substantially correct. The investigations and experiments of Pasteur and Lister gave a wondrous impetus towards advancement, and did much to place our knowledge of antisepticism and asepticism on a definite scientific basis.

Lister's practical application of such knowledge to his work in surgery stimulated surgeons and obstetricians in all parts of the world, and caused them to make special efforts to avoid septi-cæmia. The obstetricians of Germany were especially enthusiastic, and Americans were not slow in following their example. The new ideas and the new methods spread rapidly from hospital to hospital in Germany, France, Great Britain, America, and other countries. In 1872 rigid antiseptic methods were carried out in a systematic way in numerous maternities. Mortality rates had a marvellous fall. Those horrible epidemics of that fearful scourge, puerperal fever, which had slain its thousands, were rapidly being repressed, especially in large maternities. The bright reports and minute descriptions of the various methods were spread broadcast over the whole civilized world, and incalculable good was derived therefrom.

But, gentlemen, puerperal septi-cæmia, or puerperal infection (call it what you will), still exists. The annual reports of the Registrar-General of

*Read before the American Association of Obstetricians and Gynæcologists, at Toronto, Sept., 1894.

Great Britain shows that the death rate from childbirth has not appreciably diminished in England and Wales. In fact, in certain parts of England the death rate from puerperal septicæmia has actually increased in recent years. In the United States and Canada the mortality from this cause is probably less now than it was fifteen years ago, but it is still very high. Why is it that such a deplorable condition of things in connection with the practice of obstetrics continues to exist, notwithstanding the flood of light which has been thrown on the subject during the last fifty years? I will not now attempt to answer the question.

Under the circumstances, it behoves us, as a society which includes obstetrics as one of the subjects within its province, to assist others in carrying on a vigorous fight against this deadly but repressible foe—puerperal septicæmia. With this object in view it was decided by our council, on the advice of Dr. McMurtry, to have a discussion on one of the proposed preventive measures, viz., antiseptic vaginal douching, and I have been honored with the request to open the discussion.

Since the year 1848 antiseptic vaginal douches have been more or less in vogue. In the earlier years chloride of lime, chloride of soda, permanganate of potassium, sulphate of copper, etc., etc., were used by various obstetricians. So far as I know, such injections were first used in America by Fordyce Barker, in the Bellevue Hospital in New York, about forty years ago, and were continued by him as a matter of routine practice about twenty-six or twenty-seven years. In later years carbolic acid became the favorite. In 1876 Tarnier recommended bichloride of mercury, which to-day is probably the favorite antiseptic agent in obstetrical work. I will not mention any of the other numerous antiseptic remedies which have been used, nor will I attempt to discuss their comparative merits.

Vaginal antiseptic douching during the puerperium was most popular between 1875 and 1885. It appeared at one time that it would be universally adopted as a routine prophylactic measure. The method seems so charming in its simplicity, and appeared so perfectly innocuous, that it was considered by many somewhat of a crime to neglect it. In December of 1883, about two years after Fordyce Barker had given up the practice, Gallard Thomas became its most enthusiastic champion. His address on the subject of the prevention and treatment of puerperal fever, delivered before the New York Academy of Medicine, and the discussion which followed, including a paper by Barker, read at an adjourned meeting, were exceedingly able, and created a great deal of interest during the year 1884. The douching wave reached its greatest height about that time, but since then a reaction has set in, and at the present day opinions are divided as to the utility of the measure in normal cases.

I consider it quite unnecessary to enter minutely into pathological

details. Probably all here will admit that puerperal septicaemia is due to the work of living organisms, which are largely, if not altogether, introduced from without. Bacteriologists have taught us much on the subject, but have not yet proved definitely what form, or forms, of bacteria cause the poisoning. Certain kinds of cocci, especially the streptococci, have a certain connection with the sepsis, but exactly what it is we know not now. The bacteria are so much under the influence of surrounding structures, and are subjects to so many modifications, that the study of their life history has been found very intricate and difficult. It seems in some cases that a certain number of bacteria already lodged in the parturient woman are comparatively innocuous until other members of their species are imported from foreign sources, when suddenly all commence to work together with deadly effect; or sometimes they are kept harmless by the surrounding secretions, as, for instance, in the vagina, until they are pushed into other fields, such as the cervical tears, or the uterine cavity, when they immediately wage war. From a clinical standpoint the important thing to recognize is that septic matter—something that cripples or kills our patients—when introduced from without by dirty finger tips, dirty instruments, and from dirty surroundings of all sorts, creates all the mischief.

In order to assist in avoiding the evils, our council directs me to ask the question, Should antiseptic vaginal douching be made a routine practice in the puerperium? In my opinion, no. While I hold a decided opinion, and am quite willing to express it, I have a great respect for many eminent obstetricians who say yes, and am always glad to hear their arguments and, I hope, weigh them carefully. I happen to be one of those who were not captured by the fascinations of vaginal douching as pictured by so many in years past. If I were at all inclined to feel proud of this, my pride ought to be lowered by a consideration of the fact that a large proportion of those who at that time held views similar to mine were too lazy, or too careless, or too indifferent to give the matter much thought or study. I have no feeling but that of contempt for this class of obstetricians, who are mainly responsible, in my opinion, for the high mortality rates which still prevail in midwifery. I have sometimes been misunderstood and misquoted; and, although I am not likely to be misunderstood by the members of this association, I desire to add that no man has a greater desire than I to see a rigid adherence to the modern rules of asepsis and antisepsis on the part of all who practise our obstetric art.

I have studied the subject pretty carefully for the last eighteen years. I was much impressed with many of the favorable reports showing the good effects of vaginal douching. About sixteen years ago, and for a number of years thereafter, I watched the work of a friend in Toronto

who practised the methods. We carefully compared notes, and had many discussions on the subject. His methods of antisepticism both in surgery and obstetrics were very carefully and thoroughly carried out. He had high temperatures more frequently than I; but for years he thought they were due to accident and not to his methods. He thought, as did many others, that the douching with weak solutions of carbolic acid could certainly not do any harm, if carefully done. Although he has since relinquished obstetrics for the more narrow field of surgery, he quite came to the conclusion before his departure that the douching was at least useless in normal cases. I do not know whether it was Breisky or Tarnier who first used the expression, "Everything that is useless is dangerous," but it has always struck me as being both true and sensible. If it can be shown that douching is useless, it is surely better not to carry out a method which is very distasteful to women, whether it be dangerous or not. I think, however, it is both useless and dangerous, and will endeavor briefly to give my reasons, which are founded partly on the results of my own observations, but chiefly on the reports of those who have had experience in the larger maternity hospitals in various parts of the world.

(1) Douching disturbs that perfect rest and quiet which are so desirable for a patient after labor. I do not now refer to surgical rest of wounded tissues, but to rest in a general way, which is so delicious to a weary and more or less exhausted woman. I have often thought, and sometimes stated, that meddling midwifery reached the acme of absurdity when, in 1883, a distinguished New York gynecologist recommended about the most persistent and aggressive obstetric meddling that had ever been conceived by the brain of man. He advised, among other things, the administration of a douche every eight hours, and the introduction of an iodoform suppository every two or three hours for at least ten days after delivery; that is to say, the bruised and lacerated vagina was to be invaded from eleven to fifteen times every twenty-four hours for at least ten days, if the unfortunate victim should live so long. Little wonder was it that Fordyce Barker entered a strong and vigorous protest!

(2) Douching is unscientific on surgical grounds. After labor the utero-vaginal canal is bruised and wounded. On surgical principles, the most important points in the treatment are rest, pressure, position, and drainage. By rest I refer to that physiological rest to which so much importance has been attached by Hilton, and many others. The wounds of the cervix and vagina are, as a rule, kept closed by the elastic and even pressure of the surrounding tissues. The introduction of suppositories and douching seriously interfere with rest and pressure as described, and, in my opinion, materially delay the healing of those wounds. The recumbent posture, with the slight changes in position required in voiding urine and feces, is well adapted for drainage.

(3) Douching does not lessen the dangers accruing from the presence of bacteria in the vagina. This is probably the most difficult contention to prove definitely. Do destructive organisms ever exist in the vagina after labor? Undoubtedly, yes. In some cases cocci of various kinds are present in varying numbers. The recent investigations of Doederlein, Winter, Steffek, Koenig, and others, confirm the opinions of former observers as to the occasional, if not frequent, presence of pathogenic micrococci in the vaginal secretions after labor. It is generally agreed, however, that in normal cases the vaginal mucus is strongly acid. The acidity is produced by innocuous organisms which have their habitat in the healthy vagina. It happens that these organisms have some restraining, if not destructive, effect on the pathogenic cocci. Vaginal antiseptic injections may interfere with this normal acidity, and thus chemically lessen the resistance of the tissues to bacteria. Taking these views as correct, we learn that nature has provided a secretion in the vagina which prevents the wicked organisms from doing any harm; and such being the case, douching is at least useless.

(4) Douching is actually dangerous. I have already alluded to certain of these dangers, especially from a surgical standpoint. It is apt to disturb clots, and thus open avenues for infection; to open lacerations of the cervix and vagina, and thus prevent them from healing; to wash bacteria into the uterine cavity, and thus cause septic endometritis. Among other dangers which are generally due to accident or carelessness are the introduction of septic matter by fingers and instruments. Some mention other rare or minor dangers which I will not refer to in this paper.

Many of the arguments thus far advanced are, to a certain extent, theoretical; and in connection therewith the results of clinical experience ought to assist us materially in arriving at correct conclusions. Fortunately, statistics prove beyond the possibility of doubt that the results of our modern methods, whether with or without douching, are vastly better than those of the pre-antiseptic era. The fearful mortality rates of five to ten per cent., or even more, have been reduced to about one-half of one per cent., or less, in all our well-ordered maternity hospitals, both in the old and the new world. As far as I can learn, the weight of evidence goes to show that the hospitals in which the routine douching is not practised have better results. Baruch, of New York, published a table, from which it appeared that in the following hospitals where the douche was in use—Charité, Parma Maternity, and Glasgow Maternity—the mortality ranged from 1.5 to 3.42 per cent., while in the Tarnier Maternity, Paris, Prague Maternity, Copenhagen Maternity, and New York Maternity, where the douche was not in use as routine practice, the mortality ranged from 0 to .56 per cent. (*New York Medical Journal*, March 22, 1894.)

It will be seen by this that one maternity (the Parma) had the high mortality of 3.42 per cent. Now, although I am not partial to douching, I do not for one moment suppose that the bad results at Parma were due to this practice alone or chiefly. There must have been other elements at work.

More recent reports prove conclusively that the mortality rate may be brought down to .5 per cent., or less, whether douches be used or not. From one of Boxall's papers we learn that the mortality in the London Lying-in Hospital, for five years previous to 1890, was only .418 per cent., the number of patients treated being 2,150. Vaginal douching was done as a routine measure twice a day during the puerperium.

I am very strongly impressed, however, with the opinion that the use of the douche does sometimes, if not frequently, cause a rise of temperature which must, of course, be considered an evil. During the period referred to by Boxall, when the death rate was .418 per cent., the labors followed by fevers from all causes amounted to 40.65 per cent. In a number of maternities on the Continent where no douching is done, the percentage of febrile complications ranges from 6 to 10 per cent. Leopold has compared the two methods in Dresden with the following results: Of 2,388 deliveries with injections, 17.2 per cent. had fever; of 1,136 deliveries with vaginal washings, 20 per cent. had fever; of 1,123 deliveries with no injection at all, only 9.7 per cent. had fever (*Medical News*, Feb. 14th, 1891).

In all these cases similar antiseptic precautions were applied to everything which approached the patient, but in the latter series there was no interference with the parturient tract. In comparing the second with the third set of cases, it will be seen that in 1,000 cases 200 had fever after deliveries with injections and vaginal washings; while in the same number only 97 had fever when no injections had been employed.

In considering the statistics from modernized maternity hospitals, I think it important to keep in mind the fact that the injections are administered with care and skill. In private practice they are frequently given in a careless and slovenly way, notwithstanding conscientious efforts on the part of the accoucheur to guard against such faulty work. A large proportion (more than half, I think) of our nurses do not know how to administer a vaginal douche properly. If you will admit, for the sake of argument, if not absolutely, that Leopold's results show that skilful antiseptic vaginal douching is not only useless, but actually dangerous, then I think it follows as a logical conclusion that indiscriminate douching by good, bad, or indifferent nurses, such as are placed at our disposal in private midwifery, is dangerous in a still greater degree.

Such is my opinion at the present time, and such it has been for many

years, but I would hesitate to say it is final or unalterable. I have not yet reached that happy state when I feel that I know all that is worth knowing about antiseptic or aseptic midwifery. It is a subject which does not grow old with me; in fact, it is ever new. I am as anxious now as I ever was to learn something new about antiseptic and aseptic methods, to adhere religiously to what I consider the best rules, in both private and hospital practice, and to do what I can to teach others, especially my students, how to avoid preventable maiming and preventable death. I am not sorry this question is still unsettled; I think it exceedingly fortunate that we are able to get from time to time such valuable and accurate reports from the various large maternities, and hope we may, in the near future, get still more light on a subject of such vast importance from a humane as well as a professional point of view.

HISTORY OF TWO CASES OF SECONDARY HÆMORRHAGE
AND ONE OF DELAYED HÆMORRHAGE FOL-
LOWING TONSILLOTOMY.*

BY PRICE-BROWN, M.D.,
TORONTO.

CASE I. On June 2nd, 1893, Mr. C., æt. 22 years, a second-year medical student, presented himself for treatment for hypertrophy of tonsils. He was stoutly built, and florid in complexion. His voice was thick and indistinct, and throat catarrhal. Though not very prominent, both tonsils were enlarged, extending low down into the pharynx. The crypts were wide, and lined with muco-pus. As a result of the tonsillar condition, the patient was subject to frequent attacks of soreness of throat, attended by hoarseness.

In this case I would have preferred to operate with the galvano-cautery. The man's time, however, was limited, and, in order to allow him to return home to Princeton on the following day, I decided to operate with the tonsillotome. I considered myself justified in doing so for two reasons:

(1) That I had never met with hæmorrhage of a severe character, either primary or secondary.

(2) That the old idea of the possibility of wounding the internal carotid artery by tonsillotomy has been demonstrated by Heryng and Linhart to be incorrect, the vessel being situated behind the posterior pillar instead of external to the tonsil.

Accordingly, after applying a solution of cocaine, I removed the tonsils at one sitting, with two of Mathieu's tonsillotomes, using the larger instrument for the larger growth. In each case I had to press the instrument well into position to insure a sufficient hold for the needles. At the time there was but a moderate amount of bleeding. He called to see me the next morning on his way to the train, and, from the appearance of the parts, I saw no reason for objecting to his immediate return home.

