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THE CANADIAN PRACTITIONER

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PUBLISHERS:

THE BRYANT PRESS, 20 BAY STREET.

VOL. XXI.]

JULY, 1896.

[No. 7

Original Communications.

THE DIAGNOSIS OF TYPHOID FEVER.*

BY G. R. CRUICKSHANK, B.A., M.D., L.R.C.P.S. EDIN.,

WINDSOR, ONT.

NEXT to phthisis, there is no disease so often under consideration in Ontario; and, excepting diphtheria, no other which receives so much scientific attention as typhoid fever.

A medical text-book of ten years ago is pretty safe reading on almost any subject but this. A short time ago a mortality of nineteen per cent. was considered a good result. Brand, after many years, convinced the profession that his revival of the cold-water cure would reduce the death rate more than one-half; and now Dr. W. B. Thistle, of Toronto, by an elaboration of another old plan, claims to reduce the death rate very much more. Some time after the publication of Dr. Thistle's results, Dr. Woodbridge, of Ohio, laid claim to a similar plan, which he has modified into a specific, and produces a list of cases to show that the mortal-

* Read before the Ontario Medical Association, Windsor.

ity is only a fraction of one per cent. With reference to these claims, physicians in whom we have the greatest confidence reply that the majority of these cases were not typhoid at all. The sincerity of both sides cannot be doubted; so that the question of diagnosis becomes a matter of some concern.

Windsor offered a peculiar opportunity for studying this disease lately. Walkerville sewer opens about half a mile above the Windsor waterworks, the intake pipe of which extends 400 feet and 40 feet deep in a current of three miles an hour. On February 9 the manure tank of the cattle barns in connection with the distillery at Walkerville overflowed; at the very same time needle ice blocked the strainer of the intake, so that a valve at the shore was opened till the outer opening could be cleaned. This unusual combination of circumstances brought it about that manure slightly diluted was pumped into our kitchens for breakfast. On February 15 commenced an outbreak of fevers, the diagnosis of which is the text for my paper to-day. Some of my medical colleagues considered them all typhoid, others that only the severe cases were worthy of the name, while one or two maintained that none of them were typhoid. I do not intend taking up time by referring to typhoid-like fevers caused by peritonitis, pleuritis, pneumonitis, ostitis, corditis, tuberculosis, or pyæmia, although I might tell of mistakes of my own with tubercular peritonitis and osteomyelitis during this very epidemic. But while a discussion of these fevers might be as interesting as the diagnosis is difficult, still these are not matters of dispute, and will be passed over. The real difference of opinion commences with the consideration of mild and abortive fevers. One physician says "typhoid;" another says, "Nothing of the kind, only malaria, or bilious fever, or, perhaps, gastrointestinal toxæmia."

The matter of malaria is easily disposed of. The occurrence of the parasite in the red-blood corpuscle is sufficient and pathognomonic. There are several specimens under microscopes in the lobby for your inspection. The plasmodium in these specimens can be readily made out in several stages of development; in some a small spot like a vacuole in a red-blood corpuscle, in others almost filling it. For purposes of diagnosis a drop of an alcoholic solution of methylene blue is allowed to run over a clean slide, which is set aside to dry. The lobe of the ear, chosen because insensitive, is well washed with soap and water, then with alcohol, and is pricked with a clean needle with cutting edges. Wipe off the first drop and touch a well-cleaned cover glass upon a drop no larger than a pin head. This is quickly laid upon the slide and the edges sealed with vaseline or melted paraffin. Such a preparation will last several hours, and can be examined at one's leisure. Thin, in the Medical Annual of 1896,

describes a method of drying blood so that it will keep indefinitely for examination.

Without the microscope, to distinguish between typhoid and malaria is difficult in malarial districts; but if the commonest kinds of malaria are absent, surely one would not expect to find the rare typhomalarial fever. During six years I have not seen a case of intermittent fever in Windsor, except those that have come from elsewhere. I have examined the blood of typhoid patients suffering from chills, and have not found the malarial parasite, while I had no trouble in making them out in intermittent cases from Dover flats. No doubt a person suffering from malaria might contract typhoid, but the resultant could hardly be that tame affair commonly called typhomalaria. Dr. Osler says: "Among 333 cases of malaria and 389 cases of typhoid fever treated at Johns Hopkins Hospital in no instances have the diseases been concurrent."

It is when we try to distinguish between mild typhoid and simple continued or gastro-intestinal fever that our troubles begin. For some time prior to February 9 there was no fever in Windsor, nor has there been any since April. About one week after the drinking of the manure water fevers commenced, and by the end of the month there were about two hundred cases of all kinds of virulence, some lasting a few days and some several months. On February 15 Mrs. H. was taken ill with a fever which developed almost every symptom of typhoid that could possibly occur, and passed into a tedious convalescence in four weeks. On February 25 her daughter, aged 12, was found with a temperature of 103° , with typhoid symptoms. The fever subsided in five days, after which the patient remained in bed a week and continued well. On February 28 George H., aged four years, was first examined, and his temperature was found to be 102° . In three days it reached normal, and three days later his importunities gained him his freedom. In five days his fever returned and lasted four weeks. Case No. 1 was as certainly typhoid as any ever described; nothing was wanting to complete the diagnosis but a post-mortem. Case No. 2 was probably due to the same cause, but seen first during the second week; while Case No. 3. aborted in three days, and for lack of care reappeared and continued for four weeks, with symptoms satisfactory to the most skeptical. From February 15 till March 31, in my own practice there were thirty-four cases, of which nine were abortive. "Jurgensen mentions an outbreak near Kiel where fourteen out of twenty cases were abortive."

I am not claiming that treatment can abort typhoid, or that it cannot, but that the fever does abort of itself, perhaps much oftener than we imagine. It is strange that some careful physicians deny that typhoid ever aborts, while they readily admit that pneumonia and smallpox often terminate in a few days.

In some cases it is impossible to distinguish between typhoid and gastro-enteritis. Vaughan refers to cases where typhoid symptoms, even to perforation of the intestines, have been produced by ptomaines, in the formation of which Eberth's bacillus played no part. It is as much a mistake to call every mild continued fever gastric as to call every severe one typhoid. Rodet and Roux conclude that Eberth's bacillus is only a degenerate form of bacterium coli commune, brought about by altered environment. If this be true, then there is some excuse for the too frequent remark that "it has turned into typhoid." Yet the post-mortem appearances of this disease are so distinct and characteristic that we conclude it has a specific cause; that typhoid is always typhoid from the start, and never a development of any other disease; nor can we believe that the always present and innocent bacterium coli commune can cause it under any circumstances. It is now usually agreed that a group of pathogenic germs not yet diagnosed may give rise to typhoid fever with the typical intestinal lesions. The typhoid germ and its product is allied with a great variety of germs, and their toxins give rise to an endless variety of symptoms.

No one symptom, nor, indeed, can any two, or even three, be mentioned which may not be irregular or absent in undoubted cases of typhoid, and, on the other hand, there is not one of the usual symptoms which may not be present in other diseases.

Dr. Bonning, of Detroit, performed an autopsy to find the cause of sudden death, and learned that it was caused by perforation of typhoid ulcers, although the man had presented no symptoms of that disease. More reliance must be placed upon the occurrence of rose spots than upon any other one symptom, yet this rash often occurs in other diseases, such as miliary tuberculosis; and, on the other hand, such a careful observer as Fagge says he has failed to find them in many cases in which careful search was made every day. There are few physicians who, misled by the temperature, have not regarded other ailments as typhoid, while, on the other hand, cases of typhoid where the fever is absent or irregular are not uncommon.

Leibermeister describes cases without any fever, and Dr. Strube, a surgeon in the German army at the siege of Paris, describes an outbreak among the troops in which twenty-three cases were fatal. In many of these the temperature was subnormal throughout, and in others it never went above normal, yet characteristic lesions were found on post-mortem.

Much was expected from the examination of the excreta. It has long been advised to strain the fæces for shreds of typhoid ulcers. Of course, their presence would be more conclusive than their absence. The bacteriological examination is not satisfactory, because Eberth's bacillus in

fæces cannot be distinguished with certainty ; besides, the intestines and their contents are often quite free from this bacillus, while it is found in abundance in other organs. There are several specimens of these bacteria under microscopes in the lobby, illustrating this difficulty of diagnosis.

So instances might easily be produced to show that no symptom is infallible. As one aid in making a diagnosis in doubtful cases, Ehrlich's diazo-reaction is very useful. This is well discussed in Johns Hopkins Hospital Medical Reports, Vol. 4, No. 1.

For the performance of this test two solutions should be kept on hand : (1) a 5 per cent. solution of hydrochloric acid in a saturated solution of sulphanic acid ; and (2) a $\frac{1}{2}$ per cent. solution of sodium nitrite. When required for use 40 c.c. of the former and 1 c.c. of the latter are mixed together. Equal parts of this mixture and urine are shaken together, and strong ammonia added. If positive results are obtained, a characteristic pink tinge is seen in the foam, and at the junction of the ammonia with the fluid a dark garnet ring appears. When the tube is shaken a uniform red color is the result, and upon standing an olive-green precipitate is deposited. This reaction occurs in other diseases, especially in those of a chronic nature, accompanied by much wasting, and in a few febrile infectious diseases, such as, occasionally, in acute rheumatism, meningitis, and pneumonia, usually in typhus fever and measles, and it is sometimes absent in typhoid fever, especially after the first or second week.

In the management of a case of continued fever, the nurse should be instructed to note the temperature, pulse, and respiration at regular intervals and often. Tuberculosis, septicæmia, and fevers characterized by inflammations of such organs as the liver, lungs, pleura, heart, or bones, should be carefully excluded. The presence or absence of any one or two symptoms of typhoid should not be considered important. No matter how distinct the case seems to be, this process of exclusion should be repeated again and again. It is very humiliating, after considering a case as typhoid a week, to have to confess that we are treating pleurisy. The suspicion of malaria should be set at rest by the microscope.

If we are confronted with a mild case, not malarial, which we would be tempted to call simple continued fever, Ehrlich's urine test will afford important information. Van Noorden says that "a mild afebrile or subfebrile disease with an outspoken diazo-reaction must always be considered as strongly suspicious of typhoid fever." If, moreover, one is able to discover Eberth's bacillus in the fæces or spots, the corroboration would be very strong.

Our opinions of a mild fever should be influenced very largely by its surroundings. Its occurrence with undoubted typhoid or malaria cases should point to it with suspicion. If we have satisfied ourselves that the

fever is really typhoid, and good for three or four weeks, we should not be surprised nor compelled to confess a mistake in diagnosis if it should terminate in three or four days.

Osler says the death rate is $7\frac{1}{2}$ per cent.; yet if a conscientious confrère should publish a list of 100 cases without one death, we should not accuse him of mendacity or ignorance, nor should we conclude that he had an unusually good plan of treatment, but rather that he happened with a series of the mild type, which hospitals seldom see.

UNUSUAL FEATURES IN THE CLINICAL HISTORY OF ADENOID DISEASE.*

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

SO much has been written during the last two or three years concerning this prevalent affection of the naso-pharynx that I shall refrain entirely from speaking of the etiology, pathology, and symptoms of the disease, as it usually occurs; and, confine my remarks to the clinical history of a few somewhat unusual cases.

In the experience of every physician, cases of more than ordinary interest are occasionally met with, and they are, as a rule, worth recording; as they stand out like landmarks, to help to guide him in his future contest with diseases of a similar character. It is of cases such as these that I wish to speak to-day. Possibly when brought to the light of the professional experience of the members of this section they may not be unusual at all. Still, as such cases can at the most only occur occasionally a brief statement of them can do no harm; while it may have the effect of putting an unwary brother on his guard, and possibly may stimulate him to keener investigation when opportunity occurs.

CASE I. W. D, æt. 7 years, October, 1892. Has had right otitis media catarrhalis chronica for years, accompanied by deafness of the right ear. No history of either scarlet fever or measles. All his lifetime had been a mouth breather. On examination I found imperfect hearing also on the left side. There was almost complete absence of right drum membrane, and a large papilloma was attached to the remaining margin. On examining the pharynx the vault was found to be filled with adenoids and the faucial tonsils greatly hypertrophied. There was little doubt that the pressure upon the Eustachian tube by the pharyngeal tonsil had produced the ear disease.

Under chloroform narcosis the papilloma was removed from the auditory meatus; the adenoids taken away by digital operation; and double tonsillectomy done by Mathieu's instrument—all during one administration of the anæsthetic.

* Read at the Laryngological section of the American Medical Association, Atlanta, Georgia, May, 1896.

In this case the operative work was too late to restore the hearing in the right ear, though it improved that in the left. The nasal and throat symptoms disappeared, but the cataarrh of the right ear continued, though in a minor degree. After some months the case was lost sight of.

CASE 2. Miss B. R., æt. 23 years, April 6, 1893. Has been gradually becoming deaf for two years. Both ears equally affected. Cannot hear tick of a watch on either side more than half an inch from the head. Impossible to open Eustachian tube on either side by Valsalva's method. Before coming to me she had been treated professionally for deafness without any improvement; Politzer's method of inflation being used—also daily application of ear-drops.

Examination proved the pressure of a large hypertrophied pharyngeal tonsil, filling the upper pharynx, pressing the palate forwards and producing complete nasal stenosis. The faucial tonsils in this case were not particularly large. As the adenoids were soft and lymphoid in structure, I decided to operate digitally, believing that the entire growth could be removed more effectually this way than by the use of instruments. A 15 per cent. solution of cocaine was applied freely with a post-nasal cotton holder, modifying to some extent the pain of ablation. The first operation was confined chiefly to the right half of the growth, and was accompanied by considerable hæmorrhage. The nasal stenosis was relieved, but not the deafness.

April 7. Digital operation¹ repeated, chiefly on left side. Hæmorrhage free as before. Nasal stenosis completely removed. No immediate improvement in hearing.

April 8. While blowing the nose after breakfast, the patient heard a sharp report in left side of head; and immediately could hear the conversation going on in the room—the first time that she had been able to do so distinctly for more than a year. The hearing, however, was confined to the left side, being caused by the accidental valsalva—dilatation of the left Eustachian tube, and entrance of air into the middle ear.

The return of hearing on the right side was more gradual, each day being slightly better than on the previous one.

April 11. Removed by finger-nail the remaining remnants of the adenoid tissue. The discharges from the naso-pharynx during the healing process were aided by spraying through the nose with albolene, the patient inhaling forcibly each time that the atomizer was used.

April 22. Came last time for examination and treatment. Hearing fully restored. Could hear watch tick on either side at a distance of six feet from the ear.

CASE 3. N. J. McK., æt. 20 years, June, 1893. Has been suffering for two years from buzzing in his left ear. Had been treated profession-

ally six months previously, but with little improvement. He complained particularly of the effect of his own voice, whether used in ordinary speech or in singing. He said it sounded as though the voice reached the ear through the throat on the affected side, no similar effect being produced in the right ear. He had a worried, anxious expression of face, and said that during the period mentioned he had lost much in flesh.

On examination I found the uvula elongated, and the vault of the pharynx filled with a large flattened tonsil, the left side of it being attached by a broad cicatricial band to the superior-posterior lip of the corresponding Eustachian tube, binding it backwards. There had evidently been a shrinkage of a former tonsillar hypertrophy; which, dragging on the Eustachian attachment, had produced an almost funnel-shaped form to the orifice of the tube. This unusual condition appeared to be the cause of the voice-ringing complained of.

After applying a 15 per cent. solution of cocaine, I curetted out the adenoid enlargement; and then separated the attachment to the lip of the Eustachian tube with the finger-nail. The result was that the throat voice sounds diminished, and in a few days disappeared.

Four months later the patient, being in the city, returned for examination. There was improvement in facial expression and in weight, as well as tone of voice. He said the throat sounds had never returned since the time of operation.

CASE 4. A. B., æt. 5 years, September, 1894. Mouth breather, suffering from nasal stenosis, owing to the pressure of adenoids in the naso-pharynx. Faucial tonsils not materially enlarged. A professional confrère administered chloroform. Not more than half a dram had been given when respiration suddenly ceased. On forcing the mouth open, the ball of the tongue was found resting well backwards over the larynx, filling the lower pharyngeal cavity. Cyanosis developed quickly; but drawing the tongue forward with forceps, and the practice of artificial respiration, soon restored the natural breathing. The operation was then performed digitally, without any further untoward result.

CASE 5. Alice G., æt. 9 years, June, 1895. Pale, flabby, exsanguineous girl, lacking in the energy usually possessed by children of her age, not from mental habitude, but from impoverished blood. Faucial and pharyngeal tonsils unusually large. Chloroform being administered, double tonsillotomy was performed; and then the pharyngeal tonsil removed by digital operation. There was the usual amount of hæmorrhage at the time; but it abated, and became almost *nil* in a few minutes.

Three hours later, while resting quietly on the sofa, hæmorrhage from the upper pharynx commenced again; and, becoming profuse, alarmed the parents. I was sent for and arrived at the house half an hour later,

to find the bleeding gradually becoming less. Interference was not necessary, and it did not recur again. This is the only case of recurrent hæmorrhage after ablation of the pharyngeal tonsil that I have ever seen.

A few days later, when I next saw the patient, there was extensive ecchymosis of the soft palate. This went through the usual stages of such an affection, and several weeks elapsed before it entirely disappeared. This is also out of a large number of operations for the removal of adenoids, the only instance in which I have observed ecchymosis as a result of operation.

CASE 6. V. R., æt. 9 years, February, 1896. Had a severe attack of diphtheria several years ago, since which time she has suffered from irritable throat and nasal stenosis. On examination, I found both faucial tonsils irregularly enlarged, and a copious supply of adenoids in the nasopharynx. My intention was to operate first on the faucial tonsils with the galvano-cautery; and then, while still under the influence of the anæsthetic, to remove the adenoids.