Five days later he was attacked by hæmorrhage. I will quote his own words, from a letter to me upon the subject. He says:

"The hæmorrhage was the result of my carelessness. It was due to heavy lifting and, at the same time, stooping over. What I was working

*Read before the Toronto Medical Society, November 22nd, 1894.

at was laying sods. The blood would flow quite freely from both tonsils, and, when I had sat down for half an hour, it would partially cease. The blood, I think, was arterial, and there would be quite a throbbing in the throat on both sides during the bleeding. I gargled my throat with tincture of iron clear. That would check it for about fifteen minutes. I kept repeating the iron for about three hours. After that they bled very little, but continued throughout the day. The next day they had entirely ceased, and have felt quite well ever since."

CASE 2. On July 11th, 1893, at 4 p.m., Dr. M. brought his son, æt. 6 years, to have his tonsils removed. The boy was medium in size, not very robust, and a mouth breather. After applying cocaine I performed double tonsillotomy with two of Mathieu's smaller instruments. As in the former case, hæmorrhage was only moderate. I did not see the boy again until 4 a.m. of the 16th, four and a half days later, when the doctor summoned me to the house. Hæmorrhage had commenced during sleep an hour earlier. It was arterial, but not severe. The position in which the patient lay was somewhat suggestive, as he was coiled up on his left side, with his head lying low upon the bed, and without a pillow. The blood had run out of the mouth from the lower tonsil, and had covered a patch five or six inches broad, soaking through the cover into the mattress beneath.

When I arrived bleeding had ceased, but soon commenced again. Slight pulsation could be noticed as the blood issued from between the pillars. Dipping a cotton pledget into a strong solution of tannic acid, I pressed it with curved forceps on to the bleeding surface. In a few minutes the hæmorrhage ceased, and did not recur again.

CASE 3. September 22nd, 1894. Mr. A.R., Frenchman, moulder by trade, was operated upon by me for hypertrophied tonsils. Under cocaine, I removed the right one by tonsillotome, and operated upon left by galvano-cautery, at the one sitting. The right tonsil bled moderately, the left not at all. He did not suffer from the cocaine to any unusual extent, and a short time after the operation left the office. Two hours later I received a telephone message that he had bled nearly a quart, and was getting faint.

On arriving, I found a large clot filling the right tonsillar cavity, and blood oozing from beneath its margins. I at once removed the clot, and after drying the throat as much as possible with absorbent cotton applied pure tincture of iron to the bleeding surface. In a short time the bleeding ceased, the subsequent oozing being very slight. That the hæmorrhage was not of very serious moment is proved by the fact that, although the operation was performed on Saturday afternoon, the man was able to resume his work on Monday morning without the loss of an hour's time.

Although on the whole dissimilar, there are several points in which the first two cases are somewhat alike. In both the excisions were clean cuts, extending down to the bases of the tonsils. In both the intervals between ablation and secondary hæmorrhage were about the same, being, respectively, five and four and a half days, the period being that required for the slight traumatic slough to reach the point of separation. Although the one patient was a strong, plethoric adult, the hæmorrhage arising during active exercise, and the other an anæmic child, the bleeding occurring during sleep, yet the exciting cause might be alike in each. In the first, the exercise and posture increased the arterial tension in the pharynx. In the second, gravitation produced the like result, the head being low, and the bleeding from the side upon which the child was lying. In both the absence of tonsillar resistance facilitated the rupture of the minute arteries.

In the third case there was nothing remarkable. It was merely one more added to the list of those in which hæmorrhage occurs a few hours after operation—a rule rarely broken where bleeding occurs in adult life.

In referring to the literature upon the subject of hæmorrhage after tonsillotomy, I find that Bosworth, in the second volume of his late work on "Diseases of Nose and Throat," gives a detailed account of all the cases of secondary hæmorrhage reported up to that date. They number about fifty cases. All of them occurred in adults except one related by Capart. This was in a child eight years old. The tonsil had been removed by galvano-cautery loop, and was followed immediately by hæmorrhage, which lasted five days. The case was considered unique, and it was thought that the persistent bleeding might be owing to injury of the faucial pillars.

In all the other cases, with three or four exceptions, hæmorrhage occurred either immediately after or within a few hours of operation. It was, as a rule, easily controlled, though sometimes it took many hours to check the bleeding. In Fuller's case, all other means failing, the common carotid artery was tied. Even this did not stop the flow of blood. Three hours later the bleeding stopped spontaneously. In St. Yves' case hæmorrhage came on four days after operation.

Thorner, of Cincinnati, reports three cases, all occurring in one family, two of them two days after operation.

Hunter Mackenzie, in *British Medical Journal*, 1893, gives an analysis of 230 tonsillotomies. In only one of them did he have secondary hæmorrhage. This was in an adult, occurring on the second day.

Jessop, in *British Medical Journal*, June, 1893, reports a case of a delicate female child, æt. 10 years. The bleeding commenced four days after operation. By giving ice to suck, and keeping recumbent posture,

the bleeding stopped. It recurred, however, thirty-six hours later, in more alarming character. It was finally stopped by clearing out the clots from the tonsillar cavity and rubbing in perchloride of iron.

Santi, in London *Lancet*, March, 1894, reports three cases ; like the rest quoted, all occurring early after operation, and all in adult life.

In summing up, the full number of recorded cases I have been able to find, including those presented to-night, is about 64. Of these, three were children, aged respectively six, eight, and ten years. In two of them hæmorrhage did not occur until four and four and a half days after operation. In the other, although commencing early, it did not cease until five days after excision of the tonsil.

In 61 cases they were all adults ; and, with three or four exceptions, the hæmorrhage occurred, at the outside, within two days after tonsillotomy. In the exceptional cases the hæmorrhage could be traced individually to over-exertion of one form or another.

Granting, of course, that the surgeon can have a judicious oversight over his cases, the lessons taught seem to me to be :

(1) That tonsillotomy is a safe operation, whenever necessary, irrespective of the age of the patient.

(2) That in young children the period requiring the greatest care after operation is between the third and the sixth days.

(3) That in adults, after operation, the patient should be kept under observation for from thirty-six to forty-eight hours, subsequent to which time a warning against possible contingencies may be all that will be required.

SPRAINS AND THEIR APPROPRIATE TREATMENT.*

BY A. PRIMROSE, M.B., C.M. EDIN., M.R.C.S. ENG.,

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THE subject of my paper may appear to be one possessing little interest. Current medical literature provides us with very few articles on sprains, and from this fact we might be justified in concluding that either the subject has been neglected, or—in consequence of the fact that the class of injuries to which I refer appear to present very little variety—there is, apparently, no field for much discussion, and few cases of sufficient interest to warrant a clinical report.

From the experience I have had in the treatment of old sprains and badly-treated sprains, I think I am warranted in concluding that the subject *is* neglected, and, if we had more discussion concerning these injuries and their appropriate treatment, we would possibly see less of the misery which is entailed by the injudicious treatment of recent sprains.

In estimating the amount of damage done to an injured articulation, and in considering the best method of restoring its usefulness, it is essential that we should have a clear conception of the joint structure and its function. It is impossible for me to describe the individual joints of the body in this paper, and it would serve no useful purpose to do so, but there are some general considerations which are of value.

We have entering into the formation of the ankle-joint, for instance, the bones, with their coating of articular cartilage; the ligaments which unite the bones; the synovial membrane (which secretes the fluid synovia) lining the ligaments; in addition to these structures, which form the joint proper, we have the muscles acting upon and closely related to the joint. We have also to consider the connective tissue about the joint, with the blood vessels and nerves.

It has been stated that the strength of a joint depends mainly upon one or more of three factors. These are: (1) The shape of the bones; (2) the strength of the ligaments; (3) the support of the muscles. It may have all three elements strengthening it. The hip-joint, for instance,

* Read before the Ontario Medical Association.

possesses great osseous strength, the spherical head of the femur fitting into the deep acetabulum. It is ligamentously strong also, the cotyloid ligament still further deepening the acetabular cavity, and special thickenings of the capsular ligament affording powerful support. The muscles closely surrounding the joint also strengthen it. Compare the shoulder-joint with this. Here we have an enlarged head of the humerus and a very shallow glenoid fossa. The joint is osseously weak. The bones do not fit together, and there is no locking. The ligaments are only fairly developed, but the muscular strength of the joint is great; *e.g.*, the biceps tendon, the supra-spinatus, infra-spinatus, subscapularis, and triceps, with the deltoid. All these impart great strength to the shoulder-joint. The acromio-clavicular joint is osseously weak and muscularly weak: it is a typical example of a ligamentously strong joint. There is great osseous strength in the joint between the ulna and humerus, the coronoid and olecranon processes fitting into their respective fossæ, in the humerus. The wrist and the ankle-joints resemble one another very closely in that they are dependent mainly upon ligamentous strength and the close association of the tendons of muscles passing in close contact with the ligaments.

Roughly speaking, we may say that, in severe injuries, dislocation is the rule in joints that are muscularly strong, and that a sprain is more likely to result from an injury in joints whose integrity depends upon the shape of the bones and the strength of the ligaments. The reason for this is obvious, namely, that the muscles may be taken at a disadvantage; if they fail to contract when the joint is forcibly wrenched, the joint is unprotected and dislocation is likely to occur, the bones being widely separated and maintaining their abnormal relations. The ligaments are not strong enough to prevent this. In the shoulder-joints examples of this are common. The powerful action of the muscles in this neighborhood is readily demonstrated if one attempts to reduce a dislocated shoulder in a muscular man, and compares the ease with which reduction of such a dislocation is accomplished if we eliminate the action of the muscles by putting the patient deeply under an anæsthetic. Contrast the condition of affairs in the ankle-joint. Here we have osseous or ligamentous strength, whilst the muscles impart little or no support. Consequently, a severe wrench in this neighborhood is not so likely to cause a dislocation, but a sprain, in which we have laceration of the ligaments to a greater or lesser extent.

I am aware that the two classes of injuries I am contrasting here are closely allied, and that a sprain may correctly be looked upon as a "temporary dislocation," and, on the other hand, we cannot have a true dislocation without laceration of the ligaments. Further, the ankle-joint may be the seat of a true dislocation, or the shoulder may be simply sprained, but

the point I wish to emphasize by the considerations I have brought before you is that, in the majority of cases in which we are called upon to treat a severe sprain, we have to deal with joints possessing powerful and extensive ligamentous connections, and, consequently, the laceration of tissue—the extent of the subcutaneous wound—is, in such cases, very considerable. The actual amount of tearing in the majority of severe sprains, in joints ligamentously strong, is very much greater than the laceration in many dislocations of joints depending for their strength upon muscles. Thus it is possible to imagine a much more extensive wound in an ankle severely sprained than that existing in a subcoracoid dislocation of the shoulder.

Of course the amount of laceration of the ligaments varies widely. The injury may be very slight, and the ligaments possibly bruised only. It is usually extremely difficult to estimate accurately the actual amount of damage done.

The synovial membrane is not, as a rule, opened, but in severe injuries the joint cavity may be opened up, and will, in many such cases, freely communicate with the cellular tissue outside the articulation.

The muscular structures about a joint are injured to a varying degree. The amount of damage is often dependent upon the degree of activity and consequent tension on the muscle fibres at the time of the accident. Tendons form most intimate relations with certain joints; thus we have tendons passing in contact with the ankle and the wrist joints. In these localities the effect of the injury upon the tendons must be very closely studied. It is extremely rare to have a rupture of the tendon, but what we do have is a laceration of the tendon sheath with its synovial lining.

One of the most striking features of a sprain is the swelling consequent upon the injury. This swelling is primarily due to hæmorrhage. Blood vessels are torn, and blood is poured out. At a later period there is effusion of lymph, which is accountable also for the tumor. It is remarkable how quickly swelling occurs. I had an excellent opportunity a short time ago of observing this fact. I was standing in the corridor of the Children's Hospital when one of the nurses slipped from the topmost step of the stairs leading from the floor above. She tumbled down the whole flight of steps, and complained of having injured her right ankle. I had the boot and stocking removed at once, but, by the time I had the joint exposed, there already existed a fluctuating swelling of great extent on the inner and outer sides of the ankle-joint. This was due wholly to fluid blood which had been poured out of the torn blood vessels.

If we sum up now the possible results of severe sprain in damaging the tissues in and about a joint, we would indicate them thus :

Laceration of ligaments.

Tearing of synovial membrane.

Rupture of the tendon sheath and its synovial lining—possibly dislocation of the tendon.

Damage to the cellular tissue about the joint involving rupture of blood vessels, and in consequence the extravasation of blood.

These possibilities must always be borne in mind when we are called upon to treat a sprain. In many cases all the structures are injured, but the degree of damage varies with the severity of the injury. These remarks apply to all joints, but we occasionally have to deal with individual peculiarities in joint structure which modify the conditions. Thus an inter-articular fibro-cartilage may become dislocated, or bursæ in the neighborhood of certain joints are often damaged very considerably.

The subsequent course of a sprain may be briefly pictured as follows: The swelling tends to increase by the outpouring of lymph, and with this swelling pressure on the nerves causes increased pain. The effused blood and lymph tend to organize, and the tissues become firm and inelastic, unless the effused material is rapidly absorbed. After a time the repair of the torn tissues is accomplished, and whether this is brought about in such a manner as to restore the normal functions of the joint or not depends very much on the treatment adopted.

Injudicious treatment is likely to bring about a condition in which, in consequence of non-absorption of effused material, the blood and lymph organize in the cellular tissue, and this becomes inelastic and unyielding. Further adhesions are produced where laceration of the ligaments has occurred. Then, again, the tendons become firmly adherent to their synovial sheaths. We have, in fact, the condition of affairs which produces the stiff, painful, and misshaped joint, which is so often the result of injudicious treatment.

Clearly, the things to aim at in our treatment are: (1) Early absorption of effused material. (2) The prevention of adhesions. If we can attain this, we will have a complete cure.

One of my chief objects in writing this paper is to call attention to the value of pressure in the treatment of a recent sprain. The suggestion is a very old one, but nevertheless the excellent results to be obtained by this method of treatment are not recognized, excepting, perhaps, by a surgeon who may see many cases of severe sprain, and who, in consequence of the unfortunate results often obtained from injudicious treatment, has come to study carefully the comparative values of the various regulation methods.