A physician administered chloroform by dropping it upon the gauze of an ordinary inhaler. The patient took it quietly, and with very little resistance. Not more than thirty or forty minims could have been taken when it was noticed that breathing had stopped. I at once drew forward the tongue with forceps; while my assistant, after practising inversion, commenced artificial respiration by Sylvester's method. This had to be continued for fully fifteen minutes before breathing was properly restored. By this method air was drawn into the lungs and expelled again; but the slightest cessation of the artificial means would stop the breathing and increase the cyanosis. By the end of the period mentioned natural respiration had returned. The child was still unconscious, and the galvano-cautery operation on the tonsils was at once performed. Returning sensibility seemed to be indicated by moaning, but as the administration of an anæsthetic again, chloroform at least, would at any time in the near future be a dangerous procedure, the gag was again inserted, and the adenoids also removed. There was a good deal of hæmorrhage, and the child screamed loudly during the operation; but half an hour later, when consciousness had fully returned, she said she had experienced no pain whatever, and remembered nothing but the first application of the inhaler to her face. This prolonged insensibility to pain is somewhat remarkable, when the severity of the operation and the amount of screaming are taken into consideration. The prolonged artificial respiration required to sustain life, after breathing seemed to be re-established, is also worthy of notice.

In concluding this brief history of unusual cases, differing in one respect or another from those which we ordinarily meet with, I will close with a glance at my general methods of treatment.

The large majority of my patients have been of an age from three or four to ten or twelve years. In these cases I invariably, whether in public or private practice, secure the services of a qualified physician to administer an anæsthetic. The one chosen has always been chloroform; and although I have operated upon a large number of children, I have never seen any injurious effect from its administration, except in the two cases already referred to; and it will be noted that in neither of these was the result fatal. In this class of cases I always operate digitally, using the nail of the fore-finger of the right or left hand, whichever at the time is most convenient to use.

The soft, pulpy lymphoid tissue can easily be stripped off at a single operation; and the educated digit can apply itself more thoroughly and efficiently to the lateral regions, between the Eustachian tubes and the promontory of the spine, than it would be possible to do at one sitting with the curette. The objection sometimes made to this method of operation, that particles of the adenoid growth are likely to drop into the larynx, is, I believe, a groundless one. The recumbent posture with the head thrown backwards, and the quick reversal to the side position to facilitate the discharge of the hæmorrhage through the nasal cavities into the bowl, neutralize this tendency: and I never saw a single instance in which there was the slightest reason to think that it had occurred.

As far as recurrence after digital operation is concerned, I have only seen one case, and that was partial, the hypertrophy appearing again over the upper portion of the posterior choanæ.

In older youths and adults, I have first applied a 15 per cent. solution of cocaine on a pledget of cotton freely behind the palate to the tonsillar tissue; and then removed the hypertrophied tissue by one or other of Gottstein's improved curettes. It has usually required two or three sittings to assure a satisfactory result. My use of post-nasal forceps has never been a success, although I have tried them variously modified in a number of instances.

These operations are always more or less painful, the cocaine never producing complete anæsthesia, although it usually materially modifies the sensibility of the part.

In conclusion, let me say that the history and treatment of adenoid disease is becoming such a trite subject that, if it had not been for the unusual nature of the cases I have been able to report, I would not have taken the liberty of presenting them to you.

MISSED ABORTION.*

BY F. R. ECCLES, M.D., F.R.C.S. ENG.,

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LONDON, ONT.

MISSED abortion, missed miscarriage, and missed labor, are terms not very frequently used in many of our text-books on obstetrics and gynaecology. Missed labor is exceedingly rare; on that account perhaps more frequently mentioned than either missed abortion or missed miscarriage.

Throughout the whole range of medical literature there is but scant allusion to the subject. It lies in the borderland between obstetrics and gynaecology. It belongs to both; and belongs to neither. Perhaps the fullest explanation was given by the late Dr. Matthews Duncan, who gave it the name (not faultless) of missed abortion.

Not only on account of the medico-legal as well as the moral aspects of the subject do we find it of great importance.

Many cases, no doubt, are perplexing and difficult to solve beyond all question of doubt. Whereas in cystic degeneration of the chorion we find the enlargement of the uterus would correspond much beyond, in missed abortion we find it much within, the accredited period of utero-gestation.

Indeed, in missed abortion the patient may have gone the whole period of utero-gestation, and the uterus be no larger than at the third month.

Missed abortion or missed miscarriage may be defined as a neglect of the uterus to empty itself after the ovum has perished.

If the foetus die any time between impregnation and the end of the third month, and is retained, the patient is said to be in a state of missed abortion, between the third and end of the seventh month a state of miscarriage, and after the seventh month a state of missed labor. Just how long the blighted ovum may be retained in the uterus is as yet an unanswerable question.

Some have put the limit at nine months, a mere *obiter dictum*.

*Read at the Ontario Medical Association, Windsor. 2

I do not believe there is any fixed limit, like gestation ; the determining causes of which are also unknown.

How the menstrual cycle of twenty-eight days is multiplied by ten to complete the full period of utero-gestation, and why the rhythmical contractions of the uterus take place at the end of the tenfold cycle in order to accomplish the emptying of the uterus, are questions the solution of which may yet be found in the further study of the functions of the cold.

The symptoms of missed abortion are vague and uncertain in the majority of cases. Generally, there have been symptoms of pregnancy which have lessened or entirely disappeared.

Irregular losses of blood with more or less pain and uterine contractions have been noticed ; and, in looking back, one infers that the fœtus died at or about the time of the said symptoms.

During this time and following, there is a period of deranged health.

Any gradual enlargement of the abdomen after such symptoms would be opposed to such inference, and gradual diminution of tumor, as revealed by bimanual examination, would be in favor of such inference.

A state of missed miscarriage presents less difficulty to the observing physician than missed abortion.

Here one has the evident signs of pregnancy, previously observed, and the opinion of the patient herself (if she be married) that she is pregnant. These signs she gradually loses, and there appears the objective and subjective signs of gradual diminution of the size of the abdomen. This is very important.

If this evidence is clear and conclusive, and determined by the physician himself rather than relying on the opinion of the patient herself, it is a very important fact towards a correct diagnosis. Taken with the previous amenorrhœa and with the usual history of pregnancy, with the usual irregular hæmorrhages from the uterus and more or less pains at times, there can be little doubt that the patient is in a state of missed miscarriage.

The patient is not in a state of pregnancy, as one finds the usual symptoms have ceased. The differential point must be considered in connection with placental polypus where simply a fragment of placenta is left behind after artificial or natural delivery, and which in process of time develops a pedicle.

This ought to be easily distinguished from missed abortion, as it would have a history of bleeding from a particular confinement, but even here difficulties present themselves. For we have cases of placenta prævia which have those irregular hæmorrhages which often occur in missed abortion ; and one may on his first examination be in doubt. Time, however,

clears up the doubt—in the one the movement is forward; in the other, retrograde.

The same may be said of myoma, particularly of the œdematous variety, the feel of which resembles the pregnant uterus.

A little time makes the case clear and unmistakable.

In reference to ectopic pregnancy, the symptoms of pregnancy with occasional hæmorrhages would lead to examination and the detection of a swelling entirely to the side of the uterus.

Then pregnancy itself has been mistaken for missed abortion.

In September, 1894, I saw a patient in quite a worried condition on account of the uncertainty of pregnancy or of tumor. I urged her to cease worrying, assuring her that the case was one of simple pregnancy, and requested her to see me again at the end of October. I saw no more of her, and heard that she had had the sound passed several times without any symptoms of labor following, and the case, if ever a case of pregnancy, was now in a state of missed miscarriage. Some time in December of the same year the uterus was dilated, and delivered of a seven months' child, which, I believe, lived twenty-four hours. Here undoubtedly the frequent passage of the sound without labor ensuing was interpreted as an evidence of the non-pregnant condition.

“You” do not “see beautifully illustrated in this case the power of what is called uterine catheterism in inducing labor.”

It must be remembered, however, that it occasionally happens that there has been no hæmorrhage whatever during the whole period of pregnancy and state of missed abortion until the expulsion of the blighted ovum; and that the patient has not in any way been threatened with miscarriage.

Here the cessation of all the previous signs of pregnancy, more or less impaired condition of health, with gradual diminution of the abdominal enlargement or uterine tumor, ought to be sufficient evidence to excite the suspicion of missed abortion, and to lead to most careful investigation.

I will read you very condensed notes of three selected cases, presenting to you some divergence of symptoms and treatment.

M.L., æt. 26, single, first consulted Dr. Moore, July 1, 1895. She then complained of exhaustion, pain at the stomach, loss of weight, etc. She had not been well for three months, and previous to that had been quite irregular. There was no history of irregular hæmorrhage. The doctor requested examination, but the patient objected, and he did not see her again until August 31. She then suffered from more or less vomiting, constipation, and increased emaciation. The vomiting was so persistent that she had to be nourished by enemata regularly given. The

first week in September typhoid phenomena manifested themselves, the tongue gradually becoming dry and cracked, and the pulse becoming more and more frequent ; but during all this time there was no elevation of temperature.

On October 1 I saw her in consultation with her medical attendant, Dr. Moore, of London, and Dr. Graham, of Dorchester Station. She was very much emaciated, eyes sunken, cheek bone prominent, upper lip retracted, tongue dry and fissured, and, as Dr. Moore said, had there been an accompanying temperature one might easily have taken the case for one of typhoid fever ; the pulse ranging from 135 to 140. I examined all the physiological systems without obtaining any light on the case, until I came to the reproductive, and here the amenorrhœa could easily be accounted for on account of the long-continued illness.

There had been no menstruation or loss of blood since the last of March or beginning of April, and some irregularity previous to this. Examination per vaginam revealed slight odorless leucorrhœa, an absent hymen, relaxed vagina, a fairly normal cervix and os, and a uterus quite as large as a cricket ball.

There was no hæmorrhage from examination, and I suggested exploration of the uterus under an anæsthetic, deeming it not wise to pass the sound until the patient was prepared for the exploration. Patient was very weak, and was stimulated and fed by the bowel until the afternoon of the 4th, when chloroform was administered and the uterus emptied of its contents.

The dull curette would slide over the smooth fibrous covering of the blighted ovum. Without the sharp curette it would have been impossible to empty the uterus. The placenta which was scooped out was pale, condensed, firm, but more or less brittle. I could not say that it was leathery, as has been mentioned by some authorities.

CASE 2. (Condensed from notes kindly furnished by Dr. English.) Mrs. W., æt. 26, married, mother of two children. First seen by Dr. English, November 9, 1895. She miscarried in December, 1894, and was regular from that time until September 15, 1895. She believed herself to be pregnant two months. There was free hæmorrhage from the uterus, with the bearing-down pains ; but the cervical canal was not dilated. The doctor gave her liquor sedans and opium with good effect, the pains and hæmorrhage ceasing entirely in a few days. The patient was not seen again until February 12, 1896, when she again complained of hæmorrhage more or less since January 30, but had no pains. Previous to this date she said she was bloated, and thought she felt life. The breasts were enlarged, and contained colostrum, but that now these symptoms had disappeared.

The same treatment as before was tried, without effect. Full doses of ergot were then given at short intervals, hoping that the uterus would empty itself and terminate the hæmorrhage, but it did not.

On March 4 I saw the patient with Dr. English, and believed her to be in a state of missed abortion. I advised emptying the uterus, which we did under anæsthesia on the 6th. The placenta was firmly adherent, and removed with difficulty, with a sharp curette. No fœtus was discovered. The uterine cavity and vagina were packed with sterilized gauze and the recovery was uneventful. The placenta was not large enough for a four months' pregnancy, and I believed the patient was in a state of missed abortion since November, 1895.

CASE 3. (Condensed from notes kindly furnished by Dr. Ferguson.) Mrs. M., æt. 30, mother of four children; always menstruated regularly until October, 1895, after which she became irregular, both as to time and quantity. At Christmas had a profuse hæmorrhage lasting over night, and not ceasing entirely for three or four days. She had no physician, but said she saw no evidence of abortion, only clots passed from her. Since Christmas there were more or less irregular bloody discharges, and at times of a grumous character.

On May 11 the patient drove some twenty miles, which excited hæmorrhage, and by the time she returned home her clothing was saturated. The hæmorrhage lessened during the night, but started again at 10 a.m. the following day. She then sent for the doctor, who, as the hæmorrhage was then slight and the os dilated, packed the vagina with sterilized gauze, after douching it with antiseptic water.

The next morning the gauze was removed, and with a speculum the blighted ovum could be seen presenting itself at the external os, and was readily removed in its entirety with a pair of dressing forceps.

The mass was cylindrical, rolled up in itself, and about two and a half inches in length by one and a quarter in diameter.

Dr. Ferguson and I unrolled the mass, and found in its centre a small membrane, but the embryo had become absorbed or extruded.

The patient had been miserable ever since October 11, but had no history of chills or fever, and at no time was there any odor to the discharges. Six days after the removal of the blighted ovum the patient declared herself better than she had been for six months.

You will note the differences in the symptoms and signs of these three cases :

In Case 1 there was no hæmorrhage of any kind during the whole period of missed abortion; there was incessant vomiting and alarming prostration, and the patient would undoubtedly have died had not the uterus been emptied.

In Cases 2 and 3 the characteristic symptoms were irregular hæmorrhages and a general feeling of poor health during all the time they were in the state of missed abortion.

In Case 2 it is uncertain what the termination would have been if the uterus had not been emptied.

In Case 3 the uterus, unaided, emptied itself, and this put an end to the state of missed abortion.

These are interesting cases, involved in much doubt and perplexity at certain stages of their course.

The first question one ought to ask himself in cases of this kind is, Have I to deal with a pregnant uterus, or is the embryo dead and the patient in a state of missed abortion ?

When we have decided this point the treatment is clear.

There is not so much likelihood now of observing how long a patient may remain in a state of missed abortion, as any prolonged doubt in reference to diagnosis leads to an examination and exploration of the uterus under an anæsthetic.

In any case, I think it unwise to put a limit to its duration ; it might be derogatory to the character and honor of an innocent individual, and productive of great injustice to her.

In all cases of missed abortion the date of conception is frequently very uncertain ; but how much more uncertain is the date when the pregnancy passes into a state of missed abortion !

Selected Articles.

ASEXULATION IN THE PREVENTION OF CRIME.

BY G. FRANK LYDSTON, M. D.,

CHICAGO, ILL.,

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AMONG all of the advances in sociologic science which may fairly be attributed to modern scientific medicine, nothing is more prominent than the philosophical treatment of the crime question. The attempt to reduce criminology to a rational and materialistic basis has constituted a great step in advance—one which marks a distinct epoch in scientific sociology. The science of criminology is comparatively new, and its study, in this country particularly, has only recently become popular. But it is my impression that just at the present moment the study of criminology needs to be saved from some of its over-enthusiastic friends and from the misdirected zeal of certain *dilettante* scientists and alleged criminal anthropologists. The second exception which I would take to the trend of scientific thought upon the crime question is that we are too much concerned with the criminal of to-day or the cure of the individual criminal, rather than with the very remote conditions which produce criminality in him, and which will inevitably produce criminality in his descendants, as well as in many individuals who are more or less remotely related to his criminal stock.

In the consideration of the theme which I take the liberty of presenting herewith it will be necessary to indulge in some general considerations of the causes of, and remedies for, crime. In the first place, the proposition is advanced that society is responsible for its own criminals, and in a less degree for its paupers, inebriates, and insane. These are the flotsam and jetsam of the social stream. They are, so to speak, the excreta of society, the retrograde products of social metamorphosis, bearing the same relation to the social body that certain excrementitious products of physiological metamorphosis bear to the animal body. The

sources of these products should be considered, and the aberrations of the social body which produce them corrected, else no measures of repression of resultant evils are likely to be successful. I believe that the conditions producing these excrementitious social products are more amenable to measures of correction, and less inevitable, than what I have presumed to term the analogous conditions in the human body. In the case of the animal body we are aware that certain excrementitious products of physiological change are absolutely necessary. We, however, deny the necessity of allowing these products to remain in the animal body and contaminate it, or be placed in a position to injure other animals after discharge from the body. Is not the same true with regard to the social body? All of the conditions which produce the criminal class are furnished by society. Society's method of cancelling its debt is to punish the criminal after he has arrived at a point at which he menaces the safety, comfort, and commercial interests of society. At no time before is cognizance taken of the results of the poisonous stream of criminality as it sweeps through some particular part of the social system, and an attempt made to correct them. Is this logical? Would it not be far better to turn the stream harmlessly aside, dam it at its source, and antidote its contained poisons, if such a course be possible?

Society begins its self-contamination at the marriage-license window. The foundation-stone of society is the matrimonial relation. Its assumption is the most important step that a human being can take, and upon the conditions which surround it depend some of the most important interests of our social system. Taking this into consideration, and laying aside the interest of the individual, is it not surprising that no effort at the regulation, control, or supervision of the marriage relation is made by society? The license-window is a place where the honest citizen and the criminal, the sane and the insane, the diseased and the healthy, the pauper and the millionaire, the learned and the ignorant, may meet upon common ground—for the important consideration of \$1.50. The criminal, the insane, the epileptic, the syphilitic, the consumptive, and the drunkard are legalized to go on producing their kind, the number of their progeny being limited entirely by the sweet will and physical capacity of the individuals. That the product of the factory of degenerates set in operation by licensing such people is a menace and a burden to society goes without the saying. Has society a right to protect itself against its own vicious off-scourings? I believe it has. I think the time will come when it will be no longer possible for our army of degenerates to procure licenses to marry. I believe that it should be, and one day will be, a crime for a person in the active stages of venereal disease to marry and almost invariably infect innocent persons. There can be no greater crime against the

individual than inoculation with contagious disease—a disease which, perhaps, may outlast several generations and carry affliction to unborn innocence.

I am well aware that sentiment is strongly against the regulation of matrimony; still, sentiment has been no bar to the demand for a license and for the performance of the marriage ceremony by the proper parties afterward. Why should it be a bar to demands for proper qualification on part of the prospective candidates for matrimony? To reduce the question to its ultimate by very material and substantial argument, society should govern matrimony upon business principles. It should protect itself against the danger and expense of breeding an army of paupers, lunatics, criminals, and diseased persons. A life insurance company which should be governed by sentiment would not be very highly regarded from a business standpoint, nor would it be likely to endure. Why should not society handle this question from the standpoint of a huge co-operative insurance association?

The prospective criminal once born, what does society do to prevent his becoming a criminal? Practically nothing. The child of poor but honest parents is allowed to run the streets and contract evil habits or vicious associations. Result, eventually, a criminal or a prostitute in a large proportion of cases. The child with hereditarily criminal propensities is allowed to follow the same course. The diseased degenerate child, whose parents are unable to care for it, is allowed to be exposed to all manner of vicissitudes, and, unless fortunate enough to be cut off by death at an early period, eventually becomes a burden upon the community. What is the remedy at present instituted for this condition of affairs? Society punishes the vicious child after a criminal act has been performed, and sends the diseased one to a hospital to be supported by the public after he has become helpless. Even to-day the child who has committed its first offence is thrown by the authorities into contact with older and more hardened criminals—to have its criminal education completed. We have millions for sectarian universities, millions for foreign missions, but no dollars for the redemption of children of vicious propensities or corrupting opportunities, who are the product of our own vicious social system and should be the wards of the State. But this is expensive. Yes, possibly—for the time being—but within a few generations a diminution in expensive processes of law and of costly penal institutions would make the plan a most economic one in the long run.

A very important factor in the development of the criminal class is the fact that crime seems to be quite profitable; that the gigantic swindler, if he be successful, wins a greater reward than thousands and thousands of honest laborers do collectively during the same period of time. Nor does

he run as great risks to life and limb as the average laborer who is employed in mechanical pursuits. A single mine explosion destroys more lives, injures and cripples more men, than are executed by law or injured in the pursuit of criminal occupations in half a century. The average professional thief gets more comfort and luxury and loses less time from his vocation than the average laborer.

That both moral persuasion and punishment have given but little result in the suppression of crime in times past must be admitted. The proportion of crimes to the population has varied comparatively little in the remote past. Statistics tend to show at the present time that crime is increasing. According to a report made at a recent meeting of the Medico-Legal Society of Chicago, a comparison of the census of 1850 with the census of 1890 shows that the population has increased 170 per cent., while the proportion of criminals has increased 445 per cent.

Preaching, while all well enough in its way, has accomplished even less than punishment. This is especially true with the criminal of the habitual type. I do not claim that this failure is due to the intrinsic fallaciousness of moral methods of persuasion, but the individual with a degenerate brain, who is possessed of absolutely no capacity for moral impressions, is poor material upon which to work. As outlined in the report to the Medico-Legal Society, already alluded to, the habitual criminal is an abnormal man, this abnormality manifesting itself (1) physically, by stigmata in cranial and cerebral development; by criminal physiognomy; by anomalies in the muscular, respiratory, and circulatory systems; by anomalies in motor activity, and in physical sensibility; and (2), psychically, by moral insensibility; by a lack of forethought; by a low grade of intelligence; by vanity; by emotional instability; and by slang (thieves' jargon).

In the consideration of such a vital question as the management of the criminal class, the sentimentalist and his natural ally, the preacher, have joined hands on the question, and to them the world has looked for the reformation for which it has waited in vain. Such practical treatment as the question has received has been chiefly in the direction of devising ways and means to punish the criminal, the building of penal institutions and scaffolds, with the expensive law machinery which leads thereto. And then society has set about devising ways and means to save the elect from its own laws, and has split hairs to such an exceeding degree of fineness that there lies between the thieving corporation, or the absconding millionaire, and the petit larceny fellow, who steals to live, an impassable gulf, one, at least, across which Mammon alone can build a bridge.

Society makes crime; manufactures its own criminals, and winks at the violation of its own laws in high places. It gives the criminal all facilities, the best of inducements for carrying on his avocation, and then threatens

to punish him if he follows the path cut out for him. Above all, society gives the criminal a chance to breed. Crime, as I have said, seems to be more profitable, safe, and comfortable, on the average, than honest labor. What have our preachers, moralists, sentimentalists, and lawmakers accomplished? They have spent the energy and money of the people for nothing. Every penal institution, every expensive process of criminal law, is a monument to the stupidity and wastefulness of society—an expenditure of money and energy to cure a disease which might be largely prevented. We have millions for courts of law and penal institutions, but nothing for the salvation of the children of to-day, who will be the criminals of the future. The first and worst injury that society inflicts upon the criminal is allowing him to be born. The criminal has a good and just cause against us.

The principal remedy for the conditions which tend to manufacture criminals out of young children consists in making them wards of the State, where it shall be shown that their parents are unable or unwilling to care for and educate them properly, or where it shall be shown that the children are vicious, either personally or in association, and, above all, in cases in which the children are of criminal parentage. The management of these children should begin before they commit criminal acts. They should be taken charge of and placed in suitable institutions in which physical as well as intellectual and moral training are followed. The first duty of the State to the degenerate is to make him a healthy individual and give him the physical capacity necessary to enable him to become a useful citizen. If the child is exposed to evil influences and sources of corruption it is the fault of our social system, and one which should be corrected. Good morals should not be expected from diseased children. The moral sense is the product of a healthy brain, and to be healthy the brain must be fed with good blood, a condition which is not possible in the case of the young waifs or neglected children whom we see about our streets. That physical and moral training is beneficial is shown by the records of the Elmira State Reformatory, the results of which have been phenomenal. If so much can be accomplished in such an institution, which is distinctly reformatory and to which children are only sent *after* they become offenders against the law, how much more effective might the same system be if used as a method of prevention in the case of children who have not yet become criminals?

The adult criminal must be separately considered. He is thoroughly developed in his criminal propensities; his organization, such as it is, is complete, and in by far the larger proportion of instances it is impossible to bring about moral reformation in him. Punishment rarely cures; there must be some radical fault in the system, else we would not obtain such such meagre results.

Criminals should be confined to institutions in which proper physical and intellectual training are brought to bear, and in by far the smaller proportion of cases excellent results may be obtained, and when it is believed that a cure of criminal propensities in this relatively smaller number of criminals has been brought about they should be released upon parole, but should still remain the wards of the State for a certain length of time. The duration of sentences should depend mainly upon the question of cure, rather than upon the enormity of the original offence, the exception to this being certain cases of murder and the crime of rape.

Habitual criminals, certain murderers, and rapists should be emasculated. This serves three purposes: (1) The rational punishment of the individual. (2) A powerful moral influence upon other and prospective criminals. (3) The criminal is prevented from perpetuating his kind.

Something like twenty-five years ago Dr. Gideon Lincecum, of Texas, a very able physician and a scientist known all over the world, appeared before the Texas legislature and ably advocated the substitution of castration of criminals for capital punishment. The result was that he was set down as a crank, while a howl of derision and disapprobation arose all over the land. By some this general protest was accepted as an argument—however, like all of the subsequent objections which have been advanced, it was based entirely upon sentiment. Dr. Lincecum's plan is now being advocated in many quarters, not as a substitute for capital punishment alone, but as a method applicable particularly to habitual criminals and rapists. Most of the opposition which is now being exhibited toward the plan is of a sentimental nature. As an illustration of this sentiment, a recent address upon the subject before the Medico-Legal Society of Chicago by a prominent practitioner of law in this city was excellent. Natural as sentiment may be in certain quarters, it is remarkable that a practitioner of law, and a man of standing in his profession, should come before an enlightened medico-legal body and protest against what would inevitably be a great step in sociological progress, and protest upon sentimental grounds. I do not oppose sentiment in general, but sentiment applied to sociological problems is—well, it should be a back number; it certainly is misplaced.

There is one feature of castration which makes it far superior to capital punishment in most cases. Executions do not punish, and are but an evanescent lesson to others. A few castrated murderers, habitual criminals, and rapists scattered throughout the community would be most efficient aids to the criminal memory.

Oliver Wendell Holmes once said: "If you want to reform a man, begin with his grandfather." I offer as an amendment that if you want to reform the criminal, castrate both his grandfather and grandmother. There

is but one substitute : Take the children of to-day, who will be the grandfathers of future generations, and make useful citizens of them. And yet, this failing, asexualization comes into play.

A legal gentleman who spoke in opposition to the proposed method before the Medico-Legal Society of Chicago referred to the viciousness and savagery of the eunuch of the East as an illustration of the danger of castration. Before he makes any deductions from the characteristics of the eunuch, he must compare him with the race from which the eunuch sprang. I presume that castrating the "Ahkoond of Swat" would not have produced a nineteenth century dude. The Oriental eunuch comes from a race of savages. The Amazons of Dahomey are not only savages, but, after being made practically neuters, are trained by savages for savage deeds. Another point : they are castrated young and trained afterward. We are advocating the castration of the adult criminal only. The result will not be the development of savage instincts in the criminal, but, if the experience of countless generations goes for anything, the operation will be likely to tone him down to a marked degree. That this gentleman was absolutely wrong is shown by observations of animals and by thousands of cases of castration in the human subject. The emasculated choir-boys of Rome did not develop blood-thirsty instincts. There is not a practising physician who does not know of dozens of women who have been asexualized for the relief of ovarian disease, yet where is our Amazonian army ?

In conclusion, I desire to say that the advocates of castration demand it, not for all criminals, but for habitual and incurable types, for rapists, and possibly for some murderers. As far as the latter are concerned, their execution is useless. Let them choose between scientific experimentation under anæsthesia and castration. They might expiate their crimes by benefiting scientific medicine. As for capital punishment, away with it !

With regard to sexual crimes, asexualization is of very practical importance to the people of the South, among whom such crimes, particularly on the part of the ignorant Southern negro, is of especial frequency. This was one of the important points brought out by the discussion before the Medico-Legal Society. It is to be understood, however, that the discussion of this subject applies to all sexual criminals of whatever color ; the negro criminal of the South is especially considered because he has been very prominent, not only with reference to the frequency of the crimes which he has committed in this direction, but because of the barbaric treatment which he has received in certain communities as a method of punishment. In response to a request made by my friend, Dr. Hunter McGuire, of Richmond, Va., I made an exhaustive discussion of this subject several years ago in a paper which I then published. I called attention to the futility of lynching and legal executions or imprisonment.

Nowhere in the history of civilization has the futility and barbarity of capital punishment been so well shown as in the punishment of negro rapists in the South. The negroes who perform the acts under consideration are the lowest and most ignorant of the race. They cannot read the newspapers, and it is conceivable that a negro may be hanged or burned at the stake without the negroes of the adjoining county becoming apprised of it. The lower-class negro is subject to attacks of *furor sexualis*, which completely remove any inhibitory impressions which he may have received, even though in his rational moments he knows that swift and terrible vengeance will be meted out to him for the crime of rape. He is usually a religious fanatic who sees the gates of heaven yawning wide to receive him just beyond the scaffold. Those gates are ever hungry for the fruit of the gallows-tree, and your negro fanatic needs no priest or clergyman to bid him *bon voyage*. The Zulu crops out in his not very remote descendant on such occasions. Death is no punishment, and its moral effect is but transitory on those about him. What a rapist needs is an ever-present object lesson, and one which puts the criminal beyond the power of further criminal acts of like nature.

A negro clergyman of education, in commenting on my paper on this subject, said: "The conceded superiority of the white race has much to do with rapes committed on white women by the negro. Art, literature, and religion combine to inflame the passions of the negro for white women. Your fairies, nymphs, goddesses, and angels are all white. Did you ever hear of a black angel? The result is an inflamed passion and an exaggerated curiosity on the part of the negro."

It is my opinion that a few castrated negroes scattered throughout the South would do more good than a multitude of executions. The colored clergyman whom I mentioned suggested that the offender's ears should also be cropped that he might be easily recognized.

I repeat, I do not endorse this method as applicable to the negro rapist alone, but to all criminals of that particular type.

In one of the papers read before the Medico-Legal Society mentioned a distinguished student of the subject became a trifle sentimental over the case of a boy of seventeen years of age, who was committed for killing a policeman—"his first killing." This boy behaved well for several years, and the author of the paper said "he was cured." Cured of what? He never *was* a professional murderer. His was a sporadic case of criminality, and one in which it is impossible to say that the same conditions would not lead to another murder. No matter how well behaved, that boy was probably still dangerous. From an extensive experience, I am free to say that convicts doing time for murder are nearly always well behaved. First, because their crimes were committed, in most cases, under exceptional

conditions of excitement. Second, good behavior affords the only hope of men who are not imprisoned for a definite term, but who may at some time excite the pardoning sentiment in somebody or other. Beware of well-behaved murderers unless there be something more than good behavior as an evidence of cure. Repentance is, of course, no evidence—they are nearly *all* repentant. Understand, I believe that quite a large proportion of murderers might be liberated without danger, but I simply desire to call attention to the difficulty of deciding this point. Your sporadic murderer may be “cured” until such time as certain sources of excitement control him. He is much more difficult of analysis than the habitual criminal.

The author of the paper to which I allude also suggested a board of medical examiners to diagnose the grades of criminality and decide upon appropriate measures of treatment. Now, this is all very well in theory, but will it work? Who shall form the board, how shall they be appointed and upon what absolute data shall they form a diagnosis? I firmly believe that the existence of such a board for six months would, with the meagre data at our command, bury the science of criminal anthropology so deep that it could never be resurrected. Let us rather bear those laws we have than fly to boards we know not of—that would make confusion worse confounded. No, a board of diagnosis of crime would be a dangerous thing. Let us concern ourselves with the conditions that produce the criminal and the best means of cure.

It has seemed to me that we are working at a disadvantage by considering the criminal of to-day as being the most important factor in the crime problem. I repeat—Dr. Oliver Wendell Holmes voiced the central idea when he advised us to reform a man by beginning with his grandfather.

The repression of the criminal class is a question which should be dealt with from a practical standpoint. Sentiment, if exhibited at all, should be in behalf of honest people, not the criminal: The maudlin sentiment which impels fashionable women to present bouquets and frosted cakes to imprisoned criminals may yield to the pressure of the new method of criminal correction. Like all other diseases, the disease of crime is one which is more rationally treated by prevention than by curative methods. Will not the lawmaker join hands with the medical practitioner and endeavor, even at the sacrifice of his own interests, to prevent the diseases which he treats?—*Medical News*.

TREATMENT OF SYPHILITIC AFFECTIONS OF THE EYE
BY MERCURY, POTASSIUM IODIDE, AND PILO-
CARPINE COMBINED.*

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IN July, 1894, a man consulted me suffering from syphilitic inflammation of both eyes of nine months' duration at least. His physician had been treating him for acquired syphilis since December, 1893. Three months or so prior to this his eyes became affected while under the supervision of another physician. From December, 1893, to July, 1894, he had received antisymphilitic treatment in the form of mercury and the iodide of potash. Atropine was also used locally during the entire winter. This latter remedy had not been used for two weeks prior to consulting me.

The condition of the eyes July, 1894, was as follows :

Left eye. Much conjunctival, subconjunctival, and ciliary injection, pain at times, aqueous turbid, many lymph dots on the posterior surface of the cornea, very many posterior synechiæ, some being broad and dense, with the thin deposit of lymph in the pupillary area. V = perception of light only.

Right eye. No letters of Snellen type at twenty feet, and only letters of No. XL. of the same type at eight inches ; cornea and aqueous very slightly affected, posterior synechiæ more numerous and broader so as almost to be without a break, *i.e.*, so as to form almost one solid ring of adhesion, and the lymph deposit in the pupillary area denser. He said that his vision was now much worse than three months previously. I continued the administration of mercury and the iodide of potash internally, and atropine locally. At the end of four weeks no improvement had taken place ; in fact, the eyes were slowly getting worse. I now made a change in the treatment as follows : I still continued the internal use of mercury and the iodide of potash, but added pilocarpine, giving it hypodermically. I began with gr. $\frac{3}{8}$, and gradually increased it to gr. $\frac{1}{4}$. I continued this for three weeks, and then again in three weeks for two weeks more, and

* Read before the Toronto Medical Society, February 7, 1895.

again in five weeks for two weeks longer. While in use the pilocarpine was given every day, unless its administration gave rise to nausea, headaches, or oppression over the region of the heart, when it was stopped for one or two days, or perhaps the dose reduced only. After one week an improvement could be seen; at the end of three weeks it was quite evident, and at the termination of fifteen weeks or so the vision was $\frac{2}{30}$ Snellen.

The posterior synechiæ had been steadily thinning, so that the broad dense bards began to look quite attenuated and web-like.

An interval of rest of eight weeks was given, the mercury and the iodide of potash, however, being continued. I may here mention that he has steadily taken the mercury and the iodide since he came under my care. At the expiration of this time the pilocarpine was again given hypodermically for ten injections. Some of the posterior synechiæ above mentioned have now given way, and such an alteration has shown itself in those that remain that I feel assured that by persistence in treatment all these iritic adhesions will be removed. The deposit of lymph, once markedly present in the pupillary area, seems to be practically gone in the left eye and much lessened in the right. The vision is R = $\frac{2}{40}$, L = $\frac{2}{20}$.

I may also mention that since the pilocarpine was given the improvement that then began has been uninterrupted.

The progress of this patient under the combined treatment has been most interesting to me. It has not only shown the apparent inertness of the powerful remedies, mercury and the iodide of potash, but also the immediate and brilliant results of the combined use of mercury and the iodide of potash internally and pilocarpine hypodermically.

We all know that the vigorous and long-continued use of mercury and the iodides has too often had far from a satisfactory effect, not only in syphilitic affections of the eye, but also in syphilitic lesions in other parts of the body, as I think has again been exemplified in this case. The addition of pilocarpine, however, produced such a markedly beneficial effect that I feel justified in claiming for this combined form of treatment a position as a most valuable and important addition to our means of treating syphilitic affections of the eye, and, if of the eye, why not of any other part of the body that may be affected? From the manner in which this combined form of treatment has acted upon long-standing iritic adhesions, I feel it ought to be exceptionally useful in syphilitic lesions of long duration.

Pilocarpine has been used to a limited extent in syphilis; but I have never heard of its employment combined with mercury and the iodide of potash, as is now brought before the attention of the profession.

It is not from this case alone that I have drawn my conclusions; for

others, not so typical, have, however, all contributed to strengthen my belief in its efficacy.