Let me explain at once what I mean by pressure properly applied. Imagine we are dealing with an ankle severely sprained. We have examined the joint and determined, as nearly as possible, the extent of the injury. The foot is placed at a right angle (or, if possible, less than a right angle) with the leg. Cotton-wool (ordinary cotton batting is the

best) is applied evenly over the foot from the toes upwards to the middle of the leg. The amount of wool must be considerable. Loosely applied, it should be fully three inches in depth, so that, upon the application of our bandage, it is about one-third of that thickness. Now apply the bandage from the toes up, and draw the bandage as tight as we can draw it. It is all-important that the bandage should be put on as firmly as we can apply it, otherwise we will do little good. There is no danger of making too much pressure, provided we have sufficient cotton-wool. You may imagine that your patient will object, and will suffer pain. I had occasion only yesterday to disprove this. A girl sprained her ankle late in the evening. The pain was severe, and she did not sleep all night. I saw her in the morning, and, at once applied pressure. The moment I finished bandaging the limb my patient informed me that she was absolutely free of pain.

You may rightly ask how I account for this disappearance of pain. Well, the pain is due more to the congestion and dilated condition of the vessels than to the pressure of effused material. The "throbbing" character of the pain would indicate this. Our pressure affords support to the blood vessels; they are no longer dilated. The circulation goes on normally. Eventually this restoration of the normal circulation tends to the reabsorption of effused material, and the swelling disappears. A surgeon who has never tried this method of treatment is greatly surprised with the rapidity with which the swelling goes down.

But our pressure does more than diminish swelling and ease the pain. It keeps the parts at rest. I have already had the opportunity of calling attention to the value of cotton-wool as a splint, if applied in large quantities under a firm bandage. In a paper read before the Clinical Society I referred to this in connection with a case of excision of the elbow-joint where it had been applied. It proves a most efficient splint, and we thus secure rest, a matter of primary importance in the treatment of all injuries. I have tried plaster of Paris over the wool as a means of obtaining absolute fixation in sprained ankle, but I believe it to be quite unnecessary.

By our pressure and rest, then, we attain two most important results :

(1) Restoration of the normal circulation.

(2) Absorption of blood and lymph.

This treatment must not be continued unmodified for too lengthened a period, else we will have a stiff joint from the formation of adhesions. The absorption of effusion undoubtedly does away with one of the conditions so frequently responsible for stiffness, but adhesions may form, and, therefore, early passive movement is imperative. We must remove our bandage and wool at the end of a few days—a week, at the longest—and

carefully conduct passive movement in all the normal directions. Then immediately reapply the pressure to prevent further effusion. As a rule, in ten days or a fortnight—varying with the degree of severity of the injury—the cotton-wool may be dispensed with, and the support of an ordinary flannel roller will be sufficient. In the majority of cases of severe sprain, the individual may be able to use the injured joint for ordinary purposes after the lapse of three weeks.

There are just one or two points to which I wish to refer: (1) A bandage alone without the wool is absolutely harmful; it causes unequal pressure, and injurious pressure on the bony prominences, whilst the depressions receive no support at all. (2) Bandage always from the toes or fingers up, else we will have swelling, discomfort, and actual damage done below the injury.

I do not overlook the value of massage in the treatment of a sprain, but the limited time at my disposal prevents my discussing it. In sprains of slight severity massage may be begun at once with excellent results; and in old sprains massage is by far the most appropriate treatment, and is, in my opinion, indispensable in order to effect a cure.

Heat and cold are, in my estimation, merely temporary methods of relieving congestion, and, whilst they undoubtedly do good for a limited time, they as surely do harm if employed too long. The blood vessels at first contract, but subsequently they cease to respond to the stimulus. Therefore I seldom employ hot and cold water or evaporating lotions in sprained joints.

Neglect to ensure early movement is, undoubtedly, accountable for many cases of stiff joints. This applies to fractures near joints as well as to simple sprains, because the injury to cellular tissue, the organization of effused material, and the adhesions of tendons within their sheaths are apt to result if the joint is kept too long at rest. I need only remind you of the importance of early movement after a Colles' fracture at the wrist or after a Pott's fracture at the ankle to make the point clear. A short time ago a patient, an old lady, was sent to me, who had suffered from a Colles' fracture eight weeks previously. She had worn splints for a month with absolute fixation, and had had very little, if any, movement up to the time she came into my hands. I endeavored to restore the functions of the joint by breaking down adhesions under chloroform, but I failed to do her much good, and she has a joint practically useless. The treatment to which she was primarily subjected was sufficient to account for the sad result.

In many cases of old sprains, particularly in young people and in those who are willing to endure a considerable amount of pain, and who will persevere in carrying out one's instructions, a great deal may be accomplished by breaking down the adhesions under chloroform and subsequent

passive movement and massage. As examples of this treatment and its results, I may refer to two cases which came under my care. With the narrative of the clinical features of these cases I shall close my paper.

CASE 1. M.H., æt. 51, laborer, came under my care with the history that nine months previously he was thrown violently upon his shoulder whilst driving a team of horses. Pain and limitation of movement resulted. For some months he applied liniments, which had been ordered for him, but he received no benefit. Six months after the injury he was told by a medical man that he had disease of the bone, and shortly afterwards he was informed by another professional man that his shoulder had been dislocated. When I saw him nine months after the injury the shoulder presented a perfectly normal appearance. There was no swelling, no redness, and no muscular wasting. The bony prominences were normal in their relation to one another. The patient complained of pain only when the joint was moved; he referred the pain more particularly to the region of the acromio-clavicular joint. He occasionally suffered from a dull aching pain down the biceps and through the shoulder. Movement at the joint was very considerably restricted; there was little or no rotatory movement possible, and the arm could not be carried above the head; forward and backward movement was very limited. The man was healthy, and no family or personal history of tubercular disease. I diagnosed the case as one in which stiffness of the joint had followed traumatism in consequence of the formation of adhesions. Chloroform was administered and the shoulder girdle was firmly fixed by an assistant, whilst movement was carried out passively at the shoulder-joint. On flexing the elbow, and using the forearm as a lever, rotation outwards was performed. A number of adhesions gave way with an audible tear. This was accomplished without undue force. The various movements were carried out, and very free action, indeed, obtained. Subsequently, the arm was kept at rest for a few days, and evaporating lotions applied. After forty-eight hours passive movement was begun, and the patient encouraged to use his arm. He carried heavy articles about, and practised on a horizontal bar, supporting his weight with his arms raised above his head. Three weeks after the operation he expressed himself as being free of all pain, and the extent of movement at the joint was practically normal.

CASE 2. Miss M., æt. 21, was referred to me for treatment six months after an injury to the right ankle. At the time of the accident she was jumping over a rail fence in the country. Her right foot caught in the topmost rail and she twisted it severely. The doctor who saw her treated the injury by placing the foot in plaster of Paris, and keeping it there for two weeks. The foot swelled very much subsequently, and became very painful. The circulation in the foot subsequent to the injury was much

impaired, the part remaining cold and clammy. There was no pain except on movement, when it was considerable. Shortly before coming to me she had been treated by a doctor, who rubbed in ichthyol ointment. The circulation improved somewhat under this treatment, but she was quite unable to bear her weight on the foot. In fact, up to the time she came under my care (six months after the injury), she had been unable to use the foot in walking. There was no history of tubercular disease in the family. The girl seemed strong and of robust constitution. Measurement showed increase of the circumferences of the injured foot, whilst the circumferences around the calf muscles were diminished one and a half inches, this being an evidence of considerable muscular atrophy. Considerable pain was caused by manipulation of the foot, and this was chiefly localized in the region of the mid-tarsal joint. My impression at the time of examination was that the foot had been caught at the time of the accident just across the dorsum, and that there had been a severe sprain in the region of the mid-tarsal joint with some laceration of the ligaments, and some bruising and tearing of the tendons on the dorsum of the foot. There had, undoubtedly, been considerable effusion into the joint, the tendon sheath, and the cellular tissue.

Chloroform was administered, and forcible manipulation caused many adhesions to give way, the tearing being audible to all in the room. The foot was then treated as a recent sprain. Pressure was applied very firmly over cotton-wool. After two days passive movement was attempted, but the pain caused was very severe. A splint was applied with extension in such a way as to flex the foot to a right angle with the leg. It had previously been fixed in an extended position. The splint was continued for two days, and then removed. Passive movement was now freely carried out, and with much less pain than previously. The subsequent treatment consisted in the employment of massage and passive movement. She gradually lost all pain, and the movement became free, so that, eventually, the normal functions of the joint were wholly restored.

Selected Articles.

A PLEA FOR THE EXCISION OF THE INITIAL LESION.*

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EXCISION of the initial lesion as an *abortive* measure has been practised at irregular intervals since 1693, when M. Corbis, of Lille, first excised the sore, contending that the poison had not yet entered the system. Since that time some surgeons have followed his lead, but many more have opposed the treatment. Each advocate of excision has had an idea of aborting the disease, but no one, so far as I know, has advocated the procedure as a method of treatment to lessen the secondary symptoms. I hope to show that by early excision of the initial lesion the disease may be aborted, and by excision in the later stages the secondary symptoms can be moderated.

I am very sorry to disagree with any opinion expressed by my friend, Dr. R. W. Taylor, but I can hardly accept his explanation of the matter as laid down in a very elaborate paper entitled, "Why Syphilis is not Aborted by the Destruction or Excision of the Initial Lesion."† In this paper two particular cases are referred to, and conclusions are drawn from the pathologic condition as demonstrated, but we are not justified in assuming that these conditions existed in an earlier stage of the disease. That would have to be actually demonstrated before an argument could be based on their existence. Again, the condition demonstrated must be constant, and have some particular relation to the dispute in question. If the identical condition can be demonstrated in other diseases, then no conclusions of a positive nature, attributed to one disease, are justifiable. Dr. Taylor concludes from the microscopic appearance in these two cases—one of a chancre of about four days' and the other of ten days' exist-

*Read before the American Association of Genito-Urinary Surgeons, at Washington, May 31, 1894.

†*Medical Record*, July 4, 1891.

ence—that it is owing to the rapid infiltration with leucocytes of the peri-vascular spaces and tissues immediately surrounding the blood vessels. (Figs. 1 and 2.) I quote from his article :

“The point deserving of attention in the first case is the extremely early and far-extending involvement of the blood vessels; although the primary sore in the first case is but of a few days' duration and very small, and under the microscope is of such limited and circumscribed extent, the blood vessels are very extensively surrounded by cell investment, at a considerable distance from the ulcer. The microscope shows *how very deeply rooted syphilis is at the beginning of the sore by having propagated itself along the peri-vascular lymph spaces, and how futile it is, as experience has already shown, to attempt to stay syphilis by excising the primary sore. Apparently, judging from the appearance of the vessels in this case, their involvement begins before the appearance of the sore.*”*

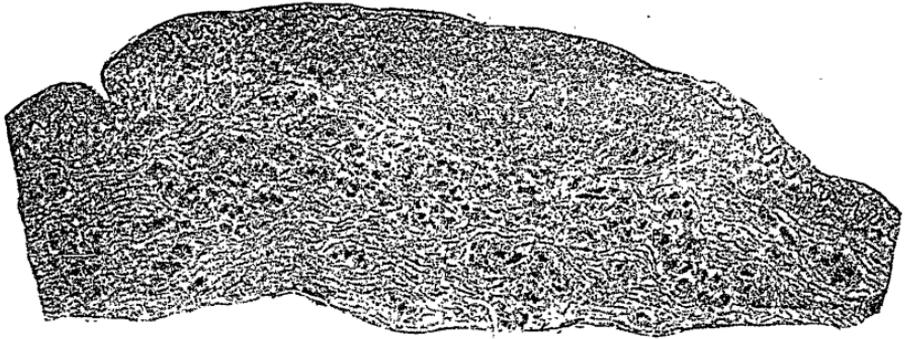


Fig. 1.—Showing the chancre (at the right upper part) and small vessels, with the coat-sleeve arrangement of the cell-infiltration in the deep connective tissue under and beyond the chancre. (Vessels represented by black dots.) [Taken from lithograph illustrating Dr. Taylor's article in the *Medical Record*, July 4th, 1891.]

In the foregoing paragraph no consideration is given to inflammatory change, or to the irritating effect from the development of a toxine at the site of the lesion. We know from bacteriologic studies that an infiltration of leucocytes is found in the tissues in about two hours (or less) after an irritating poison has been applied. This infiltration of leucocytes is all that has been demonstrated here. We are asked to look upon these as the poison of syphilis, but we can hardly do that. Some other conditions must be demonstrated; for instance, a specific bacillus in this tissue. I have here a section made from a chancroid, removed on the second day after its development, which presents identically the same appearance as that described by Dr. Taylor. (See Fig. 3.) I shall quote one paragraph from his paper that will be an excellent description of my specimen :

“This change in the blood vessels consists in the distension of the peri-vascular spaces with small, round cells. Nearly every vessel in the

*Italics are mine.

section, both artery and vein, is in this way enveloped by masses of small, round cells, forming a sheath, like a coat sleeve around the arm. . . . Besides this condition of the peri-vascular spaces, there is a change in the endothelial cells lining the arteries and veins. The endothelial cells are swollen, and seem to be proliferating."

I shall quote one more paragraph from Dr. Taylor's article :

"These studies, therefore, go to show that in the very first days of syphilitic infection, as shown by the chancre after the first period of incubation, the poison is deeply rooted beneath the initial lesion, and that

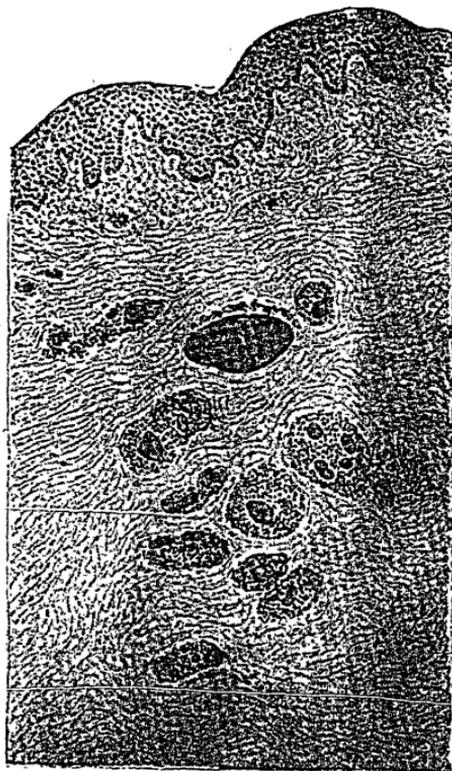


Fig. 2.—Showing coat-sleeve arrangement of the cell-infiltration in the skin, far away from the chancre, which to the eye looks healthy. (Vessels represented by black dots.) [Taken from lithograph illustrating Dr. Taylor's article in the *Medical Record*, July 4th, 1891.]

it extends far beyond it; that it is in a most active state, and running along the course of the vessels it soon affects all the parts beyond, even to the root of the penis. These studies seem to warrant the conclusions that the virus is not localized at the point of entry, and that it does not shut itself in by throwing out a dense wall of circumvallation which, later on, disappears and allows the exudation of the morbid products of the heretofore supposed closed in morbid focus."