The above-mentioned treatment has ever since been carefully followed out, and is still being continued with such gratifying results that, with permission, I purpose later on publishing them in this journal.—*Archives of Ophthalmology*.

PROFESSIONAL SECRECY AT HOME AND ABROAD.

THE result of a recent trial has been to bring into prominence the obligations and legal relations which exist between medical men and their patients with regard to facts learnt in the sick-room involving questions of professional secrecy. On this subject little has been written in this country, and the student has to turn to foreign literature, especially to that of France and of the United States, for a full discussion of the questions involved. We propose to consider briefly some of the obligations of professional secrecy as they obtain in this country, where the matter is not under statutory control, and in certain other countries where it is governed by legal enactments, at the same time giving a few actual cases in illustration of the points raised.

Ever since the practice of medicine has been an organized profession the obligation devolving upon its members to regard as inviolable the secrets confided to them, and those to which they gained access during attendance on their patients, has been a generally-recognized tradition. This tradition was embodied in the well-known Oath of Hippocrates, of which the final paragraph runs as follows: "Whatever in connection with my professional practice, or not in connection with it, I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this Oath unviolated may it be granted to me to enjoy life and the practice of the art respected by all men in all times! But should I trespass and violate this Oath, may the reverse be my lot!" In a similar manner the Faculty of Medicine of Paris embodied this tradition as to the obligation of professional secrecy very concisely in the following formula, which was promulgated in 1566: "*Ægrorum Arcana, visa, audita, intellecta, eliminat nemo.*" It will now be necessary to consider how far this tradition has been modified in modern times, and to what extent it has received legal sanction.

In Great Britain and in most of the States of the American Union medical men, when they appear in a court of law, can be compelled under oath to divulge such confidences, rendering themselves liable, in case of refusal, to committal to prison for contempt. Medical men in this country are thus, from a legal point of view, in exactly the same position with

respect to secrets confided to them in the practice of their profession as the rest of the world is with respect to ordinary secrets.

On the other hand, in most European countries, and in a few of the States of the American Union, professional secrecy has been made the subject of special enactments. In France the betrayal of professional confidence is of itself a punishable offence.

It will now be useful to compare, with some little detail, the working of these two systems as regards the obligation of professional secrecy involved under the two following heads: (*a*) The obligations to retain secrets, and the consequences of divulging them; and (*b*) the obligations to divulge secrets, and the consequences of retaining them.

(*a*) The obligations to retain secrets, and the consequences of divulging them. In France, according to Professor Brouardel, there are, broadly speaking, three classes of facts which always involve the obligation of secrecy: (1) Facts with regard to the nature of the disease, amongst which are (*a*) those known as "maladies secrètes," or, in other words, venereal diseases; and (*b*) diseases which are either known or supposed to be hereditary, such as epilepsy, tuberculosis, and mental alienation. (2) Facts with respect to diseases which usually lead to a more or less rapid death. (3) Facts which, though not in their nature secret, become so under special circumstances. For example, the birth of a child is not as a rule to be regarded as a secret—in fact, medical men in France are bound, under penalty to the authorities, to notify any birth occurring in their practice in the absence of the father; but where a girl who has been seduced gives birth to a child, the medical man, in reporting the birth, does not give the name of either the father or the mother; nor does he give the address of the house in which the child was born. If he divulged any of these facts he would render himself liable to a penalty. Again, cholera is not a secret disease; but in the case of a man dying of cholera in a house of ill-fame, the fact of his having done so may not be divulged by his medical attendants. In such a case it is usually assumed that he has been attacked by the disease in the street, and thence carried to a hospital—a form of polite fiction which in Paris is connived at by the Prefecture of Police.

The rigor with which the law in France with respect to professional secrecy is enforced is well illustrated by the case of Dr. Watelet, who, in 1884, in order to defend himself against false accusations with respect to his treatment of M. Bastien Lepage during his last illness, wrote a letter to *Le Matin*. In this letter he described the disease, the operation, and the result of the subsequent examination of a tumor removed. For the publication of this letter he was prosecuted and condemned to a fine of 100 francs, and the conviction was upheld on appeal.

In addition to the penalties under the penal code, medical men in France are also liable to civil actions if their betrayal of professional confidence can be shown to have caused the aggrieved party technical damage.

In this country, if a medical man voluntarily divulges secrets acquired in the course of his profession, he does so at his own risk, for the secret is that of the patient, who has a *prima facie* right in law to require that it shall not, under ordinary circumstances, be divulged to any third party. If he can show that he has suffered any damage in consequence of the publication of the secret, he is entitled to redress. Supposing that action taken by the patient should be for defamation of character or for libel or slander, the medical man, under certain circumstances, might plead "justification"—that is to say, he might set up as a defence to the action "that the words spoken or written were true in substance and in fact." Whether this plea would be successful or not would depend on the view taken of the circumstances by the jury. If, however, it should not be thought desirable to enter the plea of "justification," the question of "privilege" might arise. What circumstances exactly constitute privilege when a medical man communicates a professional secret to a third party has not been authoritatively decided in this country; but, to take an extreme case, there is little question that where a doctor, having ascertained, in the ordinary course of his profession, that his daughter's intended husband was suffering from syphilis, communicated the fact to his daughter, with a view to preventing the marriage, such a communication would be regarded as privileged; whereas in France, under precisely similar circumstances, a medical man would have rendered himself liable to penalties for divulging a professional secret.

In France, in addition to the various classes of cases which have already been referred to, and in which the necessity for professional secrecy is regarded as absolute, there are a large number of other cases in which a certain amount of discretion is permitted to the medical man, as, for example, in questions of life assurance and death certification. With regard to life assurance, there has been much discussion and litigation in France. It has been held that under exceptional circumstances the family doctor may disclose facts with respect to the person to be assured, but not where these have any bearing upon the family history. As a matter of practice, however, at the present time, it is considered a breach of professional secrecy for the family doctor to disclose any facts with regard to the personal or family history of his patient, and the death of the latter does not release him from this obligation. The companies' interests are considered to be sufficiently protected by the report of their own medical examiner. In the case of certification of the cause of death,

again, a certain amount of latitude is allowed to medical men. Still, here there are a large number of diseases where, if the doctor certifies as to the actual cause of death, he is considered as guilty of a breach of professional secrecy. These instances will suffice to show the difference between the practice in France and in England.

(*b*) The obligations to divulge secrets and the consequences of retaining them. With regard to this heading, it may be stated in general terms that in France the physician is bound to divulge professional secrets in those cases where their retention involves plots against the State, or against the lives and welfare of individuals—in cases, for example, of poisoning, abuse of children, and criminal abortion—and with regard to these subjects the obligations of the medical man in England are the same. A failure to divulge would cause him to be considered an accessory, and render him liable to penalties. The medical man in France is also bound under penalties to report under certain circumstances births which have occurred in his practice, and under a recent law he is required to notify the occurrence of cases of infectious diseases. With respect to evidence in a court of law, a medical man in France cannot be compelled to disclose communications or to produce documents which have passed between himself and his patient in professional confidence. Many cases have been decided on this point, of which the following is an example: When, after an insurrection in Paris, Dupuytren was questioned by the Prefect of Police as to some insurgents under treatment in his hospital, he replied, “I have not seen any insurgents in my hospital wards; I have only seen some wounded men.”

In England and most of the States of the American Union communications between client and legal adviser necessary to their relations only are held to be confidential, and protected from disclosure in a court of law; whilst medical men are bound to give evidence as to facts learnt professionally which have any bearing upon the case. The leading case on the subject is that of the Duchess of Kingston, who was tried for bigamy in 1776. On that occasion Cæsar Hawkins, who was called as a witness, refused to answer a question on the ground of professional secrecy. The court, however, held that a surgeon was bound to disclose professional confidences which voluntarily to reveal, said Lord Mansfield, “would be to be guilty of a breach of honor and a great indiscretion, but to give that information which by the law of the land he is bound to do will never be imputed to him as any indiscretion whatever.” In view of this decision, any medical man refusing to testify in a court of law to facts which had come to his knowledge professionally would render himself liable to be committed for contempt of court. Whether he would be committed or not would depend on the judge, whose decision would be

governed by the particular circumstances of the case. The only case according to English law in which a medical man may refuse to disclose secrets between himself and his patient is when such disclosures would incriminate himself.

In New York and certain other of the American States it has been enacted that "a person duly authorized to practise physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity." In the States where this enactment is in force the position of medical men in a court of law is practically the same as in France. The Court of Appeal has decided that all information must be regarded as confidential which has been acquired by the physician in his professional attendance, whether personally observed by him in examining the patient or imparted to him by anyone in order to enable him to act in his professional capacity, and that, too, although it might not, in fact, aid him to prescribe.

From the foregoing remarks, which have touched upon some only of the questions involved in the subject of professional secrecy, it will have been seen what a wide difference exists between the strictness with which the old tradition is still adhered to in France and elsewhere, and the great modification which it has undergone in our own country. While not wishing to abandon our greater freedom, and feeling that the interests of patients may be safely left in the hands of their medical advisers, we consider that the rule with respect to the disclosure of professional secrets in court is, in the words of Best ("Law of Evidence," p. 531), "a rule harsh in itself and of questionable policy."—*The Practitioner* (English).

Clinical Notes.

REPORT OF SURGICAL CASES.*

BY DR. T. K. HOLMES,

CHATHAM.

THE following surgical cases that have come under my care recently present some features of interest that may warrant their being reported :

CASE I. Mr. W. W., æt. 44, who had always led an active life, and whose family and personal history are good, consulted me in the summer of 1894. He had for several years had occasional attacks of severe pain in the stomach and right hypochondriac region, which were so severe that gallstones were suspected as being the cause. None, however, could ever be detected, nor was there ever jaundice. He had been treated by a number of physicians, and had been in the sanitarium at Battle Creek for about two or three months just before coming under my care.

Examination showed that he had lost weight from 180 to 124 pounds during the last four years ; that he had suffered almost constantly from severe dyspeptic symptoms, loss of sleep, progressive emaciation, and a train of nervous symptoms that entirely unfitted him for any kind of business. He complained of great distress in the abdomen, which he described as a drawing or twisting of the bowels, and of a feeling of fear of being left alone. This was so marked a feature of his case that he would not go anywhere alone, or even remain alone in his room, so great was his feeling of fear of impending death. He was so emaciated that examination of the abdomen was easy, and at once revealed an enlarged movable right kidney. It could be displaced beyond the median line, and descended freely with each inspiration. He readily consented to have nephrorrhaphy performed. This I did by making the usual lumbar incision exposing the kidney, incising the capsule for about three inches, and stripping it back so as to secure a fresh surface about an inch and a

* Read before the Ontario Medical Association, Windsor.

half wide. Three silk sutures were passed through the muscles and fascia, then through the denuded kidney, and through the fascia and muscle again on the opposite side of the incision. These were tied, cut short, and buried by silkworm-gut sutures passed through the skin, and deeply enough to close the wound to the buried sutures. There was no shock, and the wound healed without suppuration. No drainage was used. The symptoms he had suffered from gradually disappeared, and in a few months he regained his usual weight and resumed his business. He has remained well since. I have frequently observed that floating kidney gives rise to very marked dyspeptic symptoms and much nervous depression, but never before saw a patient so completely reduced physically and mentally as this man was. He dwelt constantly on his bad feelings, and no assurance could convince him that he was not in danger of impending death. Opinion is divided as to the propriety of operation for this affection, but I think it will be generally admitted that in any case in which the symptoms are distressing and not relieved by any mechanical appliance nephrorrhaphy should be performed. The operation has been condemned by some surgeons, and it will not always succeed in curing a patient, but it may be that insufficient means to anchor the kidney firmly is the cause of failure and disappointment in some cases. The sutures should be so introduced as to hold the organ firmly and permanently in place, and to do this should be passed through tissue that will not yield when tied, and enough of the kidney should be included in them to afford a surface of at least three inches by one and a half inches for adhesion.

CASE 2. Mrs. McG., æt. 49, married, and has six children. Was never ill till sixteen months ago, when she was thrown from her carriage and bruised her left kidney on a stone. She was unable to rise without help, was ill for several days, and from the time of the injury she has had constant pain in the region of the left kidney and in the left side of the head, neck, and face. About eight months after the fall she noticed a tumor opposite the navel on the left side, and this grew until it extended beyond the median line, and by pressure caused great distress and interfered with nutrition. She lost weight, became pale and weak, and was unfit to do any work. On February 26, 1896, I removed the tumor by abdominal incision through the linea semilunaris. The internal layer of the mesocolon was split in longitudinal direction, and so as to avoid large blood vessels, which were numerous, and the organ was rapidly enucleated, the ureter and renal vessels were tied separately, and the whole mass removed. The colon lay in front of the kidney, and was pushed to the left in the process of enucleation. When the tumor was removed, the layers of the mesocolon shrank together so completely that no suturing seemed necessary. Very little bleeding occurred, and after drying the cavity well the

abdominal wound was closed without drainage, and recovery was satisfactory in every way. There was no shock, the temperature never rose above normal, and her health has steadily improved since the operation. The neuralgic pain in the head, neck, and face did not return after the operation. This patient was sent to me by Dr. Hanks, of Blenheim, who, with Dr. McKeough, was present and assisted at the operation.

CASE 3. Miss Y., æt. 30 years. Had a good family history, and always had good health herself until August, 1894, when she discovered a hard lump in the left inguinal region. It was as large as a hen's egg, as nearly as she could tell, was not tender nor painful at that time, but as it grew became very painful, especially at the menstrual periods, which were regular, and, in other respects, normal. She did not consult anyone in reference to the tumor until October, 1895, when she saw Dr. Langford, of Blenheim, through whose courtesy she came to me. I found a solid tumor filling the pelvis and lower part of the abdominal cavity, and extending about two inches above the umbilicus. It was slightly movable, and was firmly connected with the uterus. She was much reduced in strength by suffering, was pale and sallow, slept little, and walked with difficulty. I advised abdominal hysterectomy, and she entered the General Hospital at Chatham to have the operation performed, but the day before that set for the operation she was sent for by her parents, who shrank from having it done on account of the danger. She subsequently consulted a homœopathic physician in Detroit, who thought he could disperse the tumor by medicinal means. She returned to me in April last, and on the 17th of that month I performed abdominal hysterectomy, adopting the plan advised by Dr. Howard Kelly, of Baltimore, to whom the profession is so deeply indebted for many improvements in the technique of abdominal and pelvic surgery. My chief object in reporting this case is to bear testimony to the greater facility with which such cases can be dealt with by adopting his method. Quoting Dr. Kelly, the steps of the operation are :

(1) "Opening the abdomen.

(2) "Ligation of the ovarian vessels near the pelvic brim, either on the right or on the left side, clamping them towards the uterus and cutting between.

(3) "Ligating the round ligament of the same side near the uterus, cutting it free, and connecting the two incisions in order to open up the top of the broad ligament.

(4) "Incision through the vesico-uterine peritoneum from the severed round ligament across to its fellow, freeing the bladder, which is now pushed down with a sponge so as to expose the supravaginal cervix.

(5) "Pulling the body of the uterus to the opposite side to expose the

uterine artery low down on the side opened up. The vaginal portion of the cervix is located with the thumb and forefinger, and the uterine artery, seen or felt, is tied just where it leaves the uterus. It is not always necessary to tie the veins.

(6) "The cervix is now cut completely across just below the vaginal vault, severing the body of the uterus from the cervical stump, which is left below to close the vaginal vault.

(7) "As the last fibres of the cervix are severed or pulled apart, while the body of the uterus is being drawn up and rolled out in the opposite direction the other uterine artery comes into view, and is caught with artery forceps about an inch above the cervical stump.

(8) "Rolling the uterine body still further out, the other round ligament is clamped and cut off, and, lastly, the ovarian vessels are clamped at the pelvic brim, and the removal of the whole mass, consisting of the uterus, tubes, and ovaries, is completed.

(9) "Ligatures are now applied in place of the forceps holding the uterine artery, round ligament, and ovarian vessels; if the surgeon prefers these may be tied as they are exposed without using the forceps.

(10) "After the enucleation the operation is now finished by closing the cervical tissue over the cervical canal, and then by drawing the peritoneum of the anterior part of the pelvis (vesical peritoneum and anterior layer of broad ligaments) over the entire wound area, and attaching it to the posterior peritoneum by a continuous catgut suture."

The tumor in the case here reported was developed beneath the pelvic peritoneum, and the whole mass was more accessible on the right side. The operation, therefore, was begun on that side, and the enucleation from below upwards was completed on the left side. In this way the vessels on the right side were more easily found and secured, and the ureter avoided, while on the left side the ureter was pushed out of the way in the process of enucleation and was not seen at all. The closing of the cervical canal by a double row of catgut sutures and the shutting off of the pelvic from the abdominal cavity by sewing together the layers of the broad ligaments and the vesical peritoneum with that behind the uterus makes an ideal finish, and allows the abdominal wound to be closed without drainage.

During the operation, and as soon as the pulse began to weaken, normal salt solution was transfused under each breast, eighty-four ounces being used in this way with excellent effect on the circulation. For eight hours after the patient was removed to bed symptoms of shock were marked, the pulse being part of that time very feeble and about 160 per minute, although she continued to express herself as feeling comfortable. While shock lasted an enema of two ounces of brandy in a pint of salt solution was administered every two hours.

She made a good recovery, and was discharged at the end of a month. The tumor and uterus, which are here presented, weigh four pounds two ounces.

The kidney of the second case, which I also present, weighs forty-nine ounces.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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CASE OF SEVERE HEAT-STROKE; RECOVERY.