Here, again, the infiltration is pointed to as the syphilitic poison. From the conditions found in and surrounding the chancres, Dr. Taylor concludes that the poison is not localized in the sore. Certainly not, after a certain amount of the poison has entered the circulation, but this localized sore is a reservoir from which new poison is continuously poured into the system until the induration becomes entirely absorbed. The paper really strengthens the case of those who advise excision at any stage.

CASE I. J.M., twenty-three years old, presented a chancre that developed twenty-two days after intercourse. He was treated by a druggist, who told him the matter was only trivial. The ulcer was very slow in healing. About six weeks after the man noticed the sore, and before it



Fig. 3.—From a section of chancroid, showing coat-sleeve arrangement around the vessels and general infiltration of the tissue with leucocytes.

had healed, a rash appeared on his body. When he consulted me the chancre was one inch by one-half inch in size, and presented marked induration. The adenitis was excessive and very painful. The rash was general and very profuse. I excised the lesion at once, and the wound healed by first intention. The adenitis began to subside within thirty-six hours, and a marked change took place in the rash within seventy-two hours. I now placed the man upon specific treatment; the sequelæ were few and easily controlled. The first improvement I attributed to the removal of the cause of irritation, and the second to the cutting off of the supply of germs.

While the specific microbe of syphilis has not yet been isolated, it is almost beyond doubt that syphilis is caused by a specific germ. Although

Lustgarten, Zeissl, Klebs, Doutrelepon, Schultz, and others, have all isolated bacilli, yet none has stood the test of further research, and, therefore, we cannot claim to know their absolute importance as a factor in the causation of the disease. The very long period of incubation of the disease and the peculiarity of soil necessary for the cultivation of the bacillus appear to be the most important difficulties in isolating the organism. In the light of recent researches, however, we are justified in arguing from the standpoint of a specific syphilitic germ.

In all germ diseases there is a period of incubation of variable length. In a good many the effect of the germs is self-limited, whilst in others it is continuous. In all forms of these diseases it is necessary that the poison shall be administered or planted in a soil suitable for the propagation of the germs. That mild cases of these diseases occur proves either that a smaller dose of the germs was administered, or that the soil was not properly suitable for their growth, or that both of these conditions existed together. In all cases we have a period of incubation, a period of exacerbation, and a period of recrudescence.

In the milder exanthemata the organism must grow rapidly, and the return to health is unusually rapid. The introduction of the poison into the system is by a different route, we admit, and this illustrates the "one-dose-of-poison" principle. In syphilis this order of things is materially changed, and we observe a longer period of incubation, a greater time again before exacerbation or the manifestation of systemic infection, and a still greater period to exterminate the poison by nature, if, indeed, that is at all possible—which I doubt. Here we have the germ (?) introduced through a broken service, developing at the very point of introduction; this I believe to be capable of administering to the system, not *one dose* only, but many continuous doses of the poison.

The intensity of secondary syphilis has been held to be in direct proportion to the extent of the initial lesion. This I have corroborated, and I have further demonstrated, clearly to myself, that it is also in direct proportion to the time that the initial lesion has existed. This, it appears to me, demonstrates that it is in direct proportion to the quantity of germs introduced and the poisonous toxine generated by their growing in the system. I do not look upon the adenitis, as it appears during the continuance of the chancre, as due solely to the syphilitic poison, but to a double cause—the syphilitic germ plus an inflammatory condition due to the toxine; this is shown by the case here related, in which a subsidence occurred immediately on the removal of the sore.

I do not think that it is possible by any known means to abort the disease, once the germs in sufficient quantity have entered the general system; but I believe the course can be greatly modified by limiting the

amount of the poison entering the economy. By early and free excision, the fewest possible number of germs are allowed to enter the system. In this way medical (or internal) treatment will have less to control.

Excision has been useful in other diseases in which fatal results follow the introduction of a poison, when neglected. The bite of the cobra has, by excision, been prevented from proving fatal. The excision must be practised early and freely to be successful. The effects of rabies have been prevented by free and early excision. Cauterization does not always produce the desired result. Here we are starting a new inflammation, and unless every germ is destroyed the cauterization is useless. We are producing a very suitable soil for these germs to propagate in. The same may be said of cauterizing the wound after excision, unless it be done with, say, pure carbolic acid, which does not prevent primary union.

We should excise freely and bring the edges together, and expect union by first intention. In these cases I believe that undoubtedly some poison must have entered the system, but not sufficient to be a dangerous dose. We have been shown by Biondi, Senn, Watson Cheyne, Hauser, and others, that there is a minimum dose of microbes necessary to produce systemic effects. Small doses produce no effect, and larger ones produce a greater and more rapid effect. Why not the same with syphilis?

The entire ablation of any localized diseased area is a sound surgical procedure. In these days of antiseptic and aseptic surgery, it is the duty of every surgeon to render all diseased areas as nearly as possible aseptic. When excision is impossible, it is likely that free scraping may be practised and the same result attained. The free and early excision of the chancre changes an infected area into a healthy one, and removes a reservoir of growing germs that would otherwise have to pass through the entire economy. In a very short time after the chancre has cicatrized we observe the inguinal adenitis gradually subside until it attains the characteristic bullet-like hardness, and as the induration melts away this hardness also disappears, until we have left only a slight enlargement as compared with that in the first stage.

I wish it to be distinctly understood that I am not advocating the excision of chancres at all stages as an abortive measure, but as a means of lessening the systemic effects. I say again, if it is possible to see the lesion during the first few hours of its existence and to at once excise it, the disease may be aborted. Even with the ameliorating results, I do not allow my patients to be careless about internal treatment. I tell them that the treatment must be thorough, but I feel justified in assuring them that secondary results will be fewer in number and less severe in character as a consequence of the incision, and I encourage a hope that they may not appear.

I shall now report a case in which I think the disease was aborted.

CASE 2. J. McK. consulted me June 18, 1893. He noticed that morning a slight crack on the free border of the prepuce. Fifteen days previously he had had sexual intercourse with a woman of the town. He was under the influence of liquor at the time. On awakening in the morning, he noticed that she had a "skin disease on her body." He did not give the matter any particular attention, other than a careful inspection of the parts. I examined the woman within two hours, and found her suffering from a secondary skin lesion and mucous patches on the vulva. I advised an immediate and free excision of the spot, which he willingly submitted to. The operation was done with antiseptic precautions, and the edges of the wound brought together with fine silk. The wound healed by first intention. No hardness developed in the cicatrix, nor have any symptoms presented themselves up to April, 1894, when I last examined the man.

This case, it appears to me, furnishes as clear evidence of a disease aborted as any that has been published; yet the evidence is in some respects unsatisfactory. At the present time it is absolutely impossible to make a differential diagnosis by the microscope between a chancre and a chancroid. This case may go a long way in determining the course we should pursue in the treatment of the lesion, yet it offers no positive proof that it was syphilitic in character, although the presumptive evidence is very strong.

In six other cases the history is much the same. The wounds healed by first intention in five of them. In the sixth the wound cicatrized after some delay, as the sore had involved the border of the glands, and I did not thoroughly remove the whole of the infected area. The sores had existed for from four to fourteen days. The rash appeared very mildly in all of the cases in from forty to forty-five days from the appearance of the chancre—four entirely escaped any other symptoms. Two had only very slight and easily-controlled mucous patches on the tonsils, but both of these patients had been inveterate smokers and had continued the habit. At least two years have elapsed since the last of this series of chancres was excised, and during the past eighteen months no secondary symptoms have developed in any of the cases.

In considering the subject of excision of the initial lesion, it would be of great advantage if an answer could be made to the question, When is the system infected?

First. Is it immediately on inoculation?

Second. Is it during the incubation period, *i.e.*, prior to the development of the lesion?

Third. Is it subsequent to the development of the lesion?

The first of these—Is it immediately on inoculation?—would, of necessity, open a purely theoretic argument, for which, at the present, I have not the time. I do not believe that it is. All germs require time and a suitable medium for their successful development, the germ of syphilis requiring from seventeen to sixty days—a rather wide range. I know of no means whereby we can detect the slightest evidence of systemic infection immediately after the most suspicious intercourse. Nor, on the closest scrutiny of many observed cases, can the slightest abrasion be discovered.

In reference to the second—Is it during the incubation period, prior to the development of the initial lesion?—again, I believe not. That period of time only has elapsed in which the germ has been able to reproduce itself in sufficient numbers to become manifest, and that at the very seat of inoculation. We have seen that a minimum number of germs are necessary to produce any result. I believe that that number only is attained when the lesion first appears. From this time the increase is fairly rapid. If it were possible to at once excise this spot I believe the system would not be infected, because sufficient of the germs have not been carried into the general system. It cannot surely be argued that the poison had entered the system, been carried throughout the whole economy and back to the very point of entrance, to show itself there and there only. If the system was poisoned before the initial lesion developed, why do not lesions develop on any sore or abraded spots that might have existed on the body during this time? If the system was infected prior to the appearance of the sore, why does it take, on an average, forty-two days longer for the roseola to show itself? Adenitis cannot be discovered before the appearance of the lesion, nor for some shorter or longer time after its appearance.

In reference to the third question—Is it subsequent to the development of the initial lesion?—I answer yes to this. Immediately the germ is developed sufficiently to produce the lesion, the irritation commences, and the lymphatics at once take up the germ or its resulting toxine. The system is now infected, but with the very smallest quantity of poison. This is rapidly augmented, and the poisoning becomes more severe. If, now, the sore is freely excised, possibly not enough poison has entered to produce a systemic effect, but this time must be counted by hours, not days.

The most important and most interesting question, from a clinical standpoint, now presents itself: Does the number of germs that enter the system in any way affect the subsequent course of the disease? If we can demonstrate this point, we have accomplished a great deal for the syphilitic sufferer. It does not sound irrational to say that a little poisonous material

introduced into a suitable medium should take a longer period to contaminate the whole system than would a greater quantity. Nor does it seem to me to be irrational to say that a mild attack of any disease should be more easily controlled than a severe one. The syphilitic germ, like all others, propagates itself in proportion to existing numbers, *i.e.*, after the incubation period has been passed there are thousands where tens existed before. Therefore we should take away any source of an increasing supply and allow the smallest number of germs to propagate themselves in the system. Nature tries to surround this infected area with leucocytes to devour the irritating and poison-producing germs ; but they will not be devoured. She stands by at the glands to arrest them, but without success. Even mucous patches that occur in the mouth and on the tonsils are treated locally as much to prevent systemic reinfection as to remove the unpleasantness caused by their presence. I have endeavored to show that fewer secondary manifestations appear in those from whom the chancre has been excised than in the ordinary case in which excision has not been performed, and, if this is the case, then excision is not only justifiable, but advantageous.

I have tried to base my remarks as much as possible on clinical cases, and have not attempted to quote authorities, with whom, quite possibly, you are more familiar than I am. I advocate the free excision of the sore ; that the wound be not cauterized, except, possibly, with pure carbolic acid, and that the edges be united ; that the operation be done with the strictest antiseptic precautions, including the after-dressing.

I would draw the following conclusions :

(1) That the early excision of the chancres—that is, within a few hours after their appearance—will abort the disease.

(2) That the excision of any unhealed chancre will moderate the subsequent secondary manifestations.

(3) That excision constitutes the cleanest, least painful, and most scientific method of treating the lesion.—*Medical News*.

Clinical Notes.

RETROVERSION WITH SUBINVOLUTION OF THE UTERUS
—ENDOMETRITIS WITH EXUDATION IN BROAD LIGA-
MENT—INTERSTITIAL FIBROID TUMOR OF THE
UTERUS WITH EXTENSIVE LACERATION OF
THE CERVIX — HYPERPLASIA OF THE
UTERUS WITH SEPTIC DEGENERATION
OF THE CERVIX—FIXATION OF THE
PELVIC CONTENTS CURED BY
A NOVEL METHOD.*

BY AUGUSTIN H. GOELET, M.D.,
NEW YORK.

GENTLEMEN,—The first three cases I will show you to-day are new cases, and are what may be called everyday cases, as they are such as one meets in everyday office work. They are, therefore, very instructive, and I hope they will prove interesting to you. It would be of no benefit to you if I showed you unusual cases, which might not otherwise come under your observation in fifteen or twenty years of practice, or if I showed you always cases where abdominal section is required. It is well enough to see such cases, and learn to diagnose the condition, but they are by no means as common as those you will see to-day.

CASE I. The first patient, Mrs. K., is 42 years old, has been married five years, and had one child about a year ago, this being the only time she had been pregnant during her married life. Her delivery was instrumental, which may account for her present condition. She comes because she suffers constant pain in the lower part of her spine, and in the back of her head, and general pelvic pain with bearing down, and leucorrhœa, which is more or less profuse. You have heard her say that she feels this pain in the lower part of the spine, particularly when she is sitting for a long time; and that when she is on her feet she feels as if her womb was coming down. On examination, the first thing you will observe is a laceration of the cervix, which is unilateral, being more extensive on the

*A clinical lecture delivered at the West Side German Clinic, New York.

left side. Next you will notice that the cervix is immediately behind the symphysis pubis, and the fundus has fallen backwards into the hollow of the sacrum, and that the whole uterus is enlarged, occupying a lower position in the pelvis than normal. She has, therefore, a retroversion with some subinvolution. You will be able to detect also by digital touch that the lips of the cervix have already taken on a form of granular inflammation, and as the examining finger is withdrawn you see the examination has produced some abrasion of the surface, as it is stained with blood. Through the speculum this condition is quite apparent.

The treatment which I shall advise in this case is that which I believe will give the most prompt and satisfactory result, viz., repair of the lacerated cervix, with, at the same time, curettage of the uterine cavity, as well as of the canal of the cervix, as it is possible that the condition of granular inflammation involving the cervix extends to the endometrium. After the sutures are removed from the cervix a pessary will be introduced to correct the displacement if it remains. If she consents to the operation, you will have an opportunity of observing its technique. If she declines the operation, the only thing that can be done is to overcome the subinvolution by using the faradic current, as you have seen it employed in other cases of uncomplicated subinvolution, and give electrolysis for the diseased endometrium and cervix. If she neglects treatment, her condition will go from bad to worse.