On May 28th, 1894, while in the Indian Ocean, some 300 miles to the westward of Ceylon, an English youth, aged seventeen years, was taken ill. He had been working nearly the whole day directly exposed to the heat of the sun. He never complained of any illness, but at 4.30 p.m. he was noticed to stagger and fall. Some of the men went to his assistance, found him very ill, and at once sent for me. I found him quite conscious, and he complained of violent headache and pains in the back and limbs. His skin was very hot and dry, and his pulse was very rapid, full, and bounding. I placed my thermometer beneath his tongue, but by the time the temperature was taken he was quite comatose. The thermometer registered 108° . The method I adopted to reduce the temperature was very rough and simple, but proved very effective. I had the lad stripped as rapidly as possible and laid on the deck. A large piece of ice was placed to his head and sea water was brought in buckets and dashed over him in an almost continuous stream. After about twenty minutes of this treatment the temperature had fallen to 103° , and the lad had recovered consciousness and expressed himself as feeling much better. The douching was discontinued, he was placed in his bunk and given hot tea to drink. A powder consisting of five grains of calomel and twenty grains of antipyrin was given. An hour later I found the patient's temperature had again risen to 105° and he was very drowsy. He became unconscious again and had a violent convulsion. The cold douching was recommenced in the same manner and continued for some time until the tem-

perature fell to 100.4°. He again recovered consciousness and was placed under awnings on the hatch, where he was much cooler than in the fore-castle. He felt much better and was able to partake of a little milk food. The temperature afterwards rose to 103°, but no higher. The skin continued hot and dry and a diaphoretic mixture was given. He passed rather a restless night, but on the next morning, the 29th, he felt fairly comfortable. His temperature was 101°. He had micturated very frequently during the night and the skin was still very dry. The bowels had not been moved, so two ounces of *mistura sennæ composita* were given. At 9 p.m. the temperature was normal. On the 30th he was much better. The temperature was normal the whole day, and the skin moist. The bowels were well opened. On the 31st he felt quite well. He had no headache, dizziness, or other unpleasant symptom, and was allowed to resume his work. Throughout the remainder of the voyage he remained perfectly well, but was careful not to expose himself to the sun.

I can quite endorse all that Mr. Atkey says about the good chance these cases have on board ship. The surgeon cannot be far away, and ice and water at a suitable temperature are plentiful. Much delay in a case like the above would greatly diminish the prospects of recovery. From the time when the patient was first noticed to be ill to the commencement of the douching ten minutes could not have elapsed, and it was undoubtedly this prompt treatment which saved his life. Dr. Wales, of Canton, was on board at the time, and his experience of these cases was of great assistance to me.—*J. W. Crawshaw, M.B., Ch.B. Vict., in London Lancet.*

THE "PLUMB-LINE SIGN" IN THE DIAGNOSIS OF PLEURAL EFFUSION.

Pitres (*Arch. Cliniques de Bordeaux*, February, 1896), in some lectures on the "Physical Signs of Pleural Effusions," speaks of the deformity arising from effusion, and its effect on cyrtometer tracings or measurements of the two sides of the chest. Owing to the positive pressure exerted by an effusion the affected pleural cavity becomes rounded, and increases in size at the expense of the sound, which is dragged over towards the affected side, the lower ribs of which assume the position of inspiration. As a result the sternum, with its fixed upper end as the centre, becomes rotated, and the ensiform cartilage is displaced, so that, supposing a plumb line were dropped down the middle line, it would be from 2 to 4 cm. away from it (hence the name *signe du cordeau*). Thus cyrtometer tracings or measurements, which are usually taken from the spinous processes behind to the middle line of the sternum, give a false impression of the relative size of the two sides, those on the affected side being too small and those on the sound too large by the amount of deviation of the ensiform carti-

lage from the plumb line, which should therefore be taken instead of the mid-sternal line. This sign, though of theoretical, is not of much practical value in the diagnosis of pleural effusions, since other conditions which cause an increased pressure on one side of the thoracic wall, such as pneumothorax, unilateral emphysema, and tumor of the lung, can produce a similar deformity.—*British Medical Journal*.

THE DIAGNOSTIC IMPORTANCE OF THE EXAMINATION OF THE FASTING STOMACH.

Schüle (*Berliner klin. Wochenschrift*, 1895, No 52) has made some investigations in this subject, concerning which previous researches have been very contradictory. As the term "fasting stomach" cannot be applied to the organ after it has been receiving saliva and pharyngeal secretions, the observations were made on persons at once on waking in the morning. Nine subjects were used, six of whom were trained by previous experiments in the swallowing of the stomach-tube. The result of the experiments was that in thirty-one out of thirty-four trials the stomach contained from 2 to 23 c.cm. of fluid. This was always acid in reaction, and accordingly contained gastric juice. Free hydrochloric acid was present only seven times. Mucus, bile, peptones, and pepsin were also occasionally present. The cause of the presence of the gastric juice must be sought in the saliva or secretions from the pharynx, which even in the small quantities that are swallowed while sleeping excite secretion.

As to the possibility of a continued hypersecretion the author has no personal experience, but gives the following statements bearing on the question :

If there is a hyperacid secretion in the fasting stomach, even in small quantities, it must be looked on as pathological.

If the fasting stomach contains a larger quantity, *i.e.*, 50 to 100 c.cm., this may be due to a pathological process, but is not necessarily so. Alkaline contents indicate a disturbance of the gastric chemistry.—*American Journal of the Medical Sciences*.

VERTIGO.

Mendel (*Berliner klinische Wochenschrift*, No. 26, 1895) mentions the opinions of various authors regarding the nature of vertigo, and the differences of opinion which they entertain. He personally recognizes four degrees of vertigo : (1) The mildest grade, which consists purely in a sensation of a sudden change of the external world as a projection of the perceptions from without, due to the changed conditions of the eye-muscles ; (2) there follows the first, the sensation of a disturbance of the body

equilibrium ; (3) in addition to the previous sensations, there ensues veritable body swaying ; (4) finally, there follow other conditions, as occipital headache, tinnitus aurium, even deafness, vomiting, profuse perspiration, slowing of the pulse rate. He discusses the *modus operandi* of the production of this phenomenon, and finally defines vertigo as a symptom complex, which essentially consists in a disturbance of the body equilibrium produced by morbidly changed function of the ocular muscular apparatus. When the ocular muscular apparatus as such is not diseased, the focus of the production of the vertigo is to be sought in a transitory disturbance of the circulation in the region of the nuclei of the ocular muscles. Based upon a physico-anatomical study, he concludes that there is no part of the brain more prone to suffer from slight circulatory disturbances than the region of the nuclei of the oculo-motor and trochlear nerves, and to almost the same extent that of the abducens. It is thus that every disturbance of the cerebral circulation first manifests itself by disordered function of the nuclei of the aforementioned nerves.—*University Medical Magazine*.

THERAPEUTICS

IN CHARGE OF

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SALICYLATE OF SODIUM AND URIC ACID.

Bohland (*Centralbl. fur Innere Med.*, January 18, 1896) has investigated the action of sodic salicylate upon the excretion of uric acid. It would appear, according to the researches of some authorities, that this drug produces an increased excretion of uric acid only when there is an increased production of this body. It is therefore necessary to control the production of uric acid in such investigations.

According to Horbaczewski, uric acid is the metabolic product of nuclein, which latter is chiefly derived from the white blood cells. The author's investigations with Hecken were carried out upon two healthy men. They found that sodic salicylate considerably increased the excretion of uric acid, but that the number of leucocytes was also greatly increased. Thus, medium doses of salicylates produce a distinct increase in the white blood cells, and, if Horbaczewski's theory is correct, a considerable leucolysis, and through this latter an augmented uric-acid excretion.

Sodic salicylate has been recommended in gout, but in a number of cases it has been found useless. Some authorities, while admitting that it is of no service of cutting short the attack, yet look upon it as a valuable analgesic. According to the above experimental evidence, it is hardly to be expected that the salicylates should be of use in gout, and the author believes they should not be used even as analgesics either in gout or in the uric-acid diathesis.—*Therapeutic Gazette.*

MANAGEMENT OF PREGNANCY WITH NEPHRITIS.

Mynlieff (*Der Frauenarzt*, January 1, 1896) insists that when a woman with chronic nephritis becomes pregnant, the induction of abortion is indi-

cated on account of the immediate peril of the patient (which increases as pregnancy advances), the certain continuance of the morbid process in the kidneys themselves, the great tendency to flooding and abortion, and the small prospect of the development of the foetus up to term, even if it lives so long. Mylieff dwells on the responsibilities of the physician who is called in when pregnancy is advanced. The induction of premature labor may then be undertaken at a time which seems most favorable for saving the foetus—that is to say, a little delay may be allowed; but the history of previous pregnancies must be duly considered, and if it is found that the foetus tends to die at a certain date in pregnancy that date must be anticipated. In any case the life of the mother must be considered first; hence, up to the last, immediate interference is usually the safest course. The same principle is often best for the foetus when viable, as it may die suddenly earlier than in previous pregnancies.—*British Medical Journal*, February 8, 1896.

THE IRRATIONAL EMPLOYMENT OF INTESTINAL ANTISEPTICS.

Huchard called the attention of the Société de Therapeutique (December 11, 1895, *Revue Internat. de Méd. et de Chirurgie*, January 10, 1896) to the frequent irrational employment of intestinal antiseptics.

Sometimes they are used in excess, at other times the proper ones are not employed—as, for instance, in numerous cases of hyperacidity that are treated by antiseptics. Hydrochloric acid is an antiseptic of itself; although its action is not direct, it is efficient. Sometimes the fault lies in not giving a sufficient quantity, forty-five grains or a drachm of benzo-naphthol being prescribed where three times that amount is called for.

Nothing can be inferred as to the efficacy of an antiseptic from the presence of its odor in the fæces. Deodorization and disinfection do not go hand in hand.

The author believes that the therapist should, if possible, secure asepsis instead of antiseptics, and to this end he advises the practice of enteroclysis.

The principal indication for this method of treatment is uræmia, which, according to Bouchard's definition, is an intoxication by all the poisons introduced into the body which the kidneys are incapable of eliminating. Another indication is alimentary dyspnœa, which has an origin in ptomaines, produces a state of cardiac hyposystole, and is one step in the production of a true dyspnœic uræmia.

The method of administering the enteroclysm the author describes as follows: A long cesophageal catheter, communicating with a receptacle by a rubber tube, is the instrument required. This should hold two quarts of a salt solution at a temperature of 104° F. The catheter is introduced

into the rectum, which is then plugged by cotton tampons. With the use of three quarts of water the ileo-cæcal valve can be easily passed, and the water will pass into the small intestine. With six quarts the water will pass into the stomach, and some experimenters have made it flow from the mouth—this, however, has no advantage.

The only inconvenient results of this mode of treatment are, in some cases, severe colics. The results produced have been very gratifying, as the following short résumé will show :

The first case had uræmia, with Cheyne-Stokes breathing, approaching asphyxia for the past month. The enteroclysm put him on his feet in a few days.

The second case had insufficient urination, with asystolia and a serous pleurisy. Theobromine had been unable to produce good results. This condition had arisen during convalescence from typhoid fever complicated by a parotitis and a diarrhœa that was rebellious to all treatment. The enteroclysm was followed by complete relief.

The author also cites a case of chlorosis cured by this method of treatment, and, although not concurring in the opinion that this disease has an intestinal origin, it was evident that the treatment had a markedly rapid and beneficial effect.

The author concludes that this method produces as certain and rapid a diuresis as any other therapeutic method now employed.—*Therapeutic Gazette*.

PHLEBITIS AFTER TYPHOID.

The limb should be elevated and kept at rest. Over the vein apply equal parts of ointments of belladonna, mercury, iodine compound, and vaselin; apply pressure by means of a flannel bandage. As the swelling subsides, cautious massage may be applied. Rest is imperative, otherwise there is danger of embolism and consequent paralysis.

HAY FEVER.

Discard the use of sprays, and apply to the nostrils, on a cotton pledget, an unguent composed of six parts cocaine muriate, ten of carbolic acid, twenty of menthol, 120 of oil of sweet almonds, 240 of zinc ointment.—*American Medical Journal*.

CANNABIS INDICA.

Mackenzie (*La Sem. Méd.*) speaks of cannabis indica in all forms of cephalalgia. He has found it act favorably even in the severe headaches attending cerebral growth. In chronic uræmia, where opium is contra-indicated, it is especially serviceable. He has found the remedy to be

almost a specific for that continuous form of headache which begins in the morning and lasts all day. In these cases the pain is generally dull and diffuse, but marked by occasional exacerbations. While it is rarely severe enough to interfere with occupation, yet it constitutes a source of constant annoyance to the patient. In such cases the author administers, morning and evening, from one-twelfth to one-half grain of the extract in pills. If these doses are not sufficient, he gives one grain in the evening and one-half grain in the morning. In very obstinate cases the dose is still further increased, the larger dose always being taken in the evening, until relief is afforded or toxic symptoms become manifest. In some instances Mackenzie combines gentian, cinchona, or hydrobromate of caffeine with the cannabis indica. In various neuralgic affections, gastralgia, the pains of tabes, the drug often proves very useful.

In skin diseases associated with intense itching, particularly senile pruritus, where local applications fail to relieve, cannabis indica is often used with great benefit. The author has rarely observed any untoward effects from its use; nevertheless, to avoid toxic manifestations, the drug should be given at first in small doses, the latter being gradually increased.—*St. Louis Medical and Surgical Journal*.

FOR VAGINITIS.

R.—Pulv. alum.

Zinci sulphatis,

Sodii biboratis,

Acidi carbolici.....aa ʒ j.

Aq.....ʒ vj.

M. Sig. A tablespoonful to a quart of lukewarm water as a vaginal injection twice daily.—*Vanderbilt Clinic*.

CREAMERY EMULSION OF COD-LIVER OIL.

R.—Cod-liver oil.....500 parts.

Finely sifted sugar.....190 parts.

Pulv. gum. arabic,

Pulv. gum tragacanth.....aa 5 parts.

Infusion of coffee.....200 parts.

Rum.....100 parts.

Mix the sugar and gums in a mortar, and in the bottle which will contain the emulsion shake together the oil and cold infusion of coffee. Pour a sufficient quantity of this liquid into the mortar to make a paste. While stirring, add to the portion remaining in the bottle the rum, and then gradually incorporate it with the emulsion.—*Therapeutic Gazette*.

OBSTETRICS

IN CHARGE OF

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ASSISTED BY

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THE SERUM TREATMENT OF PUERPERAL FEVER.

Gaulard (*Presse Médicale Belge*, November 30, 1895) reports two cases of puerperal fever treated by injections of serum.

CASE 1. A rachitic woman, with a contracted pelvis, had a prolonged labor on August 26; face presentation; the perinæum was split to the anus, but was sutured at once. On September 2 the temperature rose to 105°, where it remained for four days. On September 6 Gaulard saw her; her pulse was then 140 and irregular, and diarrhœa was present; there were some sloughs on the vagina, and the perineal wound was suppurating. He curetted the uterus, bringing away nothing of importance, packed it with iodoform gauze, and resutured the perinæum. The next day the temperature had fallen to 102.7°, but on September 8 it rose again, and her general condition was very grave; ten cubic centimetres of Marmorek's anti-streptococcic serum were then injected into the abdominal wall. The temperature was rather lower next day, and an injection of two cubic centimetres was given. From this time the temperature fell steadily, and the patient was soon out of danger. The uterine plugs were renewed every day.

CASE 2. A rachitic woman was brought to the clinic on September 24, in her fourth pregnancy. The first labor was natural; in the two others delivery was effected by forceps. The antero-posterior diameter of pelvis was 3½ inches. An unsuccessful attempt to apply forceps had been already made, so a basiotripsy was performed, delivery effected, and a douche of 1:4000 perchloride of mercury given. The temperature rose on the 26th, and in the evening of the 27th it reached 104°. The uterus was swabbed out with creosoted glycerin, some putrid fragments coming away,

and then plugged with iodoform gauze. On the 28th cultivations of streptococci were obtained from the discharge, so ten cubic centimetres of anti-streptococci serum were injected (temperature then 104.9°). On September 29 a second injection was given, the temperature still rising. On September 30 a third injection was given; evening temperature 102.9°. October 1 a fourth injection of ten cubic centimetres was given. October 3 the evening temperature was 101.5°, the general condition satisfactory, and recovery hoped for. No pain was felt at any time. After this the temperature fell steadily, and reached normal on October 4. However, later in the evening, two days before, she was seized with bilious vomiting and meteorism, the pulse remaining at about 120, and on the 4th and 5th her condition grew worse; she became semi-comatose, nothing controlling the vomiting, and died on the 6th. The author had never before seen a case of puerperal fever die during defervescence, and he believes the injections of serum were the cause of the vomiting. He fears that too much serum was used, for at the post-mortem there was no sign of peritonitis or of any suppuration. The question of the maximum dose, to exceed which is not safe, has yet to be settled. He is sure this treatment does not do away with the necessity of using the curette, which clears away any debris and cleanses the centre of infection. If the germs have already passed into the circulation, the serum can be employed against them and their toxins.—*British Medical Journal*.

AN OLD IDEA REFUTED.

An idea prevalent among obstetricians that from the frequency of the foetal heart-beats the sex of the child can be foretold is now refuted. This oft-quoted theory seems to have had its origin in about fifty observations made by Frankenhauser, who stated that in male infants *in utero* the average rate was 124 a minute, while in females it was 144. An observation including one thousand cases at full term at the Boston Lying-in Hospital has proven the disparity between the heart's action in male and female foetuses to be about 1½ beats. Knowledge obtained by counting the pulse rate is not reliable as data in determining the sex.—*Medical News*.

THE TREATMENT OF PRURITUS VULVÆ.

While admitting that pruritus vulvæ may be purely a nervous manifestation, Ruge (*Berliner klinische Wochenschrift*, 1896, No. 18, p. 391) states that with the exception of a small number of cases in which some constitutional disorder existed the pruritus, in his experience, was the result of local irritation, of disease of the external genitalia of the vagina and the portio vaginalis. The irritant is assumed to be of chemic or bac-

terial nature. In accordance with these views, success in treatment will depend upon the application of antiseptic principles. Without removal of the hair of the mons veneris, the vulva, vagina, portio vaginalis, and the cervix within reach of the finger are carefully soaped, without the use of a brush, and the vulva and vagina washed with mercuric-chloride solution until rendered thoroughly aseptic. Then the affected parts are rubbed with a vaseline ointment of the same, in strength from three to five per cent. These procedures must be repeated every three or four days. The results obtained with this plan of treatment have been entirely satisfactory. A similar course may be advantageously employed in the treatment of recent gonorrhœa in the female.—*Medical News*.