CASE 2. The next patient comes because she suffers pain in the right side of the pelvis and in the right hip, and has leucorrhœa. She is 42 years old, has been married ten years, and had a miscarriage three years ago. For several months following the miscarriage her menstruation was profuse, continued for a full week, and was accompanied by pain; but for the past two years it has been natural and free from pain. Her general condition, as you see, is good, and she does not give the impression that she is not well.

On examination, the first thing that will be observed is that there is a retroversion, and the uterus is not freely movable, though it is not absolutely fixed. To the right of the uterus there will be found a small mass of exudation involving the broad ligament of that side, and including the tube and ovary, which cannot be distinctly outlined. It will, no doubt, strike you that this mass is not particularly sensitive to pressure, which is not unusual with circumscribed exudations in this location where they are of long standing. This may be accounted for by the fact that all active inflammatory action has long since subsided, and the ovary and tube are buried in this somewhat unyielding mass. The uterus seems enlarged laterally, though it measures only $2\frac{1}{2}$ inches. You will observe that the external os is unusually small, and there is some obstruction to the entrance of the sound at the internal os.

The endometrium is evidently in an unhealthy condition, since a few drops of blood follow the withdrawal of the sound, which was very carefully introduced. There is probably a subacute endometritis. You have observed that the discharge from the cervix, which is slight, is albuminous in character.

I can see no necessity for submitting this patient to dilatation, curettage, and gauze packing, as is customary now with some gynæcologists in dealing with such cases. In cases where the endometritis is in a more advanced stage, as, for example, in the other case which you have just seen, it may be employed with advantage.

In this case I shall use electricity. Mild negative galvanic appliances to the uterine canal to establish free drainage from the cavity and overcome the endometritis, and bi-polar vaginal faradization to stimulate absorption of the deposit. When the deposit has been removed, if the uterus does not resume its natural position, a pessary will be used to sustain it, and faradization will be continued to strengthen the uterine supports. I shall expect, however, that the malposition will be corrected by the time the deposit has been removed.

CASE 3. The next patient, Mrs. G., is 40 years old, and had one child eleven years ago, since which time she has never been pregnant. She complains of backache, pelvic pain, profuse leucorrhœa, and excessive menstruation. These symptoms date back several years, but she cannot say definitely when they first made their appearance.

On examination you will find an extensive laceration of the cervix, and the lips covered with granulations. The uterus is enlarged to the size of the double fist, and is firm, even hard, to the touch. The uterine canal measures $4\frac{1}{2}$ inches, the sound passing up towards the left along a somewhat tortuous canal.

The diagnosis in this case is an interstitial fibroid, involving the right lateral wall of the uterus, associated with which is a chronic granular endometritis.

I shall advise, in this case, ligation of the uterine arteries with a view of cutting off the blood supply, thereby controlling the loss of blood and reducing the size of the tumor. I have had very favorable results with this operation, though I must admit that complete disappearance of the tumor has not resulted in any of my cases, though in several the growth has been reduced one-half within a year after the operation. The bleeding is immediately controlled.

You have heard the patient say since I have mentioned an operation that she has been under treatment at the Woman's Hospital, and left because they wanted to operate upon her. This she did not tell us before. She declines operation, though I have assured her that it involves little or no

risk. We must, then, endeavor to afford her relief by some other means. Electricity will relieve her symptoms, and effect some diminution in the size of the growth. This may be done with the positive pole, used intra-uterine with the platinum electrode, but the process is slow and the result not so satisfactory as with metallic interstitial electrolysis. I shall, therefore, use in this case the zinc electrode with the positive pole, thereby producing very decided cauterization of the endometrium. I have had some excellent results with this form of electrolysis in cases where the ordinary method of application had been employed before with but little benefit. In one case, which some of you have seen here, after using the ordinary electrolysis for a period extending over six months, there was so little reduction in the size of the tumor that I advised ligation of the uterine arteries, which was refused. Because her symptoms were relieved she could not be persuaded it was necessary. We then began zinc electrolysis to the endometrium, and in the last three months, though not more than six or seven applications have been made, the tumor is reduced fully one-half.

The next case is one of hyperplasia of the uterus, with cystic degeneration of the Nabothian glands. The uterus, as you will observe on digital examination, is enlarged and indurated, and you can feel these small cysts under the mucous membrane of the cervix. This is a very obstinate condition, which yields very slowly to any form of treatment.

I shall empty these cysts by puncture with a spear, or a sharp-pointed tenotomy knife will answer the purpose very well. This must be frequently repeated as the cysts come to the surface. In conjunction with this treatment, I have had very good results from negative electrolysis applied to the whole length of the uterine canal. This acts by softening the indurated tissues, and stimulating a natural circulation and nutrition.

I will show you now another case which is not new, but which is interesting because it illustrates the result which may be accomplished by appropriate treatment faithfully carried out.

CASE 5. This patient, Mrs. L., aged 28 years, first came to the clinic something over a year ago. At that time, as the result of a previous pelvic inflammation, there was an extensive exudation surrounding the uterus, and fixing it in the pelvis. This had undoubtedly existed for several years, judging from the history of the case. The pelvic structures were extremely sensitive, rendering it impossible to make a satisfactory examination. The condition was no doubt the result of an old salpingitis and perisalpingitis, following in the track of an endometritis. Some inflammation of the endometrium still existed at that time, and drainage from the uterus was obstructed at the cervical canal. On account of the exquisite sensibility of the parts, no attempt was at first made to introduce

anything into the uterus, but she was directed to have bi-polar faradization with the fine wire current every second day. Improvement was marked from the first, and we were soon able to establish drainage from the uterus in the manner you have seen adopted in other cases I have shown you to-day.

The patient has had no treatment now for five or six months. I will ask you to examine her and tell me what you think of the result which has been accomplished. You will find the uterus now freely movable, and there is no appreciable evidence of the previous exudation or disease of the appendages.

REPORT OF A DISSECTION OF A LEG CRUSHED BY A LOADED SLEIGH PASSING OVER IT.*

BY GEO. A. PETERS, M.B., F.R.C.S. ENG.,

TORONTO.

A LOADED sleigh had passed over the leg in its lower fourth. The skin is found to be divided throughout two-thirds of the circumference of the limb, about two inches above the internal malleolus. The division extends around the anterior, inner, and posterior aspects of the limb, which had apparently been lying on its outer side when the accident was sustained. There are several lines of superficial abrasions below the line of division. The subcutaneous tissue is completely crushed and torn, even under that portion of the skin which is not divided.

Bones. The tibia is broken one and a half inches above the internal malleolus. The fracture is a comminuted one, and several fragments have been separated and lost. The periosteum is stripped one inch from the lower and three inches from the upper fragment, having evidently been torn off by the traction of the muscles to which it remains attached. The fibula is broken (*a*) two inches above the external malleolus; (*b*) again two and a half inches above this point. The intervening fragment is split longitudinally in three lines, and completely flattened, the marrow having been crushed out of the medulla. This fragment was found in the soft parts completely separated from the periosteum. The periosteum is stripped from the upper fragment to the extent of four inches, and remains attached to the peronei muscles.

Muscles. Tendo-Achilles not divided. Soleus crushed from its muscular insertion into this tendon. Skin and fascia torn from the back of tendo-Achilles for about one and a half inches.

Tibialis posticus and flexor longus digitorum. Tendinous portion not divided, but portions which are muscular at the seat of injury are crushed and torn from the tendons.

Flexor longus pollicis, which is almost completely muscular at this level, is entirely torn across, and a shred of the lower portion is herniated through a portion of the posterior annular ligament.

*Presented to the Toronto Pathological Society.

Peroneus tertius. Muscular at this level, completely divided.

Peronei longus and brevis. Tendons not severed, but their muscular portions crushed.

Tibialis anticus and extensor longus digitorum. Same as peronei.

Extensor proprius pollicis. Muscular at this level, entirely torn across.

Nerves. Posterior tibial and musculo-cutaneous stripped from their sheaths and the surrounding tissues, but not divided.

Anterior tibial torn across, and stripped from the sheath.

Arteries and Veins. Posterior tibial artery and venæ comites remain enclosed in their sheath, and are not torn across, though the sheath is separated from all other structures for an extent of about four inches.

Anterior tibial artery is ruptured at the level of the injury, and filled with clot as far as exposed.

Internal and external saphena veins are torn across.

The specimen illustrates the marvellous resisting powers of the nerves and arteries under such terrible crushing force.

It also testifies to the fact that muscles have an attachment to the periosteum so intimate that they are capable of stripping it from the subjacent bone over wide areas, particularly in young subjects.

NOTE ON NEPHRITIS IN THE SHEEP.*

BY DR. J. T. FOTHERINGHAM,
TORONTO.

THE kidney from which the specimens submitted were cut was one which I noticed lying in the window of a Yonge-street butcher shop some weeks ago. Its evidently diseased condition caught my eye, and microscopic examination proves the presence of severe acute interstitial inflammation, apparently pyæmic in origin. The absence of any clinical history of the case is unfortunate, but I venture to submit it as an example of the essential unity of disease processes in homologous animal structures, and a small contribution towards the disproof, if any were yet necessary, of the erroneous views of evolution and of disease still prevailing among the laity, and among such "professionals" as the Christian Scientists, faith healers, homœopaths, *et hoc genus omne*.

The gross appearances of the organ were as follows: Apparently enlarged, pale, and slightly waxy externally; cortex pale and thickened; here and there, on the surface, patches of more marked grayness beneath the capsule. Capsule not too adherent.

Microscopically, the changes noted may be grouped thus:

(1) *Vascular*. Not marked; no signs of congestion; few or no blood masses to be seen in the larger vessels. No pigmentation, as from passive congestion. The glomeruli are all the seat of invasion of inflammatory corpuscles, some of them to a very high degree. In most cases Bowman's capsules are free, but in some the invasion of the irritant has caused marked inflammation of both glomerulus and surrounding tissue, the whole forming a focus densely infiltrated with inflammatory corpuscles. There is no sign of sclerosis.

(2) *Epithelial changes*. The most marked change is an almost universally cloudy swelling, causing the cells to stain feebly in alum-cochineal, and to lose their outline, the lumen of most of the tubules being filled with granular detritus, and the single cells lining them being indistinguishable.

* Read before the Toronto Pathological Society.

(3) *Interstitial tissue.* The brunt of the disease process has been borne by this element of the organ. The low power shows the usual wedge of infiltrated tissue next the capsule, with the inflamed area descending in the medullary rays rather than in the "labyrinth" areas, even almost to the papillæ. There is no increase in the amount of interstitial tissue, and no evidence of cirrhotic process, probably on account of the acuteness of the condition. Neither are there many foci that have gone on so far as to form abscess cavities. Many minute foci of intense beginning inflammation are seen, evidently of an embolic origin, as the tubules in the immediate vicinity are invaded, while from the central infiltrated area fingers of inflammation extend in the intervals between the tubules.

The picture presented is that of death accompanied by high fever, causing the cloudy swelling and epithelial degeneration, and probably pyæmic in character, and the animal cannot, I should say, have been possibly fit for human consumption.

GLIOMA OF THE BRAIN.

BY A. PRIMROSE, M.B.,
TORONTO.

THE following is the history of a case reported at a meeting of the Pathological Society of Toronto. The specimen was shown:

G.B., æt. 42, came to me on March 2nd, 1892, complaining of headache of a persistent character. He had had constant frontal headache for the previous three weeks, the pain of varying intensity, and for a few days immediately before his visit to me he had complained of feeling drowsy. His wife had noticed that for two months there had been marked irritability of temper. Dr. Graham saw him with me on March 6th, when the following condition was noted: The right side of each retina was inactive; he could not see an object when the image was thrown on the right half of the retina; pupils equal and reacted to light. The patellar reflexes were exaggerated on the left side, present on both sides. With dynamometer the pressure exerted was five pounds more in left hand than in right. The power of flexing the foot on the leg was greater on left than right. Cutaneous sensory function normal. There was no delay in transmission and appreciation of sensory impulses.

On the following day (March 7th), several attacks of muscular twitching in both legs were noticed by the attendants. Dr. Reeve examined the eyes, and reported double optic neuritis, more marked on the left side; right homonymous hemianopsia was determined. The pupil did not contract on throwing the light on the right half of the retina, whilst it contracted markedly on throwing the light on the left half of the retina. Pupils equal; no strabismus. It was now ordered that the patient should have 45 grains of iodide of potassium every four hours, and phenacetine in ten-grain doses to relieve headache.

On March 9th some ptosis of right eyelid was noted, and the patient was very drowsy. During the night $\frac{1}{4}$ grain of morphia was administered to relieve pain; two hours afterwards, the nurse noticed that the pupils were contracted and the respirations very slow, six to eight per minute, whilst patient slept heavily. The respiratory action, however, improved, but patient remained very drowsy all the day following.

March 12th, his pulse was 48 per minute; he had spent a restless night. It was possible to rouse him, and with difficulty it was possible to make him understand what was said to him. During the day he had one or two shivering fits. One of these occurred whilst I was there. It consisted of a general muscular twitching of both arms and both legs.

March 13th. Pulse, 48; respiration, 16. Difficult to rouse him. There was some delay in cerebration; he answered questions about ten seconds after they were asked.

On March 14th decided improvement was noted. He talked quite rationally, and asked questions. Pulse, 56; respiration, 18.

The improvement continued throughout the four following days. During this time, however, he complained of pain in the back of the head and neck, and subsequently of a sense of fullness in the head. His mind seemed clear, and he inquired minutely about his condition and his chances of recovery.

On March 19th, after a night of considerable suffering, his condition was very much worse. He was very drowsy, and his respirations became very irregular. Four or five respirations, then a pause, the deepest inspiration being taken immediately after the pause. He remained in a somnolent condition most of the time. At 9 p.m. he was sleeping quietly, when suddenly a distressing attack of muscular twitching came on. These attacks were repeated at short intervals. The whole bed would shake at each seizure. The attacks left him very weak. The breathing became stertorous; this was relieved somewhat by turning the head well over to one side, in order to let the tongue fall forward. The patient died at seven o'clock next morning (March 20th), without having regained consciousness.

This patient had been performing his duties as inspector in connection with the engineer's department of a civic corporation up to the date on which I saw him first, eighteen days before his death.