TAMPONING THE CERVIX TO CHECK NAUSEA AND VOMITING OF PREGNANCY.

Kehrer, of Heidelberg, reports in the *Centralblatt für Gynækologie*, 1896, No. 15, the case of a young woman, aged twenty-one years, of very hysterical temperament, who had had a number of illnesses before she became pregnant. An exudate was found at one time in the vicinity of the ovary upon the right side. The patient not long after marriage had an abortion at four months. During this brief pregnancy she had been greatly troubled with nausea and vomiting, which were not relieved by narcotics. She soon after became pregnant again, and at once began to suffer severely from nausea. After various remedies had been tried, including the application of solution of nitrate of silver, an effort was made to end the nausea by partially dilating the cervix with the finger. While very brief improvement followed, no permanent cure resulted. The patient's condition became so serious through weakness, loss of flesh, and failing strength that it was determined to empty the uterus. With a view of bringing on labor pains, Kehrer tamponed the os and cervix with strips of sterile gauze soaked in glycerin. The nausea immediately stopped, and a period of several days, in which the patient was free entirely, followed the use of the tampon. After a short time the symptoms reappeared, when the tampon was again employed with a similarly successful result. Kehrer was able by this method to carry the patient along in pregnancy until the thirty-third week, when labor was induced, and she was delivered of a living child. The infant was at first partially asphyxiated, but speedily revived, and became normal in strength and weight.—*American Journal of the Medical Sciences*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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SUGGESTIONS ON THE TREATMENT OF URETHRITIS.

Much has been said and written of late upon the virtues and of the flattering results obtained from the use of argentum nitras in the treatment of urethritis. So much so, in fact, that I have been led to make extensive experiments with the drug, using it in all strengths. From the results obtained I cannot refrain from making the statement that I consider its use as being unscientific and a relic of barbarism; and with the exception of granular urethritis, it should never be injected into the human urethra; especially so, never in a case of specific urethritis. In these cases I have found it far more detrimental to the mucous membrane of the urethra than the gonorrhœa itself.

We find a continuation of the specific discharge exists after a single injection of a solution of nitrate of silver.

Is it not plausible, then, to believe that the "rawness" produced by this escharotic antiseptic affords the gonococcus a far better chance to infect the whole genito-urinary tract than existed before? Also that the congestion produced by the injection may not favor its growth?

Upon that theory, supported by many cases in which I have employed it, I take a step farther and make the statement that a case of gonorrhœa may be indefinitely prolonged by such injections.

In patients on whom I have used nitrate of silver, I have always had an obstinate gleet to contend with, and, in some cases, persistent prostatitis.

Since modern researches have revealed to us the causative gonococcus, we should adapt our treatment to our pathology.

We have in the bichloride of mercury not only the very best antiseptic but one which, when used in the right strength, is scarcely irritating. I use one grain to the pint of distilled water, adding two drachms of sodium chloride, which not only keeps the mercury in solution, but prevents irritation of the mucous membrane.

I often add, as an adjuvant, camphor, making my prescription read :

℞ Hydrarg. bichloridi.....	gr. i.
Sod. chloridi.....	5 ii.
Aqu. camphoræ	
Aqu. destillat. aa.....	℥ viii.
M. ft. Sol.	Sig. Injection, t. i. d.

This same solution I use as a spray in the treatment of rhinitis and rhino-pharyngitis; also as an eye-wash in gonorrhœal ophthalmia. In non-specific urethritis, where there are no cicatricial bands, I find nothing better or more scientific than a solution of cocaine, using dilute extract of witch-hazel as a solvent, sometimes adding antipyrine, for, like cocaine and witch-hazel, it has the properties of contracting the capillaries of the urethral mucous membrane, thus relieving the hyperæmia and preventing an excessive discharge of mucus.—*F. J. Taitter, M.D.*

[The above, taken from *The International Journal of Surgery*, should be carefully read and digested, since it contains advice that it is well to know, and, after knowing, it will be of great advantage to remember *not to follow it*. There are more patients with venereal disease badly treated than with any other one form of disease. This is undoubtedly due to the fact that the average physician reads hurriedly the medical press and accepts as fact all that he reads, and, if not agreeing with it, is at any rate willing to try it on a patient. This brings him discredit, and possibly the patient drifts off to some other physician, who will treat him exactly as his confrère has done, but with some new fad. Now, silver is not a dangerous injection when properly used, but is exceedingly so when improperly. It requires to be used with great caution, however, and care must be exercised to see that the strength of injection is not too great. The nitrate has been most universally used, but argentamine and argonin have each the good qualities of the nitrate without the disagreeable, and are, therefore, preferable. Bichloride of mercury used in greater strength than 1-25,000 is harmful at any time, and the prescription recommended in the above article being 1-16,000 is, in the writer's opinion, far too strong.—E.E.K.]

URINARY CALCULI.

The following paper by Dr. Randolph Winslow was presented at the Clinical Society of Maryland a short time ago, and being of much importance I have published it here with discussion :

This is a subject which can well claim our attention. Not a case has been exhibited here for some time, though it is an affection which is not very uncommon. In the normal condition of the urine, certain salts are

held in solution, but under abnormal conditions these salts become released and deposit concretions of greater or less size. When occurring in small granules these deposits bear the name of gravel, and when of larger size are called stone. The deposition may occur in the tubules of the kidney, or in the pelvis, and passing down along the ureters give rise to what is known as nephritic colic. Sometimes instead of passing down into the bladder they become lodged in the pelvis, and are known as kidney stones, or calculi. The causes of the deposition of the salts are both local and constitutional, and among the latter are rheumatism, gout, and some abnormal conditions of the digestive apparatus. It is probable that most of the calculi which are found in the bladder have come down from the kidney and developed in the bladder. Where we have to deal with local conditions it will be found that they occur in the bladder as the result of foreign body, or obstructive disease. There are quite a variety of calculi, but only three which claim our attention to any great extent—the uric acid, the oxalic acid, or oxalate of lime, and the phosphatic calculi. The latter occur late in life, and are generally the result of obstructive disease, preventing the outflow of the urine from the bladder. I have here a number of calculi of various kinds (exhibiting specimens).

The uric acid calculi is very hard, brown in color, occurs generally in young persons, and is sometimes smooth, but not infrequently is covered with rough prickles, and is very irritating to the bladder. The oxalate of lime calculus, known as the mulberry calculus, is likewise hard and very irritating. The phosphatic calculus is usually white, or grayish white, and soft, and is more liable to be irregular in size and shape than the others.

Calculi are usually single in the bladder, but not infrequently we find a number of them, and I have here a beautiful little nest of them removed from a patient in this city on Thanksgiving day. All stones start with a nucleus of some kind, sometimes a bit of catheter, or straw, or some substance introduced into the bladder. They are found in all parts of the world, but in varying frequency in different places. In this country, for instance, it is rare in New England, but very frequent in Kentucky and eastern North Carolina; why, I do not know. It is supposed in some regions to be caused by drinking hard water, but in some places where they do not use hard water we see it in great frequency. In some parts of India and China it is of enormous frequency, one surgeon in India having operated 739 times in three years, and as high as 50 times in one month. There are various conditions of age, sex, and race which have relation to the production of stone. It occurs in young persons as the uric acid, or oxalate of lime calculus, and in older persons as the phosphatic. Whilst it occurs in women it is infrequent, but one case occurring in a woman out of many seen by my father. This is not difficult to under-

stand when we remember the capacious bladder and wide urethra of the female. Certain races seem predisposed to the disease, the Caucasian most and the negro least so.

The symptoms of vesical calculus are quite distinct. Among the first is that of frequent urination. There is also pain in many cases during the act of urinating, and this pain is different from that of cystitis in that the latter is relieved when the bladder is empty, while the pain of calculus is increased. The different varieties of stone are attended with very different degrees of pain, the rough ones giving most trouble. Amongst the symptoms and effects of calculus is an interruption to the flow of urine. As the bladder collapses the stone acts as a ball-valve, and in the act of urinating the flow may be suddenly stopped. This occurs in a considerable number of cases, and the patient may, by assuming an abnormal position during the act, prevent its occurrence. Blood is not infrequently a symptom of a calculus, and bleeding of the prepuce in small children is sometimes a sign. These symptoms are all suggestive, but do not make a certain diagnosis. Since the introduction of the cystoscope the stone can be seen and felt.

The treatment is divided into medical and surgical. The first amounts to little or nothing, as a rule, for it is doubtful whether a stone can be dissolved in the bladder. Under certain conditions, where the individual is not a fit subject for operation, medical treatment may relieve his symptoms to some extent, but where the patient is in condition for the removal of his concretions an operation should be done. The operative procedures are divided into two classes: (1) Those in which the stone is removed entire through an incision; and (2) where the stone is crushed and removed in a comminuted state. There are a number of methods of lithotomy, bilateral or median, and recently there has been a revival of the operation of suprapubic lithotomy. Some time ago it was attempted to remove stone by crushing, the object being to introduce an instrument into the bladder and break up the stone so that it could be passed out in small particles. This operation is known as litholapaxy. The best method to adopt is a point about which there is much difference of opinion. The recent statistics, which I have here, seem to prove that litholapaxy is the best operation for the great majority of cases. The cases are grouped in three classes according to age, the first including from birth to puberty, the second from puberty to middle life, and the third from middle to old age.

In the first class 602 cases were subjected to perineal lithotomy, and 19 died, percentage of mortality 3.1; 637 to suprapubic operation, 84 died, mortality 13.2. This latter operation was thought to be peculiarly applicable to young children, as the bladder is then an abdominal and not

a pelvic organ. In this class the operation of litholapaxy was performed 294 times, and five died--a percentage of 1.7.

In the second group of 226 perineal lithotomies 22 died, percentage 9.7; 159 suprapubic lithotomies, 18 died, percentage 11.3; and 585 litholapaxies, 22 died, percentage 4.5. In the third group of 69 perineal operations 13 died, percentage 19; 91 suprapubic operations, 17 died, percentage 18; and of 581 operations by litholapaxy 40 died, a percentage of 7.

In all three periods of life, then, the litholapaxy is the most favorable operation. We cannot always have a choice, for there are, of course, certain conditions which will demand one or the other of these methods of treatment. It does not seem to me that elderly persons with obstructive disease of the bladder are proper subjects for litholapaxy, although the modern statistics seem to indicate it. My predilection is for suprapubic lithotomy. In cases where there are a large number of stones they may not all be found and crushed. I had an experience with this operation which was very unpleasant. I removed this stone, by lithotomy, from a man sixty years of age. He did well after the operation, but afterwards his symptoms returned and I detected another stone in the bladder. He did not want to be cut again, and I undertook a litholapaxy. The operation was very bloody. He never secreted any urine afterwards, and soon died. I think if he had been cut by either operation he would not have died in that way. This is, of course, only conjecture. The statistics are in favor of litholapaxy almost to the exclusion of the other operations. We have seen the pendulum, however, swinging back and forth, and I think it will swing back here to a considerable extent. The mortality in cutting operations has been reduced very largely, and I expect that with care it will be brought to a still lower point. If a suprapubic operation is done you can put in the finger and explore the bladder, and by the same operation it is possible to relieve an obstruction by cutting off a portion of the prostate.

DISCUSSION.

Dr. J. M. T. Finney: Dr. Winslow has pretty well covered the ground and I shall say but a few words, and that in regard to the treatment of this trouble. Like Dr. Winslow, I am inclined away from the operation of litholapaxy. During my student days and residence in a Boston hospital I had the opportunity of seeing Dr. Bigelow, who has done most for this operation, perform it, and also a number of his pupils, so that while I cannot speak from experience in crushing stones I have seen it done as it should be. I must say it is an interesting operation to watch, but one that struck me as being attended by more dangers than one would imagine from

the statistics or from seeing one of these skilled operators perform it. There are so many things that may happen ; rupture of the bladder I have seen in one case ; injury to the urethra being another ; and in another, a thing that may not happen at present with the new instrument, but which did happen, the blades of the instrument became caught in the bladder, and it was after many efforts, and when the operator was on the point of doing a perineal section, that the blades became disengaged. All of these things are objections to the operation. Statistics are in favor of it, but we all know how fallacious statistics are, and in this instance this operation, as a rule, has been done upon the most favored and picked cases. Children will stand almost anything, and with them the condition for this operation are more favorable, but to compare these with the suprapubic operations, which are done upon the worst class of cases, those of large calculus or where there is prostatic trouble—and we all know where this has existed for some time that the kidneys are prone to disease—is hardly fair. All these things have to be taken into consideration, and they modify the statistics materially. The advantages of the suprapubic are greater than those of any other operation. You can see what you are doing, explore with the finger the entire cavity of the bladder ; it is performed with great ease, and if there is any foreign growth or obstruction to the outflow of the urine by an enlarged prostate you can remove the obstruction. One of the points most urged against the operation is the discomfort to the patient caused by the constant flow of the urine over the surface of the abdominal walls. Numerous efforts have been made to overcome this objection and lately they have met with considerable success. There is an apparatus devised by Dr. Bloodgood, of the Johns Hopkins Hospital, which has worked very well so far, and at my request he will show it to you this evening. The cases in which it has been used have been kept perfectly dry.

As to the question of sepsis it is possible to have an inflammation about the womb, but with the care that should be exercised in every operation, doing as little violence to the tissues as necessary and keeping the surrounding parts clean by packing with gauze, the chances of infection are reduced to a minimum. The packing off of the cavity in every direction about the bladder wound is all that I have to suggest concerning the operation. Sufficient attention has not been paid to that. The gauze should be left there until the wound heals by granulation. We have had no deaths attributed to the suprapubic operation, and I think the statistics are against it because the worst cases are the ones that have been submitted to it.

Dr. J. D. Blake : I endorse to a large extent what Dr. Finney has said, although I am inclined to the perineal operation. The choice of

operation is, in my judgment, a matter of practice among surgeons. They become satisfied with their results, and continue to do that operation which has given them satisfactory results. I have seen Dr. Bigelow operate by litholapaxy in a way that we would call skillful and expert, and as few of us could do, and I am sure that when we have seen him do it we have seen the father of that method, but the length of time that even he consumes, and the difficulties which he comes in contact with and which are more apt to bother us, is apt to deter the most courageous. I have only an experience in one single case, and that was sufficient to deter me from any further effort in that direction. I crushed this stone and washed it out of the bladder, and while I got away the stone after a long time, the operation lasting nearly two hours, the patient was very much shocked and came near dying. He rallied, however, and has had another stone, probably because I left some there, which I removed by the perineal operation. I have performed nineteen perineal operations, the youngest four months, and have never had a death.

Here are two very large stones which I removed from a small man. He was fifty-seven years of age, and had suffered a great deal. You can imagine that in such a case the bladder was thickened, the prostate enlarged, and the condition, so far as asepsis is concerned, was unfavorable. My opinion is that the perineal operation favors thorough drainage. You have it in the right direction and position, and you relieve the kidneys, which are usually involved. I have had one patient complain of what I suppose was an interference with the ejaculatory duct. He says that he does not accomplish the act of ejecting the seminal fluid until some time after the organism has passed off.

I agree with Dr. Finney to a certain extent that the suprapubic operation has advantages which are not possessed by any other. I can, however, explore the bladder with my finger after the perineal operation. When you can have, as Dr. Finney has, all the advantages of skilled nurses in a hospital, etc., one is justified in doing an operation that he would not do in private practice, where he must rely upon unskilled attention. Under these latter circumstances I do not believe the suprapubic operation would give the good results claimed. I believe the statistics are wrong. My opinion is that nearly all the suprapubic operations are done in hospitals, whereas the perineal ones are done promiscuously. We all remember the good results attained by the Smiths, and they did almost exclusively the perineal operation. Prof. Allen P. Smith operated eighty or ninety times without a single fatal case, and most of them were in private practice. As to the removal of a portion of the prostate I should think it a serious thing for the patient, as you have there a source of infection, and right where it cannot be relieved with the hole above as well as

if you had the hole below. Where the third lobe is bulging through there will be no necessity of removing it after the contraction which follows the removal of the source of trouble. I believe that the pendulum is swinging, and that it will swing towards the perineal operation as the one for general use.

Dr. J. C. Bloodgood : I have here a suprapubic drainage apparatus which was devised first for causes in which it was necessary to have permanent drainage from the bladder at a point about the pubes. It consists of a tube to fit in the sinus, and long enough to pass through the abdominal walls and into the bladder for one-half an inch, a bag to collect the urine, and between the bag and tube a saucer-shaped piece to fit close up against the abdomen. It is held in place by a belt passed round the body. The stopper can be drawn from the tube and urination take place as usual. The apparatus may be applied and the wearer go about just as other men do. It may be made of any material, hard rubber, silver, or aluminium.

After establishing its success as a permanent drainage it occurred to me that we might use it immediately after an operation, and thus prevent any leakage of urine and keep the wound absolutely dry. We have used it in this way with success. It seems to me this apparatus will absolutely prevent any infection of the wound after the suprapubic operation, and I agree with Dr. Blake that the hospital is the proper place for this operation. In all of our cases (about thirty in the last three years) we have had but one death, and in that case there was an existing pyelonephritis.

With an apparatus like this one might prefer the suprapubic operation to expression. We meet with some causes which are not relieved by expression. We have had two cases in which suprapubic operation had to be done anyway, because the patient could not wait for the prostate to atrophy. We have had some cases, too, that demonstrated to us that the sooner one overcomes the obstruction the better for the ureters.

Dr. Randolph Winslow : The statistics I reported are the latest known, taken from Dennis' new volume of surgery, and are practically the same as those given in the International Encyclopædia of Surgery just out, and edited by Ashurst. My personal preference is, as I have said, favorable to a cutting operation.

Dr. Blake spoke of exploring the bladder with his finger through the perinæum. His finger must be better than mine. It is hard to get a three-inch finger through four or five inches of perinæum and do much exploring beyond.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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Lecturer on Orthopædics and on Surgical Anatomy in the Woman's Medical College, and Surgeon to the Victoria Hospital for Sick Children, Toronto.