Autopsy. March 20th, 1892. On removing the skull cap, the dura mater presented a normal appearance. The dura was opened and the brain removed. The surface of the hemispheres was unusually pale. The right optic tract was traced back towards the corpora quadrigemina; it was abnormally soft, and appeared to be flattened out and widened. The crura cerebri were divided at their anterior extremities, and the cerebellum and mesencephalon, with the pons and medulla, were removed; nothing abnormal was detected in them. On examining the cerebral cortex, a spot the size of a twenty-five-cent piece existed on the under surface of the occipital lobe, just within the great longitudinal fissure. The spot referred to was just over the posterior extremity of the inferior occipitotemporal convolution. In that situation it would be in contact with the

upper surface of the cerebellum, and direct pressure might readily be exercised anteriorly upon the right half of the corpora quadrigemina and geniculate bodies with the origin of the right optic tract. The spot on the cortex was of a dirty gray color, mottled, with patches of dark and light color. On feeling over this area a firm material was detected occupying the occipital lobe, within the interior of the brain substance. On cutting into this, a tumor as large as a small-sized hen's egg was found occupying the occipital lobe. It was very near the cortex on the inner and under surface, but was some distance from the surface on the upper and outer surface, normal brain tissue intervening.

The tumor appeared to be encapsuled, and presented an appearance of a spongy texture; an interlacement of fibres, in the interstices of which existed soft material resembling very much the débris found in a caseating gland. There was no fluid in the tumor. The ventricles seemed to contain an unusually small amount of fluid.

Microscopic section of the growth proved it to be composed of cells, most of them round or oval in outline, and many of them exhibiting branches which seemed to communicate with similar branches of neighboring cells. The protoplasm of the cell is finely granular in appearance. The section shows an abundant supply of blood vessels, and exhibits one or two minute extravasations of blood.

Some points of interest in connection with this case are:

(1) The locality of the headache (frontal until shortly before death) in this case illustrates the fact, as stated by authorities on brain tumors, that the locality of the pain does not always correspond to the locality of the disease.

(2) The pain complained of shortly before death in the occipital region was probably due to irritation of the meninges in the region of the growth, and the muscular twitching (which was not unilateral or confined to any one group of muscles) was due either to a meningitis of a more general character, or to pressure exercised at the base of the brain.

(3) The failure to produce contraction of the pupil by throwing a beam of light on the blind half of the retina, whilst reaction to light was marked on the other half of the retina, is extremely interesting. It enabled those who saw the patient to assume that the hemianopsia was due to a tract lesion and not to a cortical lesion solely—a point of great importance, as it at once decided the question as to whether or not operation were indicated for the patient's relief. In reference to this point in diagnosis, Ferrier states in his Croonian lectures on cerebral localization as follows: "A distinguishing test between tract and central hemiopia consists in determining whether a pencil of light thrown on the blind side of the retina induces contraction of the pupil or not. As the optic tract is the path of

the fibres which excite pupillary contraction through the oculo-motor centres, as well as those which excite visual sensation in the cortex, lesion of the optic tract will cause not only hemiopia, but also paralysis of the reflex reaction of the pupils to light ; whereas lesion of the cortical centres will cause hemiopia and leave intact the pupillary reaction."

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

Professor of Obstetrics in the University of Toronto; Obstetrician to
the Toronto General Hospital.

ASSISTED BY

H. CRAWFORD SCADDING, M.D.,

Physician to Victoria Hospital for Sick Children.

PUERPERAL NEURITIS.

With an expansion of our knowledge of the complications of the parturient and puerperal states, and with a growing familiarity with the lesions of the peripheral nerves, we have come to learn that the intoxications dependent upon infection through wounds and lacerations resulting in the course of childbirth may give rise to a multiple neuritis comparable to that of rheumatic, plumbic, alcoholic, or other like origin. A typical case of this kind was recently reported by Lountz (*Nouvelles Archives d'Obstétrique et de Gynécologie*, 1894, No. 9, p. 419) at a meeting of the Société de Neurologie, of Moscow. The patient was a primipara, twenty-four years old, who passed through pregnancy and labor without complication, the child dying, however, on the fifteenth day. Three weeks after the labor the woman presented swelling of the face, œdema of the extremities, difficulty of deglutition, diplopia, pains in the extremities, and then numbness and weakness of the upper and lower members. Common sensibility was little affected, but the muscular sense was impaired. The knee-jerks and the elbow-jerks were abolished, and electric irritability was diminished. These symptoms were progressive for two weeks. To them were added arrhythmia of the heart, acceleration of the pulse, and attacks of suffocation. The lower extremities became entirely paralyzed. By and by, however, the symptoms gradually ameliorated, except the paraplegia, which persisted for a long time. It is assumed that this depended upon a polyneuritis due to infection through a laceration of the perinæum incurred during labor.—*Medical News*:

VOMITING OF PREGNANCY.

A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritis pudendi of the puerperal condition yielded as readily, and to one application.—*Medical and Surgical Journal*.

PLACENTAL MOLES.

Kehler (*Archiv fur Gynakologie*, Bd. xlv., H. 3), after giving an exhaustive series of statistics regarding mole pregnancies, arrives at the following conclusions:

Twelve per cent. of his cases had had precedent abortions. Previous general health or genital disease seemed to exercise but little influence in the production of moles. Vomiting in such cases the author does not find more common than in normal pregnancies. A feeling of debility seems to be more common and more severe in mole than in normal pregnancies. Pain in the abdomen was noted in 42.5 per cent., but there was nothing characteristic in the pain, and no tenderness was noted. Œdema of the lower extremities was seen in 30 per cent. of cases. This condition seems more frequent here than in normal pregnancies, but in some of the cases nephritis was coincident.

A significant largeness of size of the uterus, not corresponding to the time of the pregnancy, was noted, and this increase in size was without evidences of foetal extremities or heart beat. This symptom the author regards as suggestive.

Uterine hæmorrhage occurred in forty-one out of fifty cases; it was irregular and intermittent, and in fourteen cases it was severe.

The author has demonstrated that the majority of mole pregnancies end in abortion between the fourth and fifth months.

It has been found in forty-five out of fifty cases that the duration of birth was twenty-four hours. In two-thirds of his cases the duration of labor was under six hours. Labor pains were weak in 22 per cent.; regular and moderately strong in the same percentage; strong in 52 per cent., and intermittent in 4 per cent. Hæmorrhage was entirely absent in 12 per cent., but in somewhat over half of the cases severe hæmorrhage occurred during birth. In some this bleeding was severe enough to produce syncope. The size of the moles varied from one-half to three kilo., and their diameter from eight to thirty centimetres.

In two-thirds of the cases the expulsion of the mole can be left to uterine contractions alone. If hæmorrhage be present, the antiseptic

vaginal tampon should be used. The author advises induced abortion in all cases when the diagnosis is established. Regarding the puerperal period in such cases, two-thirds of all patients experience no special disturbance; the average duration of the puerperal period was fifteen days. Complete restoration to health followed in two-thirds of the cases.

Subsequent menstruation occurred normally in 51 per cent., freely in 37.7 per cent., irregularly in 6 per cent., returned but once in 2.2 per cent. In 5 per cent. there was no return of menstruation. Secondary sterility has been observed scarcely more frequently than after abortion.

The pathology of the placental mole the author regards as the following: (1) The membranous tufts have the same form as the normal embryonic tufts or chorion tufts of the first two months.

Moles have certain important life peculiarities, as: (1) The membranous tufts consist of living, growing tissue elements. (2) They draw their nutrition immediately from the uterine walls. (3) Notwithstanding this apparently unfavorable condition, the tufts do not fall into necrosis as the chorion tufts do after withdrawal of the blood supply, but continue to live and grow.—*American Journal of the Medical Sciences.*

THE TREATMENT OF THE ACCUMULATION OF MILK IN THE BREASTS OF THE NEWBORN.

Opitz (*Berliner klinische Wochenschrift*, June 25th, 1894), after considering the frequency of milk accumulation in the breasts of male as well as female infants, speaks of the tendency of nurses to empty them by rubbing and pressure. Such maltreatment of the infantile mammary glands may easily be followed by abscess, which, in female infants, may greatly interfere with the subsequent function of the glands. The swollen glands are best covered with a non-irritating plaster, as lead plaster, which should be daily renewed. The accumulated milk will disappear in a few weeks.—*Univ. Med. Mag.*

PUERPERAL ECLAMPSIA AND ITS TREATMENT.

Ferré, Pau (*Nouv. Archiv. d'Obstet. et de Gynéc.,* September, 1894). The author relates two cases of eclampsia, both of which were treated successfully by hypodermic injections of an eight per cent. solution of common salt in distilled water. From 200 to 700 grammes were injected at a time by means of Dieulafoy's apparatus. Ferré observes that "Porak believes that the introduction of a great quantity of saline water increases blood tension, and, in this way, leads to re-establishment of renal secretion," but he himself is inclined to think that the diminution of renal secretion is the result of the eclamptic seizures, and that the introduction

of large quantities of water acts as a nervine sedative by diluting the toxic matters in the blood and thus diminishing their power. The suspension of the attacks allows the circulation to recover its balance, and the secretions become re-established; thus, as in Ferré's two cases, the periods of complete or partial suppression are succeeded by those of polyuria.—*Med. Chronicle.*

INDUCTION OF PREMATURE LABOR BY THE USE OF GLYCERIN BOUGIES.

Theilhaber (*Centralblatt für Gynakologie*) contributes a description of a method of using glycerin bougies for the induction of premature labor. For two years past Pelzer's method of inducing labor by injection of sterilized glycerin between the membranes and the uterine wall has been well known. While it is usually effective in inducing uterine contractions, dangerous results, such as chill, fever, violent vomiting, and evidences of interstitial nephritis or hepatitis are also reported. These seem due to the chemical irritation of the glycerin on the uterine wall, and to its absorption rather than to any osmotic action it may set up between the fluids of the ovum and itself. The hypodermatic injection of glycerin causes hæmoglobinuria and interstitial nephritis. The simplest and least hurtful method of applying glycerin to the intra-uterine surface is that of glycerin bougies. These consist of a rounded thin bougie of fish bone, covered with a thin layer of 1 per cent. of sublimate collodin. Over this is a mixture of 5.9 per cent. glycerin and gelatin, which, to prevent moulding, is mixed with 2 per cent. tricresol. The bougies are packed in waxed paper that is smeared inside with 3 per cent. tricresol vaseline. Besides these, a second sort are prepared which contain as a nucleus a fifteen centimetre fish bone, and are coated with a 7.5 gramme of glycerin and gelatin. One case is narrated of the use of these bougies by the author with excellent results, two bougies being used. How much influence the mere presence of the bougies had upon the case is uncertain, but it is believed that the glycerin greatly hastened the desired result. The small amount of glycerin used could scarcely be productive of danger.—*American Journal of the Medical Sciences.*

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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A CASE OF CYSTINURIA.

Hall (*Quarterly Medical Journal*, vol. iii., part 1, p. 26) has reported the case of a miner, thirty-two years old, who complained of lumbar pains and of having passed stones ; but examination with a sound failed to disclose the presence of a calculus in the bladder. The man was of good habits, and had lived in the same locality for eighteen years. He had suffered a good deal from sick headache. Ten years before coming under observation he had an attack of what was called pleurisy on the right side, in the course of which he passed a stone the size of a pea. Subsequently he began to suffer from pain in the back on both sides, and twelve months later passed another small stone, which caused much pain. After this he passed various-sized stones every year, more in the spring than at other times ; the largest number was four in one day and fourteen in one month. The largest stone was passed a few years before the man came under observation, when he lost also about a pint of blood. The last stone had been passed seven months previously. The pain radiated from the back to the testicles, causing in these a sense of heaviness. From time to time attacks of colic occurred. The urine was clear and high-colored, and deposited a sediment. There was tenderness on pressure over the loins, and well-marked cutaneous hyperæsthesia in the middle line from the twelfth dorsal to the third lumbar spine, and passing from this outward in a somewhat triangular shape and ending at the mid-axillary line. On the right side in front there were one or two spots of hyperæsthesia over the anterior superior spine of the ilium ; and on the left one or two spots somewhat higher, also over Poupart's ligament as far as the external abdominal ring.

The patient brought with him seven calculi which he had passed by the urethra at different times. The largest measured half an inch by a quarter of an inch. It was ovoid in shape, of a honey-yellow color, with sparkling crystalline surface ; on fracture it presented a yellow, powdery appearance. The other stones were quite small, three being faceted.

The calculi were insoluble in water and soluble in ammonia, and also in nitric acid. On evaporation large hexagonal crystals of cystin remained, together with rhombic prisms arranged in star-shaped clusters. The urine was alkaline in reaction, and contained neither albumin nor sugar. It deposited a copious sediment consisting of phosphates, together with small round masses with radiating lines not soluble in acid, but disappearing with heat. These latter were believed to be ammonium urate. For a few days the patient was not placed upon treatment, in order that a study of the urine might be made. The quantity passed varied between 40 and 58¼ ounces in twenty-four hours. On several occasions cystin-crystals were found.

Alkaline treatment was then instituted and continued for seven weeks. This consisted in the administration of a combination consisting of potassium bicarbonate 12 drams, citric acid 8 drams 24 grains, and water 12 ounces, of which an ounce was taken in water every three hours. During this time the daily quantity of urine averaged 69.7 ounces. The patient felt much better and suffered much less pain. Throughout this whole period no crystals of cystin could be found, though frequent examination of the urine was made, but as soon as the treatment was suspended the crystals appeared. The patient was dismissed and advised to continue the alkaline medication, but he disappeared from observation.—*Medical News*.

INTERNAL HÆMORRHOIDS.

Dundore, after an exhaustive paper on the subject of internal hæmorrhoids, concludes as follows :

(1) The ligature is the safest method of operating for internal hæmorrhoids, as there is less likelihood of its being followed by hæmorrhage, stricture, or ulcers.

(2) The clamp and cautery cause less pain, shorter convalescence, and are less likely to be followed by retention of urine than when the ligature is used ; but hæmorrhage and stricture of the rectum may very often follow their improper application.

(3) The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hæmorrhoids it should never be used, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

(4) Simple dilatation of the sphincter, injection of carbolic acid, and Manley's method are simple palliatives, and their use is very limited.

(5) There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.—*Mathews' Medical Quarterly*.

PIPERAZIN.

Of great benefit in four cases of renal colic treated by the author. Dose, 5 to 10 grains (0.32 to 0.65 gramme) with 5 grains (0.32 gramme) of phenocoll in lithia water every two hours. The amount of urine is rapidly increased and the pain relieved. The angles of the calculi are dissolved, and they are thus passed without pain. Phosphatic calculi are broken up by the destruction of the cementing matter. Large quantities of the drug may be used without untoward symptoms. As it is not irritating, it has been of great advantage in washing out the bladder in cases of vesical calculus.—*New York Medical Journal*.

TO RELIEVE DYSURIA OF GONORRHŒA.