ACUTE OSTEOMYELITIS OF THE SPINE.

A case of this somewhat rare affection is reported by Müller (*Deut. Zeitsch. f. Clin.*). The patient, a girl of 12 years, had been struck on the spine with the hand about six months before being seen by the author. There was local pain at times, but the child went to school until the appearance of alarming symptoms on December 10, when she had headache, chills, and pain in the back, with elevation of temperature, varying between 88° and 39° C. Three days later paresis of legs. January 14, 1892, retention of urine. In twelve hours motor and sensory paralysis became complete to nipple line, left side being a little higher than right. No diminution of knee-jerk; no clonus. No deformity of the spine, but slight œdema of the upper dorsal and lower cervical regions. Lungs negative. Urine turbid, containing some albumin. A diagnosis of Landry's paralysis was made. Incontinence of urine and fæces became complete. January 5, swelling increased; on left side of three upper dorsal spines there was an abscess as large as a goose-egg, with redness of the skin. January 6, evacuated brownish-gray pus containing many fat globules, brownish lumps, and blood clots. The deep spinal muscles were degenerated into punk-like masses. There was total necrosis of left half of arch of second dorsal, and the greater part of the spinous process; the inner surface of right half of arch and the left transverse process are also affected, and all these parts were removed. Pus of the same character escaped from the canal. The dura pulsated normally, but appeared thickened and covered with rough, brownish masses. No signs of external compression. No cheesy masses. Iodoform gauze tamponade. Immediately after the operation the pus was examined. There were no tubercle bacilli, but

many colonies of cocci. Much fatty detritus. The granulations, fat tissue, and bones were also examined, and no tubercle bacilli were found.

PROLAPSE OF URETHRA IN FEMALE CHILDREN.

Attention is drawn to this accident by Broca (*Annales de Gyne. et d'Obstet.*), who reports the following :

A girl, aged six years, had alarmed her mother through the appearance of blood at the vulva for three days. It was naturally taken for menstruation. The child had been kept in bed for two weeks on account of severe bronchitis, with violent coughing. On the day that she got up for the first time the bleeding began. Broca examined the parts, and noted a little red protuberance at the meatus, caused by prolapse of the urethral mucous membrane. He directed that the everted mucosa should be touched with a 2 per cent. solution of nitrate of silver. The bleeding ceased permanently after the first application. At the end of three days the cure was complete. Broca lays stress on this case, as it shows the extreme importance of early recognition and early treatment of this affection. In another case the mother suspected rape. The court ordered a medical examination, and the truth was at once made evident. Thus the meatus must be carefully explored in all cases where blood is found near a child's genitals.

PSEUDO-MENINGITIS AFTER INFLUENZA.

The case of a boy, aged 15, who had a severe attack of influenza in the spring of 1895, and again in November of the same year, is reported by Tecce (*Rif. Med.*, March 20, 1896).

The second attack set in suddenly whilst the boy was in the best of health. The temperature fell in two days, and the boy returned to work, but he complained of headache. On the fourth day he fell down, lost consciousness, and was convulsed. The headache continued and was intense, and the patient became comatose. There was no delirium. Convulsions, with contraction of the upper limbs, rigidity of the lower limbs, and slight contraction of the neck muscles, were present during the illness. The pupils, urination, and defæcation were normal throughout. The abdomen was depressed, and there was hyperæsthesia of the vertebral column, and especially in the calves of the legs. The temperature was never very high. The pulse was rather slow. After about twenty days of treatment by cold to the head and calomel internally the boy completely recovered, and has remained well since. There was no manifestation of tubercle in the child, and, after discussing the various possibilities, the author decides in favor of the diagnosis made.

PARALYSIS OF THE SIXTH AND SEVENTH NERVES OCCURRING WITH
WHOOPING COUGH.

IN the *British Medical Journal* (June 13, 1896), Craig, of Londonderry, reports the case of a little girl, aged three years, suffering from whooping-cough of ordinary severity, complicated by complete paralysis of the sixth and partial paralysis of the seventh nerves.

Patient was first seen two months after the commencement of the whooping-cough, and five weeks after paralysis was first noticed.

On one occasion during a paroxysm of coughing blood had been forced from the left nostril.

Facial paralysis was quite marked. The left angle of the mouth was depressed. There was inability to close firmly the left side of the mouth. Saliva was not retained, but dribbled from the corner of the mouth.

Internal strabismus very marked in the left eye, showing complete paralysis of the sixth nerve.

Apart from the squint and the incomplete facial paralysis, there was no loss of power. Arm and leg on same side were quite normal. The remaining ocular muscles were not affected. Pupils were equal.

The case was seen first on Nov. 11, 1895, and on June 1, 1896, the child was in perfect health, but the paralysis was unimproved.

The author places the lesion below the nuclei of the sixth and seventh nerves, not affecting fully the fibres for the orbicularis palpebrarum and frontales, and in the case of the sixth situated so as not to affect the fibres which subserve the inward movements of the sound eye. There was no affection of the auditory and no sign of injury of the facial in the Fallopiian canal.

Editorials.

SKIAGRAPHY.

THE practical value of the "X" ray is daily making itself felt. A new and somewhat unique feature of the "X" ray and its penetrating power through glass was pointed out by Mr. James Milne, superintendent of the Incandescent Electric Light Co., of Toronto, at the meeting of the Canadian Electrical Association, recently held in Toronto. He showed a photograph of a pen nib and a pin within a glass bottle. It has been stated, and apparently demonstrated, that the "X" ray will not penetrate glass; that the obstruction to the ray offered by glass is about equal to most of the metals. In the picture referred to not only was the pen nib and pin distinctly seen, but the pin was clearly defined through both the bottle and pen. We have repeated this experiment, and there is no question about its genuineness. The glass bottle offers undoubted resistance to the "X" ray, but materials of greater density offer more, and the result is that these objects are clearly skiagraphed through the glass. In the former experiments with glass no other object had been placed beneath the glass, and consequently this observation has been delayed.

We have during the past week located a needle in the hand or finger in four cases; a bullet in the leg; a fracture of the olecranon; an ununited fracture of the ulna; a separation of the internal condyle of the humerus; and a dislocation of the astragalus. The treatment of these cases has been greatly facilitated by the use of skiagraphy. Undoubtedly the wonderful results obtained at very slight inconvenience will be more and more taken advantage of as its usefulness becomes more generally known.

THE CANADIAN MEDICAL ASSOCIATION.

WE have again to announce that the next meeting of the Canadian Medical Association will be held in Montreal, August 26, 27, and 28. The officers of the association and the profession of Montreal are

thoroughly in earnest in their endeavors to make the meeting successful in all respects. Montreal has never had a poor or a small meeting, and does not propose to spoil her record this year. The last meeting in that city, held in September, 1891, under the presidency of Dr. Thos. Roddick, will long be remembered by those in attendance as one of the best the society has known. Dr. W. H. B. Aikins, at that time the treasurer, in reading his report stated that "the meeting was the most successful in the history of the association—the enrolled membership in attendance being one hundred and thirty-five, the largest hitherto known." The physicians of Montreal, on that occasion, entertained in their usual hospitable fashion; and their thoughtful kindness, shown in so many ways, was highly appreciated by the visitors.

The meeting of this year will be held under the presidency of Dr. James Thorburn, of Toronto, who, in conjunction with his brother officers, is making a strong effort to furnish an attractive programme. We have reason to believe that a goodly number from Ontario, including Toronto, will be present. We are told that the Maritime Provinces will be well represented. Many from Manitoba and the western provinces have promised to attend. The physicians of Montreal will, of course, turn out in full force. The question of interprovincial registration will be fully discussed; and we sincerely hope that some advances will be made in the direction of clearing away some of the many difficulties surrounding it. We have not yet received the provisional programme, but we understand the following have promised to present papers: Dr. Osler, of Baltimore; Drs. Graham, J. F. W. Ross, McPhedran, Price-Brown, W. H. B. Aikins, Primrose, and B. E. McKenzie, of Toronto; Drs. G. Wilkins, Adami, Laphorn-Smith, Birkett, and J. B. McConnell, of Montreal; Dr. R. Ferguson, of London; and Dr. Stewart, of Halifax. Dr. F. N. G. Starr, of Toronto, the secretary, will be glad to hear in the near future from others who propose to read papers. Arrangements are being made with steamboats and railways for return fares at reduced rates. Full particulars as to the programme and other arrangements will be given to the profession in a short time.

THE DEFENCE ASSOCIATION OF ONTARIO.

THE Defence Association is fairly well represented in the Ontario Medical Council; and it was expected by many that its members would be contented with the present position of matters without making any fresh appeal to the public or the profession—at least for some time to come. It seems, however, that the Defence members of the council are not at all satisfied with the results of their efforts during the last two ses-

sions of that body. We learn through a letter from Dr. John H. Sangster, published in the *Canadian Medical Review*, that the executive of the Defence Association at one time "thought proper to suspend all further appeals to either the profession or the public until after a vigorous and sustained effort had been made to rectify existing abuses constitutionally through the council itself."

It appears, however, that constitutional methods have grown somewhat tedious and monotonous to some of these gentlemen; and, consequently, we are threatened with a "probable renewal of hostilities," in the near future, with "decided activity," "startling disclosures," "spicy strictures," and fearless criticisms of every thought, word, and action of each and every member of the council. Then will be answered various important questions, such as the following: "What was the origin and the motive, and what will likely prove to be the effect, of the recent changes engineered by the schools in the matriculation requirements of the council?" "What is the nature of the machinery existing in the council, by means of which every proposition looking towards the curtailment of extravagance and every effort to secure reforms in the interests of the profession are inexorably voted down?"

Many will have a sincere feeling of regret that "Defence" members have grown weary of constitutional methods, and have decided to enter into an aggressive and unconstitutional warfare which is apt to degenerate into something very unpleasant, if not disgraceful, to our profession. The representatives of the Defence Association are entitled to due respect and fair consideration while endeavoring to enunciate their views and carry out their aims in what may be called a parliamentary or respectable way; but they have no right to threaten us with open rebellion, personal attacks on brother members, and appeals to the prejudices of the public, which is not now, and never was, too favorably disposed towards our profession. We think we may add that no one of them is justified in assuming the extraordinary position of practically advising members of the profession to refuse to pay their assessment dues.

THE BICYCLE FOR WOMEN.

DURING the last two years especially the bicycle has seized the women of the new and old worlds *all in a heap*. We may smile, if we choose, at the *craze*, but the woman careth not, so long as her wheel is in good running, or *scorching*, order. Many wise men tell us the craze won't last long—and perhaps they are right; but present indications do not point to its early death. From a medical point of view, many varied opinions

have been expressed with reference to the effects of the use of the wheel on the health of women and girls who ride. Dr. Doolittle, of Toronto, an expert rider, who has probably studied the question as carefully as any physician in the world, is enthusiastic in recommending the bicycle to the majority of women, as our readers have already learned from his article published in our May issue.

Some of the opponents of cycling tell us that it is especially bad for young girls, because it is apt to press the ischial tuberosities inward and upward, and thus diminish the transverse diameter at the outlet of the pelvis. Others have depicted evils of many sorts—too many to mention in a short article. Some of the greatest enemies of the bicycle appear to have little or no knowledge of cycling. With regard to diseases peculiar to women, there can scarcely be any doubt that such exercise should not be allowed in cases where acute inflammatory disease is present. When, however, the inflammation has subsided, the wheel may be used with care. It has been found that cycling sometimes assists the absorption of masses of effused lymph which are so often left for some time in the pelvis after the acute symptoms have passed away.

The Buffalo *Medical and Surgical Journal* has published several sensible articles on cycling. From one which appeared in the July issue we extract the following :

“That bicycling produces a sense of well-being, both physical and mental, that it increases the appetite and promotes sleep, cannot be disputed by anyone who has ever ridden. A woman, especially, however, should remember that all the benefits derived from bicycling will be nullified if it is carried to excess. The rides should be judiciously graduated, commencing with a few miles and very gradually increased in length, but never carried to the point of physical exhaustion.

“Hills of any size should not be attempted until they can be ascended with comparative ease. The clothing should be light and comfortable, the underwear preferably of wool or silk. The corset should be discarded, as it prevents the full expansion of the lung and impedes the circulation, and as a good substitute can easily be found in the Ferris or equipoise waist’

“There should be no constriction about the limbs, as that would impede the circulation and lead to the formation of varicose veins. The objections which have heretofore been raised against faulty saddles have been removed to a great extent by the Messinger and Christy saddles, which appear to meet all the indications.

“The saddle should be so adjusted that the extremity is not completely extended as it reaches the lowest point of the pedal, for complete extension favors a tilting forward of the pelvis. The handle-bar should be arranged in such a way that the forearm is slightly flexed.

“If the foregoing points are observed and conscientiously carried out by the rider, bicycling is one of the most wholesome and delightful forms of exercise a woman can take. It is especially to be recommended in neurasthenic patients, in those suffering from derangement of the digestive system, particularly when complicated with constipation, and in cases where the system is below par, the result of a sedentary mode of life.”

Meetings of Medical Societies.

TORONTO PATHOLOGICAL SOCIETY.

REGULAR meeting held May 30, 1896, the president, Dr. Carveth, in the chair.

Present : Drs. Carveth, W. H. Oldright, H. H. Oldright, McPhedran, Anderson, Reeve, W. O. Stewart, H. J. Hamilton, F. N. S. Starr, W. P. Caven, I. H. Cameron, J. T. Fotheringham.

Dr. H. H. Oldright showed a finger, with a long piece (10 in.) of the flexor profundus tendon attached, and to this there was a small portion of the muscle. The patient was shown; he has good flexion of the stump of the index finger.

Dr. McPhedran showed a heart weighing 19 oz., showing aneurism of the sinus of the valsalva, which had ruptured into the left auricle. A systolic murmur had been heard before death over the front of the chest, and at the angle of the scapula.

Dr. Hamilton showed, for Drs. Graham and J. Caven, heart with only two semilunar valves at the aortic orifice.

HEART FROM SEPTIC ENDOCARDITIS.

Dr. Graham's case.

History obscure; Burnside patient. Heart shows but two aortic cusps, and one of these presents a prominent vegetation, with breaking down.

[I did not make the post-mortem; merely saw the heart some days after, and therefore can give nothing satisfactory. The presence of an aortic cusp is rare. A more common deformity is misplacement or agglutination. Absence does not necessarily cause any symptoms.]

Cause of death: Plugging of mid-cerebral; convulsive throes. He then showed a

HEART FROM CHLOROFORM POISONING CASE.

Patient of Dr. James F. W. Ross; female; æt. 28.

Dr. Ross wished, before operating for what he suspected to be pus

tubes, to examine the patient under chloroform. Dr. Lambert gave a few drops; the woman sat up, then fell back into what seemed to be a convulsive seizure, and died almost instantly. The usual means were tried for restoration: Artificial respiration for $1\frac{1}{2}$ hours. Dr. Ross says the heart stopped instantly. Post-mortem showed slightly congested lungs; soft, flabby heart, brown atrophied; markedly intense injection of serosa of small gut; small quantity of sero-sanguineous fluid in the abdomen; tubes and ovaries tied down by slight adhesions, and the tubes containing a little muco-pus.

The following are Dr. Lambert's notes of the case:

æ. 24, domestic, was laid on the table for examination at the Toronto General Hospital. It was necessary to give her an anæsthetic. CHCl_3 was chosen, and, after asking the usual questions, I began to administer it. The patient took it very well at first, and I had given about a drachm when I noticed the patient's eyelids twitching in a peculiar manner. She began to struggle, and then became rigid. I continued the anæsthetic for a few moments in order to get the patient relaxed. Her color up to that time was good, but her breathing suddenly became stertorous, and the face became cyanosed. I stopped the CHCl_3 , and resorted to artificial respiration, but the respirations became slower, and the pulse, which had become rapid, suddenly ceased. A hypodermic of brandy was immediately given, the end of the table raised, and a piece of ice introduced into the rectum. Artificial respiration was kept up, and the faradic current applied to the phrenic and diaphragm. These measures were kept up for nearly two hours.

I have no doubt that life was extinct shortly after the seizure. The respirations continued after the heart had stopped, and the collapse of the heart occurred with great suddenness.

Dr. Hamilton said that upon one occasion he gave chloroform to a patient with no untoward result. Six months later he had occasion to again administer the drug, when two hours afterwards he was summoned and found the patient pulseless and cyanosed.

Dr. W. O. Stewart, Guelph, related the history of and exhibited specimen of a case of

TUBERCULAR TESTICLE.

Mr. —, æ. 25, student, of good family history, had always been well until February, 1895, when he had an attack of la grippe of a few days' duration. On his getting around after this illness he suffered from acute lancinating pains in upper part of both sides of his chest. These his physician regarded as muscular in character. No other symptom of disease appeared until August, 1895, when a hæmoptysis of some severity

occurred. After this he remained apparently well, and continued his work on a farm for some months. On December 23 last he noticed "a slight thickening at lower part of right testicle." "It was," he says, "not very large nor very painful," and, he thought, was due to pressure of his pants, which he wore rather tightly drawn up. The swelling remained about the same for several days. On December 28, while playing with a young child on his knee, the testicle received a somewhat severe bruising from the child's knee or foot. Rapid swelling of the testicle, with severe pain, followed, and the patient was obliged to take to his bed on December 30. I saw him next day, and found testicle swollen to four or five times its normal size, painful, and very tender to the touch; temperature, 101° F.; pulse, 102 or 104. The epididymis was the site of a dense swelling. The testis also was swollen and tender. The cord appeared thickened and tender. Treatment by rest in bed and other measures was followed in ten or fifteen days by some reduction in size and much relief of pain and tenderness. The epididymis, especially the globus major and minor, became gradually more nodular.

The patient was free from cough and expectoration, and examination of lungs revealed no marked signs of disease. There were no urinary symptoms, and examination per rectum disclosed nothing abnormal. Patient was, however, losing weight rather rapidly.

January 24, 1896. Admitted my suspicions of tuberculosis of the gland to the patient to-day, and in the evening held consultation with Dr. H. Howitt, who concurred in opinion, but advised temporizing further before coming to conclusion.