The following has given brilliant results to the author :

R.—Sodii salicylate.....	ʒii.
Tr. Belladonna.....	ʒi.
Tr. Aurantii.....	ʒi.
Aq. dest.....	ad ʒvi.

Sig.—One tablespoonful every third hour.

—*R. J. Blackham, in Clinical Journal*.

AUTO-INOCULATION OF HARD CHANCRE.

S. Nolin, in *Norsk Magazin for Lægevidenskaben*, reports three cases of this kind. In the first the seat of the chancre was on the inner side of the eyelid, which the patient had rubbed continually, a particle of iron having lodged in the conjunctival cul-de-sac. In the second case the chancre was inoculated in the right armpit ; while in the third it occurred in the folds of the prepuce.—*Universal Medical Journal*.

[I have seen one undoubted case of this kind. The original chancre was on the free border of the prepuce and the inoculated sore was on the glans peni, at the exact spot where the chancre came in contact with it.—*E.E.K.*]

Editorials.

THE MEDICAL PROFESSION OF ONTARIO AND THE LEGISLATURE.

WE publish with pleasure in this issue that portion of the very able address of the Minister of Education, delivered at the recent banquet of the Medical Faculty of the University of Toronto, which refers to matters of interest to the medical profession of this province. He first asks the question: "Would it not be in the public interest to abolish the Medical Council?" This brings to our attention the fact that certain parties are advocating the abolition of that body. Dr. Ross then goes on to refer to the monopoly cry, and the desire for a readjustment of the standards for admission to the study of medicine, and a shorter and easier course in every respect.

It is difficult to conceive why any intelligent body of men should desire a lowering of the standards in medical education. We hope the members of our profession will take some active interest in this agitation, no matter how absurd or unreasonable it may appear to them. Experience in the past has taught us that the public does not like anything bearing even the appearance of a monopoly in the medical profession. Some unscrupulous men are now endeavoring to show that doctors, through the means of their medical parliament, are trying to erect "insuperable barriers in the way of entrance to the profession" from purely selfish motives.

Extremists among our physicians have, by certain unwise utterances, assisted in creating a suspicion in the minds of many that they would gladly see something like a monopoly. It is well for us to remember one simple fact—if we seek for legislation which is clearly in the interests of the public, we are not likely to meet with any strenuous opposition; but if we attempt to procure the enactment of laws that are purely in the interests of our own beloved selves, the profession of Ontario, we will certainly encounter very serious opposition. We believe, however, that we can very confidently state that the existence of the Medical Council, as at present constituted, and the high standards which are required in

accordance with the council's curriculum, are decidedly in the interest of the public. Our citizens will undoubtedly be much safer in the hands of educated, scientific physicians than they would be under the charge of half-educated, unscientific practitioners, who are very apt to degenerate into unprincipled charlatans.

THE PROPOSED PARK HOSPITAL.

WE have heard much about a "Park hospital." The generous gift of the late Senator Macdonald was apparently very highly appreciated by all classes of citizens in Toronto. The friends of the new hospital scheme were many, the enemies—visibly—none. The government, the university, the affiliated institutions, the public, all favored the erection of a hospital which, for many reasons, was likely to do exceptionally good work in the way of assisting suffering humanity, and, at the same time, advancing the interests of scientific medicine.

Such was the position of matters connected with this proposed hospital a few years ago. What is the position now? Dr. McArthur, the chairman of the Toronto dinner, made some allusion of a felicitous character to the subject in his opening address. Mr. Mulock, the Vice-Chancellor, in responding to the toast, "Toronto University," made the unwelcome announcement that he was "sorry to say the indications were that there would be no Park hospital, which, he thought, would be a calamity." What is the cause of such a threatened calamity? Unexpected opposition has arisen in some mysterious way, that no one, so far as we know, can satisfactorily explain.

We will not now attempt to discuss the causes of the obstruction, which, in certain quarters, we have to confess we are utterly unable to fathom. We are not without hope that better counsels will soon prevail. The prospects appear to be very dark now. The words of the Vice-Chancellor, evidently spoken in deep sorrow, are very discouraging. Still, we can see no reason why united efforts on the part of those who were once friendly to the scheme should not, even now, be successful in removing the obstacles that block the way.

THE MEDICAL COLLEGE DINNERS.

THE medical students' dinner has been for some time a "recognized institution." For eighteen years the students, with the members of their faculties, friends, and representative guests, have annually met at the festive board on the occasion of the "annual banquet." It appears to grow

bigger, broader, and longer from year to year ; and one begins to wonder when the limit will be reached. Fancy the amount of enthusiasm that will keep "the boys" together at a cold-water dinner for eight solid hours, with their blood gradually, but steadily, rising from normal to an almost dangerous fever heat ! Think, at the same time, that the enthusiasm is still bubbling over at the end of all these hours ! Then tell us if you have ever seen anything like it in the whole "wide, wide world."

We think we are undoubtedly correct in saying that these medical dinners are the most successful of all the college banquets that are held in Toronto. There appears to be a perfect system of organization among medical students which enables the managing committees to retain all the excellent features of former dinners, and, at the same time, to add during each succeeding year something in the way of improvement.

The students of Trinity Medical College held their banquet in the Rossin House on Thursday, November 29th. Report says that Mr. George Elliott proved a most able and efficient chairman. The numbers in attendance were large, and the dinner is said to have been a great success in every respect.

The banquet of the students of the Medical Faculty of the University of Toronto was held in the same place, one week later, Thursday, December 6th. Dr. W. T. McArthur, the chairman, made an admirable speech in opening the intellectual part of the feast, and was well supported by his brother students during the short hours of the night. The various students who were placed on the programme, both in the capacity of speakers and singers, acquitted themselves in a very creditable manner. Many excellent addresses were delivered by members of the faculty and certain of the guests. These were evidently highly appreciated by the students, who fully testified as to their appreciation with *no uncertain sounds*. We have much pleasure in congratulating Mr. McArthur and his co-workers on the committee of management for the brilliant success which attended their efforts to make this one of the best banquets in the history of this Medical Faculty.

LODGE PRACTICE.

WE have been asked to answer the following question : "A physician is employed by the Foresters, or any other society, as a physician to attend members of the lodge for, say, one year at a dollar a year for each member. Is such a physician supposed or compelled to perform surgical or gynecological operations on such members without any remuneration save the annual fee of one dollar?"

In a general way, the correct answer is yes ; but, of course, it depends largely or wholly on the terms of the contract. If a physician enters into a contract to attend the members of a society for a certain sum without any definite conditions, we understand the courts will recognize no difference between the treatment of an influenza and the opening of an abscess. A physician in this country is recognized as a person licensed to practise medicine, surgery, and midwifery.

Is the lodge doctor expected to perform major operations and treat obscure diseases of the eye, ear, etc. ? Or if he considers that he is not capable of performing any operation, or treating any special disease, can he, by refusing to do anything beyond his abilities, be relieved from responsibility for such work ? There seems to be considerable doubt with reference to certain points involved in these questions ; but we have been informed that the doctor who simply undertakes to attend the members of a lodge during illness, with no qualifications or reservations, is compelled to treat all diseases, whether surgical, medical, or special, or, if he is unable to do so himself, must get the work done by others.

A recent decision by one of our judges in Toronto created some surprise. According to the general by-laws of a lodge, no member was entitled to any "benefits" if incapacitated for work by venereal disease, or any other contracted in consequence of his own wrongdoing. The regular surgeon of the lodge attended a member for certain sequelæ of syphilis, and sent in his bill in the ordinary way. Payment being refused, he sued his patient, but was nonsuited by the judge on the ground that the contract between the doctor and the lodge did not show that any exception was to be made in such cases. He practically ruled that, under the circumstances, the "benefits" included only the ordinary payments per week to which members were entitled during illness not induced by their own imprudences.

It practically amounts to this, that the physician who undertakes unreservedly to attend the members of a lodge for a certain sum of money gives up his independence entirely, and, as the lodge's hired man, had better meekly obey orders, and ask no questions. We understand that the physicians of Toronto, recognizing this fact, have taken care in recent years to introduce certain clauses in their contracts which limit, to some extent, the responsibilities which they have to assume. In some cases exceptions are made as to the performance of serious surgical operations, or the treatment of certain diseases which are recognized as coming within the province of specialists. In the case of women (we understand that women's lodges are growing and multiplying rapidly), exceptions are generally made as to obstetrical and gynæcological work. To the physician who determines to do "lodge" practice we have only to say—

your responsibilities will depend upon the provisions of your contract. In deciding to give up certain prerogatives of manhood, look into the matter in a business way, and make the best terms you can. The best will always be poor enough.

THE MEDICAL PROFESSION OF ONTARIO AND THE LEGISLATURE.

Abstract of Address delivered at the Banquet of the Medical Faculty of the University of Toronto, December 6, by Hon. Geo. W. Ross, LL.D., Minister of Education.

IT is likely the medical profession and its privileges will be up for discussion before the next session of the Legislative Assembly, and it is possible the question may be asked, Is there any good ground for throwing around the practice of medicine any statutory safeguards whatever? Would it not be in the public interest to abolish the Medical Council and allow the various colleges and schools of medicine in the country the fullest liberty in the matter of issuing licenses to practise medicine? You are doubtless aware that the Medical Council was first established in 1866 by the old parliament of Canada, that since that time medical councils having jurisdiction somewhat similar to the Medical Council of Ontario have been established in England and a great many States of the American Union. The object of the legislature in establishing the council was not so much to protect the profession as it was to protect the public. Different schools of medicine and colleges were found to be competing with each other for students, and, from the desire which students usually have to find, if possible, some royal road to learning, the college offering the greatest facilities for an easy degree might possibly have the largest number of graduates. It will be for the medical profession to show that the protection given to the public by the establishment of the Medical Council has not unintentionally resulted in creating a monopoly for the medical profession, or erected insuperable barriers in the way of entrance to the profession, that the Medical Council has itself been progressive in the highest sense of the term, and that through its examinations professional education has not been retarded, but rather advanced.

Then, when you have justified the existence of the Medical Council, as I hope you will be able to do, you may be asked to readjust the standards of the profession. For instance, it is said that the standard of admission to the profession should be lowered, the course of study shortened, and the additional year for clinical study under a regular practitioner abolished. Each of these objections must be examined on

its merits. Does the standard for admission now prescribed deter any person of reasonable ability from entering the profession? Are the obligations imposed by the medical profession upon the students, either in the way of fees, or studies, or clinics, so great as to interfere with that freedom of professional movement or choice which should be the privilege of everyman in a free country?

It will be your duty to answer this question. And, if I am not very much mistaken, your answer will be that the supply is quite equal to the demand, and that the standards required by the medical profession, while not preventing any person from entering the profession who has talent, energy, and a moderate amount of capital, furnish a guarantee—a very proper guarantee—to the public that the licentiate of the council is a *bona fide* physician, equally learned with his fellows, of similar standing in any part of this continent, or any other continent where medicine is included among the learned professions.

But these elementary questions may not exhaust the legislative catechism in which you are likely to be drilled. For instance, you may be asked to consider whether you should be allowed to continue to exercise the right you now possess of disciplining the profession. Have you exercised that right prudently? Have you ever expelled a member because he wore a high hat, or dressed too dudishly, or drove too fine a turnout? Have you so terrorized and tyrannized the members of the profession generally that, rather than endure such bondage, the best of them have resigned their license, and taken to law or politics, or aldermanic honors, or some other more lucrative calling than medicine? Have your rules for professional etiquette and honor lost to the country any doctor whose great talents thus summarily extinguished could fairly be called a public loss? If not, you must be prepared with evidence, for it is quite possible the charge will be made.

You see from these brief observations how much of the time of the Legislature of Ontario may be taken up with the considerations of professional matters in which you are, no doubt, deeply interested. I cannot speak for this legislature, I have not seen it yet, but I will be greatly surprised if it will lend itself to any legislation which will lower the educational standards of the medical or any other profession, or will give for one moment color to the idea that the Province of Ontario is tired of professional excellence, skill, knowledge, and experience, and longing for an era of quackery, patent medicines, and manufactured advertisements. The medical profession deserves well of the people of Ontario. It has been most unselfish in its efforts to promote the public health and improve the sanitary conditions of the country. It has been at all times ready to accept every discovery in medical science which is calculated to prolong

life, or relieve suffering humanity. By years of effort and at great cost to the profession itself (for the public treasury has not been available for its purposes), it has placed medical education on a broad foundation, and has enlisted in its service many of the ablest men which the country has produced. It has been generous without jealousy towards every other profession. It has given good value for every privilege which has been of real service to the profession itself or to the country. Should it appear that it has privileges which are of no substantial use, or which may be used to cast discredit upon the profession, let them go; but as to the great and fundamental characteristics of the legislation, which is of far greater advantage to the public than it is to the profession, the greatest consideration should be given to any proposal for a change. So long as frail humanity is heir to so many ills, medical men will be in demand. Let us have the best that skill and training can supply, and let us have the honor of training them ourselves in our own colleges and universities, and in such away as to suit the genius of our own people.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—I have learned that the *Index Medicus* will cease to be published with the February number, owing to lack of support, and the fact that a large number of its subscribers are delinquent, unless an effort is made to continue it.

The value of this publication to those who do any work at all in connection with medical literature is so great that I take the liberty of writing to you to express the hope that you will not only become a subscriber, but will urge other of your professional friends to do so.

It is particularly necessary that the *Index Medicus* should be continued, owing to the fact that after the completion of the supplementary volume of the Index Catalogue of the Surgeon-General's Library there will be no record of contemporary medical literature, and he who desires to keep pace with it, or who wishes to study a particular subject, will have to resort to the laborious task of seeking in various journals that which he desires if the publication of the *Index Medicus* ceases.

It will be possible to continue the *Index Medicus* if 500 new subscribers are obtained. The subscription price is \$10 per annum, which should be sent to Mr. George S. Davis, publisher of the *Index Medicus*, Box 470, Detroit, Michigan.

As the *Index Medicus* can never be made a success from a commercial point of view, because of the peculiar scope of its work, I have no hesitancy in making you acquainted with these facts, and I earnestly hope that you will insert a notice emphasizing the importance of this matter in the columns of your valuable journal.

H. A. HARE.

Book Reviews.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Forty-fourth annual meeting, held at Philadelphia, May, 1894. Philadelphia: The Edwards & Docker Co., Printers.

The annual meeting of this society was held in Philadelphia, May 15th, 16th, 17th, under the presidency of Dr. H. G. McCormick, of Lycoming county. This society has published its transactions for about twenty-five years. This volume contains the minutes of the proceedings; the address of the president; special addresses in surgery, medicine, obstetrics, mental disorders, hygiene, and ophthalmology; and about forty papers on various subjects coming within the range of medicine, surgery, and obstetrics. The addresses and papers are, as a rule, practical in character, and excellent in quality. Unfortunately, the discussions are omitted, but otherwise there is no room for adverse criticism. Evidently the society is in a prosperous condition, and a perusal of this valuable volume of transactions will convince any reader that it contains many members who are possessed of marked ability. Dr. John B. Roberts, of Philadelphia, is the president-elect, and Dr. William B. Atkinson, also of Philadelphia, the secretary for the coming year.

MODERN HOMŒOPATHY: ITS ABSURDITIES AND INCONSISTENCIES. By William W. Browning, A.B., LL.B., M.D., Brooklyn, N.Y., Lecturer upon and Demonstrator of Anatomy, Long Island College Hospital, etc. Philadelphia: Press of William F. Fell & Co., 1220 Sansom street.

The following is the publishers' notice: "This essay was awarded the prize of \$100 offered by Geo. M. Gould, of Philadelphia, and is designed for distribution by physicians in order to disseminate more enlightened views upon the subject of which it treats. Copies of the pamphlet may be ordered of Dr. Geo. M. Gould, 119 South Seventeenth street, Philadelphia, at the rate of fifty cents a dozen, delivered. The unexpected popularity of the large first edition has warranted the printing of this still larger second edition, and has made possible a reduction in the price."

This is a very able and very readable pamphlet containing thirty-two pages of reading matter, well printed, and presented in a neat form. Notwithstanding all that we hear about homœopathy, few general practitioners, and, probably, few homœopaths themselves, have any intelligent conception of the doctrines of Hahnemann. We desire all who want to learn something about these doctrines to procure this interesting essay.

THE MEDICAL NEWS VISITING LIST FOR 1895. Weekly (dated, for 30 patients); monthly (undated, for 120 patients per month); perpetual (undated, for 20 patients weekly per year); and perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book with pocket, pencil, and rubber. Seal grain leather, \$1.25. Philadelphia: Lea Brothers & Co., 1894.

The Visiting List for 1895 has been thoroughly revised and brought up to date. The text portion (32 pages) contains useful data for the physician and surgeon, including an alphabetical table of diseases, with the most approved remedies, and a table of doses. It also contains sections on examination of the urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, and the ligation of arteries. The classified blanks (160 pages) are arranged to hold records of all kinds of professional work with memoranda and accounts. When desired, a ready-reference thumb-letter index is furnished, which is peculiar to this Visiting List, and which will save many-fold its small cost (25 cents) in the economy of time effected during a year. In its several styles "The Medical News Visiting List" adapts itself to any system of keeping professional accounts. In short, every need of the physician seems to have been anticipated in this invaluable pocket companion.

A SYSTEM OF LEGAL MEDICINE. By Allan McLane Hamilton, M.D., Consulting Physician to the Insane Asylums of New York City, etc., etc., and Lawrence Godkin, Esq., of the New York Bar, with the collaboration of Prof. James F. Babcock, Lewis Balch, M.D., Judge S. E. Baldwin, Louis S. Binse, Esq., C. F. Bishop, Esq., A. T. Bristow, M.D., B. F. Cardozo, Esq., C. G. Chaddock, M.D., A. F. Currier, M.D., C. L. Dana, M.D., George Ryerson Fowler, M.D., W. T. Gibb, M.D., W. S. Haines, M.D., F. A. Harris, M.D., W. E. Hornblower, Esq., Chas. Jewett, M.D., P. C. Knapp, M.D., R. C. McMurtrie, Esq., C. K. Mills, M.D., J. E. Parsons, Esq., C. E. Pellew, E.M., Judge C. E. Pratt, W. A. Purrington, Esq., B. Sachs, M.D., F. R. Sturgis, M.D., Brandreth Symonds, M.D., V. C. Vaughan, M.D. Illustrated. Complete in two volumes. Volume II. New York: E. B. Treat, 5 Cooper Union, 1895.

We have already spoken in high terms of commendation respecting the first volume of this exceedingly interesting and valuable work. The list of collaborators, which we now give in full, contains the names of highly distinguished men, who are well known in the United States and some parts of Canada. The second volume contains seventeen chapters, including the following: "Duties and Responsibilities of Medical Experts"; "Insanity in its Medico-Legal Bearings"; "Mental Responsibility of the Insane in Civil Cases"; "Insanity and Crime"; "Aphasia and other Affections of Speech"; "The Traumatic Neuroses"; "The Effect of Electric Currents of High Power on the Human Body"; "Accident Cases"; "Birth, Sex, Pregnancy, and Delivery"; "Abortion and Infanticide"; "Marriage and Divorce"; "Surgical Malpractice," etc.; also "Appendix" and "Index." The volume is quite equal to the first. We can give it no higher praise.

Those who were present at the Toronto University medical banquet will remember the words of Dr. Graham and Judge Rose with reference to the importance of physicians being well fortified with a knowledge of their subject before going into the witness-box to give "expert" evidence. This fact was probably never better appreciated by our profession than it is to-day. This "System of Legal Medicine," which is thoroughly comprehensive, truly admirable in character, and fully up to the times, will be found simply invaluable to all physicians who desire to acquit themselves creditably when they "get into the hands of the lawyers," or when they are called upon in any way to express an opinion on a medico-legal subject.

The following books and pamphlets have been received :

- CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW. By E. Fletcher Ingals, A.M., M.D., Chicago.
- THE CYSTOSCOPE. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in Johns Hopkins University, Baltimore, Md. Reprinted from *The American Journal of Obstetrics*.
- LOCAL ANÆSTHETICS AND COCAINE ANALGESIA: THEIR USES AND LIMITATIONS. By Thomas H. Manley, A.M., M.D., New York. 8vo., 185 pages. St. Louis: J. H. Chambers & Co., publishers, etc.
- HÆMORRHAGIC INFARCTION OF THE FALLOPIAN TUBE. By W. W. Russell, M.D., Resident Gynæcologist in the Johns Hopkins Hospital, Baltimore, Md. Reprinted from *The American Journal of Obstetrics*.
- CHOREA AND CHOREIFORM AFFECTIONS. By Wm. Osler, M.D., F.R.C.P., London; Professor of Medicine, Johns Hopkins University, Baltimore, etc. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street.
- ENLARGEMENT OF THE PROSTATE: ITS TREATMENT AND RADICAL CURE. By C. W. Mansell-Moulein, M.A., M.D. Oxon., F.R.C.S., etc. Demy 8vo. 176 pages. Price, \$1.50. London: H. K. Lewis, 136 Gower street, W.C.
- THE EXAMINATION UNDER ANÆSTHESIA: ITS USES AND ITS LIMITATIONS. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in the Johns Hopkins University. Reprinted from the *New York Medical Journal*.
- RESUSCITATION FROM IMPENDING DEATH DUE TO CONCEALED HÆMORRHAGE BY THE INFUSION OF A LITRE OF NORMAL SALT SOLUTION CENTRALLY INTO THE RADIAL ARTERY. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in the Johns Hopkins University, Baltimore. Reprinted from *The American Journal of Obstetrics*.
- HARE'S TEXT-BOOK OF PRACTICAL THERAPEUTICS. A text-book of practical therapeutics, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin, and Barton C. Hirst. New (4th) edition, thoroughly revised and much enlarged. In one octavo volume of 740 pages. Cloth, \$3.75; leather, \$4.75. Philadelphia: Lea Brothers & Co., 1894.

Medical Items.

THE staff of the *Dominion Medical Monthly* has lately undergone a radical change. Drs. W. H. B. Aikin, A. B. Atherton, J. H. Burns, John Ferguson, G. S. Ryerson, and A. A. Macdonald have severed their connection with that journal.

THE wife of Dr. T. H. Halsted (Tor., '81), Syracuse, New York State, died November 14.

DRS. R. A. STEVENSON, W. P. Caven, and James F. W. Ross, of Toronto, returned from England last month.

DR. MCKECHNIE, the partner of Dr. Hall, in Victoria, recently returned from Philadelphia, where he spent a few months in studying abdominal surgery with Dr. Joseph Price.

DR. ERNEST HALL, of Victoria, B.C., passed through Toronto a few days ago on his way to Europe. He expects to spend a few months in Berlin, Vienna, and London, "walking" the hospitals.

DR. VERNON ST. CLAIR HALLIDAY, a promising young physician, died from diphtheria at the Willard Parker Hospital, New York city, November 26th, at the age of 25 years. He graduated at McGill University, Montreal, in 1892. He was the eldest son of Dr. James T. Halliday, of Peterboro.

DR. WILLIAM HOPE, of Belleville, died at his home, November 28th, at the age of 80. He took the degree of M.D. from the University of New York in 1838, and became a licentiate of the old Medical Board in the same year. He was sheriff of the county of Hastings for many years before his death.

PHYSICIANS LIVING IN CHICAGO.—It is estimated that there are about 3,400 physicians within the corporate city limits of Chicago, embracing a territory of 186½ square miles, and a population in round numbers of 1,625,000 inhabitants.—*Journal of the American Medical Association.*

THE SCARCITY OF PATIENTS.—There may be some comfort to the many physicians who have felt the long-continued "dullness" in their practice in learning that it is not a local stagnation, but that the same conditions are being felt in other parts of the world. English medical journals speak of the "marvellous health of the country," and the large number of physicians who have attended the many congresses without being missed, so few are the

patients. An Edinburgh correspondent of the *Medical Press* writes recently "that in that city it was a vacant vacation with a vengeance; there was absolutely nothing stirring, and he knew of one practitioner acting as *locum tenens* for seven others on their holiday, who, notwithstanding this weight of responsibility, yet found ample time to play golf every day."—*N. Y. Medical Record*.

OCULAR BALLOTTEMENT.—The diagnosis of fluid vitreous with floating opacities may be aided by a little method that is not usually laid down in the text-books. The retinoscopic mirror is used in the same way as in indirect ophthalmoscopy. The patient has to be "trained" a little or carefully instructed in order to carry out the manipulation rightly, the essential point of which consists in halting a downward sweep of the eye suddenly and at such a point that the oculist can have a good view of the post-pupillary field. Direct the patient to look up to the ceiling and then to swiftly look at an object in front and on a line horizontal with the eyes, holding the gaze steadily there. If opacities floating in a fluid vitreous exist, this sudden "flip" of the vitreous chamber upward, followed by a sudden stoppage, flings the opacities upward, and with the ophthalmoscopic mirror they will be seen again to descend like snowflakes falling outside of a window in the night. This method of diagnosis might appropriately be named *ocular ballottement*.—*Medical News*.

QUACK NURSES.—Quackery is contagious and widespread. There are quacks not only in medicine, but the infection seems also to have invaded the profession of nursing. From Detroit comes the announcement of the organization of a "Correspondence School of Health and Hygiene," which proposes to give "instruction by the correspondence method in the care of the sick." The course of instruction, it is believed, "if thoroughly studied by a reasonably intelligent person, will render the pupil as truly a trained nurse as the great majority of those who come from the training schools . . . No previous training or study is required other than the ability to read and comprehend." As to age, sixteen is not considered too young, nor fifty too old. It needs scarcely be said that the art of nursing is not to be acquired by correspondence, from reading, or even from didactic lectures; these measures may aid in the comprehension of the principles upon which intelligent and rational nursing is based, but actual experience by the bedside, in the hospital ward, and in the sick-room, is absolutely essential.—*Medical News*.

THE ABUSE OF DISPENSARIES AND HOSPITALS.—In an effort to correct the prevailing abuse of the privileges accorded by dispensaries and hospitals, the Medical Charities Committee of the British Medical Association has had printed notices for distribution among the institutions of London, with the request of display in a conspicuous place, stating that, as these institutions have been "established to relieve only those persons who are too poor to pay for suitable medical and surgical aid, . . . patients will be required to give information as to their means and circumstances, with a few to prevent the abuse of this charity by persons who are well able to pay." A canvass of the

various institutions reveals the fact that the majority are in favor of the adoption of some such regulation as that proposed, many having already similar measures in operation ; others have the matter under consideration, while none has absolutely rejected the propositions made. The example is one that American institutions could follow with advantage and dignity.—*Medical News*.

POISONING FROM A SPIDER BITE.—Dr. Richard H. Lewis, of Kinston, relates the following case in which he himself was the patient : It is, perhaps, he says, not universally known that there is in North Carolina a species of spider whose bite is very nearly akin in its effects to that of the tarantula of the tropics. On Sunday night, June 10th, he was bitten upon the glans penis by one of these spiders. The first sensation was precisely like that which is produced by the nettle. Very soon pains began in the scrotum, and in half an hour they extended across the abdomen. They seemed to travel in a band as wide as the hand, rigidly contracting the muscles as they went upward. In an hour this band was drawn tightly around the chest, and the pain was terrible. It seemed as if the ribs and the intercostal muscles had become consolidated like an iron breast-plate, and lightning-like pains darted around the bands continually. The author's pulse fell to about fifty, his breath came in short gasps, and every inspiration seemed as if it were to be the last one. He became delirious, and when the pain reached the brain he was in a state of excited horror. In no other words, he says, can it be explained. Hypodermic injections of morphine were given four times during the night. On the following morning he was quieter, the pain had spread to the legs and to the tips of the toes. During the day he seemed to be some one else, and was not free an instant from distressing pain. Another injection of morphine was given, but the patient was exceedingly restless all that day and during the night. On Tuesday morning the pain left the upper part of the body and settled in the legs and feet. Its character had changed to a sharp, pricking sensation, coming every minute in lancinating stabs, and toward evening the feeling of constriction in the chest passed off. On Wednesday the pain broke up into spots instead of being in bands as before, and acute stinging pains in all parts of the body, except the head, were constant. From the second joint of the left forefinger to the ball of the right great toe the pain transferred itself with lightning speed. During that day it again left the upper part of the body, confining itself to the legs and feet, and morphine was again given. On Thursday, the pain continued, but assumed the character of "nervous rheumatism," and its favorite seat was the loins. The author now determined to try bodily exercise and went into his garden, where he became interested in his work and thoroughly warmed. Profuse perspiration was induced and the pains stopped, but, feeling very weak, he was compelled to rest, when they again set in, piercing and stabbing as before. For about a week the author had no appetite and ate nothing ; afterward, however, he ate regularly, but a very small quantity of food sufficed. After that the pains gradually ceased, lingering longest in the toes, and by the 18th of June had disappeared, with the exception of occasional stabs in the toes. A few days of sea-bathing completely restored the author to his usual health.—*North Carolina Medical Journal*.