January 31. Suppuration taking place in upper part of epididymis.

February 3. Examination per rectum to-day revealed some small nodules in right half of prostate gland, and a bacteriologist reported finding tubercle bacilli in urine. Patient, on being informed of the tubercular nature of the disease, preferred its removal to treatment by any other method.

February 4. Removed gland.

February 17. Wound healed. Patient discharged from hospital. He lost during his illness about twenty-five pounds in weight, but in less than two months after his discharge from hospital he reached his usual weight of 165 pounds.

Mr. Cameron asked if there was much thickening of the cord.

Dr. Stewart, in reply, said the cord was greatly thickened, particularly the vas deferens.

Dr. Carveth showed a large heart, and an aneurism of the first part of the aorta. The patient was wheeling a barrow six years ago, when he felt something give in his chest. He was then 31 years of age.

A year ago the aneurism was discovered. The left auricle and ventricle were greatly enlarged. There was general arterio-sclerosis.

Dr. Anderson asked if there was anything to account for the hypertrophy of the left ventricle.

Mr. Cameron said the arterio-sclerosis would probably account for the hypertrophy.

Dr. McPhedran said that in these cases one would often notice an accentuated second sound, but no bruit.

Dr. F. N. S. Starr showed two specimens from the same patient; the one the characteristic cauliflower exostoses of the femur springing from the region of the lower epiphysial cartilage.

Of the other by a growth that had probably commenced as the former, but which now presented the appearance of a chondro-sarcoma. Sections had been made, but showed no embryonic elements, probably owing to a breaking down of the growth.

Dr. Anderson thought it probably a chondro-sarcoma.

Mr. Cameron thought the degeneration was probably due to an inability to keep the growth supplied with blood.

Dr. Greig showed a fibroma of the uterus and a heart presenting atheroma of the coronaries.

Dr. Reeve presented as a gross specimen septothrix of the canaliculus; there had been some inflammatory reaction and pus formation.

He also showed a carcinoma involving the lachrymal glands.

Mr. Cameron asked if the septothrix is of the same variety that occurs in the heart cavity.

Dr. Reeve said he was not sure of its particular species, but said he was having a microscopic examination made.

Mr. Cameron showed a piece of the tibia from a leg that had been crushed by a weight of 8,000 pounds falling upon it.

He also showed the specimens from the following case for Dr. U. Ogden:

M. F., æt. 23 years, single, domestic, came into the hospital on January 27, 1896. Had a child four years ago. Had a miscarriage one year ago (at two months). Several months ago began to complain of pains in the back and sides, and about six weeks ago had a whitish discharge from the vagina, with difficult and scalding micturition.

About the middle of April thickening and pain were found in the left broad ligament, and at the end of April a mass nearly the size of an egg, tender, elastic, and spherical, could be felt at the left side of the uterus and very closely attached to it, but with the sound in the uterus the latter was easily distinguished from it. Some enlargement and dullness in the neighborhood of the right ovary were also made out. After a couple

of weeks the mass on the left side was found reduced to about one-fourth its former size, less spherical and elastic, more diffusing or elongated, more separated from the uterus, but still very tender. Diagnosis, probably enlarged ovaries with septic tubes.

On May 27 ovaries and tubes were removed, Drs. Cameron and Primrose assisting. Left ovary slightly enlarged and adherent to broad ligament and side of uterus by adhesions easily separated. Left tube very much enlarged, coiled around the ovary and adherent to the surface of ligament and ovary, and its own coils adherent to each other by soft adhesions, which when separated exposed a light-colored semi-fluid material like unorganized lymph or pus. The fimbriated end looked very red, soft, spongy, and granular.

The right ovary was about normal in size, but the tube presented much the same appearance and condition as the left.

The election of officers was then proceeded with : Dr. John Caven president ; Dr. H. B. Anderson, vice-president. The council consists of Drs. H. J. Hamilton, J. T. Fotheringham, and F. N. G. Starr.

Book Reviews.

IN *The Metaphysical Magazine* for July, Professor Elmer Gates, formerly of the Smithsonian Institute, explains for the first time the results of his extended experimental researches in the domain of psychology. These experiments have been conducted in a thoroughly scientific manner, and the demonstrations are of the very highest importance to every branch of learning. The contents of this number also include "Karma in the Bhagavad Gita," by Charles Johnston, M.R.A.S.; "The Subtile Body," by E. G. Day, M.D.; "The Serpent and its Symbol," by Lieut. C. A. Foster, U.S.N.; "Spirit in Man and Nature," by C. Staniland Wake; "Conception and Realization of Truth," by Frank H. Sprague; "A Prophetess of the New Life," by Lilian Whiting; and other articles on occult, philosophic, and scientific lines. The Metaphysical Publishing Company, 503 Fifth avenue, New York.

The following book has been received :

A MANUAL OF ANATOMY. By Irving S. Haynes, Ph.B., M.D., Adjunct Professor and Demonstrator of Anatomy in the Medical Department of the New York University; Visiting Surgeon to the Harlem Hospital; Member of the Society of the Alumni of Bellevue Hospital; of the American Association of Anatomists, etc. Philadelphia: W. B. Saunders & Co., 925 Walnut street. 680 pages. 134 half-tone illustrations and 42 diagrams. Price, \$2.50.

Medical Items.

DR. ALLEN BAINES, of Toronto, started for England, July 15.

DRS. I. H. CAMERON and Geo. A. Peters, of Toronto, started for England July 11th.

DR. R. H. SOMERS (Tor., '96), has left his home in Toronto to practice in Seney, Iowa.

DR. P. E. DOOLITTLE, of Toronto, sailed on July 11 for England, to attend the British Medical Association meeting.

DRS. R. B. NEVITT and D. J. Gibb Wishart are spending a portion of the summer in Great Britain and the Continent.

WILLIAM HUNT, M.D., aged seventy-one, died at Philadelphia, April 17. He was for thirty years surgeon to the Pennsylvania Hospital.

DR. GOLDSMITH, who left Campbellford eight years ago, and has resided in Peterborough since then, has sold his practice and will move to Belleville.

GEORGE BRIDGES, M.D., died at Richmond, Va, April 13. He had made a special study of appendicitis, and that disease was the cause of his death.

DR. GEORGE M. FERRIS (Tor., '94), who acted for about a year and a half as surgeon on one of the C.P.R. steamships, has commenced practice in Cobourg.

DR. JOSHUA HUNTER HAMILTON, Hillsburg, has been appointed associate coroner for the county of Wellington, in the room of Dr. Angus McKin- non, deceased.

DR. CHARLES MARTIN, of St. Joseph, Mo., who graduated at the University of Pennsylvania in 1832, and served during the American war as surgeon, died March 21, aged eighty-four years.

DR. J. ALGERNON TEMPLE, after his arrival in England, was slightly indisposed for a few days in Chester. We are glad to learn, however, that he has recovered, and is enjoying fully his well-earned holiday, which he is spending in the "old land."

DR. WM. WARREN POTTER, of Buffalo, has been appointed vice-president of the auxiliary committee of the second Pan-American Medical Congress

for Buffalo and vicinity. This congress convenes in the city of Mexico in November of this year.

DRS. L. S. MCMURTRY, of Louisville, and Charles A. L. Reed, of Cincinnati, have been appointed honorary presidents of the International Periodic Congress of Gynæcology and Obstetrics, which holds its meeting at Geneva during the first week in September, 1896.

KINGSTON MEDICAL AND SURGICAL SOCIETY.—A meeting of physicians and surgeons of Kingston was recently held in the General Hospital of that city, and the result was the formation of a medical society. Dr. A. Oliver was elected president, and Dr. Mundell secretary.

DEATH FROM A MURPHY BUTTON.—Osler, in the *Montreal Medical Journal*, reports a case in which death was due to a perforation produced by pressure from a Murphy button in the splenic flexure of the colon, where it had lodged three weeks after a successful surgical gastro-enterostomy for cicatricial pyloric stenosis.

IN a former issue we made statements about Dr. J. T. Duncan, of Toronto, who is now in England, which were to some extent misleading. The doctor is "walking the hospitals" in London, and spending considerable time in Moorefields, studying diseases of the eye. He will not remain long, however, but expects to return to Toronto in the fall, when he will resume practice.

DR. CHARLES MCLACHLAN, who was elected to the North Dakota Legislature on the Republican ticket, in the recent State elections, is a Canadian, and an old member of the *Mail* staff. Besides being a graduate from the *Mail*, he is a graduate also of the University of Toronto, and of the Toronto School of Medicine. He is now practising his profession in New Rockford, North Dakota.—*Toronto Mail and Empire*.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—A meeting of the Executive Committee of the Mississippi Valley Medical Association was held at Atlanta on May 6, and the following gentlemen were appointed to deliver addresses: Dr. H. N. Moyer, Chicago, address on Medicine; Dr. Horace H. Grant, Louisville, address on Surgery. The indications are that the meeting to be held at St. Paul on October 20, 21, 22, and 23 will be the largest and most successful in the history of the association.

A REFRESHING BATH.—The following is the formula of a "rejuvenator" from which Mme. Sarah Bernhardt is said to get unfailling refreshment. It is a liquid in which she is bathed from head to foot—an *eau sédative*, Madame Bernhardt calls it. The prescription is as follows: Two ounces of spirits of ammonia, two ounces of spirits of camphor, one cup and a half of sea-salt, two cups of alcohol. Put all into a quart bottle, and fill with boiling water. Shake before using. The method of application is very simple. The body is bathed with a soft sponge dipped in the undiluted liquid, and dried with the slight friction of a smooth towel. After the bath the stiffness and soreness of fatigue are all gone, the circulation is stimulated, and a gentle languor is induced, followed by a desire to sleep.—*The Practitioner*.

THE DEATH OF DR. LANGERHAUS' SON EXPLAINED.—A full and satisfactory explanation of the sudden and tragic death of the little son of Dr. Langerhaus immediately following an injection of antitoxin serum has been reached through the subsequent investigation. In the first place, the analysis of the serum proved it to be reliable, and no irregularity in the method of its administration could be discovered. It was found, however, that the child had just completed an unusually heavy meal, and as the necropsy showed his larynx and trachea well filled with a material identical with that found in his stomach the accepted inference is that while faint from the shock of the injection he was unable to eject the vomited matter from his throat, and instead drew it into the air passages, with fatal effect. It may be concluded, then, that what appeared to be quite damaging evidence against the serum is really the result of a very simple accident.—*Medical News*.

A GOOD PAVEMENT.—With reference to the agitation as to a new pavement for Fifth avenue, we would call the attention of those in the city government who have charge of the matter to the experiments lately conducted abroad with cork to obtain a new and superior pavement. The pavement used in Vienna consists of granulated cork mixed with mineral asphalt and other cohesive substances, compressed into blocks of suitable size and form. Among the numerous advantages set forth in its behalf are cleanliness, noiselessness, durability, elasticity, freedom from slipperiness, whether wet or dry, and moderate cost. Unlike wood, too, it is non-absorbent, and, consequently, inodorous. It presents the minimum resistance to traction, and, being elastic under passing loads, does away with the vibration caused by heavy teaming. The blocks are embedded in tar, and rest upon a concrete base six inches thick. When taken up for examination they have exhibited, when compared with new ones, a reduced thickness by wear of less than one-eighth inch—this in the case of a section of a London street leading to the Great Eastern Railway station, subjected to continuous heavy traffic, the blocks having been in use nearly two years.—*Medical Record*.

BIOLOGICAL WORK IN JAPAN.—The Japanese are rapidly becoming Europeanized in more ways than one. In politics, in dress, and in the arts of war it is well known that they have adopted western ideas, customs, and institutions. They are also not behindhand in the matter of education. A large number of Japanese have in the past received their education in Europe, and in medical science there are several well-known names associated with valuable pieces of physiological and pathological research. The aim of the Japanese, however, is to provide as good an education in their own country. The Imperial University of Tokio is well staffed, mostly with European professors, but we understand that these are to be replaced by natives at an early date. We are reminded that the necessary qualification of the native Japanese for such posts cannot be far distant by certain publications from the Tokio University which have recently been brought under our notice. The Journal of the College of Science attached to the university, which is published partly in English, partly in French, abounds in biological papers of the highest standard of excellence. We may say the same thing for the Bulletins of the College of Agriculture.

These are published under the editorship of the Professor of Agriculture, who is Dr. Oscar Loew, the well-known chemist and physiologist. Publications such as these are of special interest because they open up what is very largely a new field in science ; the Japanese animals and the Japanese food and agricultural products being the subjects of the papers, and these are often very different from our own.

AN INCIDENT IN THE LIFE OF A PROFESSOR.—When M. Jules Bergeron was pronouncing his eulogy of Prof. Gubler before the Academie de Médecine, he narrated an interesting episode in the life of the late Beaujon physician. Gubler, as a student, was exceedingly poor, and it was only by dint of submission to the greatest privation that he contrived to complete his curriculum. His masters were aware of his poverty, and, in order to help him, one of them recommended him as attendant to a youth of ancient lineage who was the victim of incipient melancholia. Travel having been recommended with a view to the patient's rehabilitation, the pair started for Switzerland, where for a time they enjoyed themselves very much and also became great friends. From Switzerland they crossed the Alps into Italy, and halted at Milan, the journey so far having been as prosperous as possible. One evening, as patient and physician were about to retire for the night, the former was suddenly seized with a paroxysm of furious madness. Levelling a pistol, he discharged it point blank at the unfortunate Gubler, who at once fell fainting to the floor, and then grasping a knife the patient proceeded to hack the insensible physician's head in the most savage manner. Alarmed by the noise, the hotel servants then appeared on the scene, and the lunatic was disarmed. Gubler was immediately carried to the hospital, where, almost by a miracle, he eventually recovered from his wounds. The revolver bullet, which lodged in his thorax, was, however, never extracted, and to the day of his death the cicatrices on his head were plainly visible, although he wore his hair unusually long in order to conceal them.—*Indian Medical Record.*

THE LEE-METFORD RIFLE.—A recent issue of the Johannesburg *Star* contains some interesting facts relating to the ambulance work performed during the late crisis in the Transvaal, based mainly upon a report by Professor Liebmann, the secretary-general of the St. John Ambulance Association in South Africa. In response to a notice in the *Cape Times* a number of volunteers tendered their services for work in the temporary hospital which was established at Krugersdorp. The internal arrangements for the management of this hospital appear to have left a great deal to be desired, owing chiefly to the fact that there was no responsible head on the medical staff, and that the lady who figured as matron had had no previous experience of nursing or hospital management. Some forty odd patients appear to have been received into the hospital after the Krugersdorp affair, the greater number having belonged to Dr. Jameson's force. As regards the nature of the wounds received by the combatants, all injuries were those by gunshot. Those made by the Lee-Metford were much cleaner and healed much more quickly than those produced by other weapons. Many of the shots, through fleshy parts only, healed almost by first intention. One burgher shot through the lungs left the hospital con-

valescent a few days after admission. The entrance orifice of the bullet was exceedingly small, and, few of the larger vessels having been divided, the hæmorrhage was, in consequence, slight, the wound closing almost immediately on itself. The exit was about the size of the entrance, and in all cases was much smaller than that made by the Martini. Where the Lee-Metford bullets struck bone this was completely shattered. The flesh wounds inflicted by the Martini rifle were of a much more serious nature, namely, larger, jagged, slow healing, with bad apertures of entrance and worse of exit. The majority of Jameson's men had limb wounds. Three men were wounded in the back and one through the bladder and intestine, the bullet entering from the right. Of the remainder some were suffering from fracture, dysentery, abscesses, etc., not attributable to bullets. Among the more severely wounded burghers, there was one man shot through the head who lived ten days afterwards, one shot through the abdomen, one through the lung, one through hand and lung, and one through the back. The general consensus of opinion among those who saw the effects of the fighting in South Africa is that the Lee-Metford rifle or carbine is inferior to the Martini as a "man-slaying" weapon. It does not appear to have in many cases the power which it should possess of putting a man *hors de combat*. Impending events in Upper Egypt may, perhaps, afford more extensive data on which to form an accurate opinion in regard to this important matter; at present, we confess to some want of confidence in this and other small-bore rifles as a means of stopping a rush by fanatical and semi-barbarous adversaries. We sincerely hope that future events may demonstrate our fears to be unwarranted.—*British Medical Journal*.

SEWAGE PASTURES.

While there is a general consensus of opinion in favor of irrigation as, at any rate, the final step in the purification of a sewage effluent before turning it again into a natural watercourse, opinion has by no means been so unanimous in regard to the effect of sewage farm produce upon the animals fed upon it. To elucidate this problem, Dr. Meredith Young, Medical Officer of Health for Brighouse, has collected the experience of a considerable number of sanitary officials, and the outcome of his researches is to show that while the consumption of the produce of such farms, as distinct from the sewage itself, may be free from risk, it is essential that every such farm should be very carefully managed, so as to prevent the cattle from obtaining access to the polluted water. It may not be the case that perfectly healthy cattle will drink polluted water, but Dr. Young has assured himself that some cattle certainly do so, and take it in preference to that from a purer source. It also appears pretty clear that, although some samples of sewage may not be definitely injurious, cattle who drink foul water run risks not only of catching certain diseases, but also of being poisoned by the disinfectants which are often now so freely mixed with the contents of sewers. Whether cattle can both catch diseases from drinking sewage and transmit such ailments to man is a wide question to which no definite answer can be given, although by analogy one may affirm the possibility of such a transmission of infection, for clearly there would seem a possi-

bility of the drinking of sewage-polluted water being a means by which the ova of tapeworms might gain access to cattle. Where farms are properly managed, so that the cattle cannot gain access to the raw sewage, there is but slight probability of mischief ensuing. Any possible contamination has, in fact, to pass through a double biological filtration, once when the sewage is being absorbed by the plant, and again when the plant is being absorbed by the alimentary canal of the animal, and in the case of milk possibly through another still again in the process of secretion of the milk. Even under such circumstances some farmers consider that milk has a bad taste when taken from cows fed on sewage produce, that it has a heavy odor, and that its keeping qualities are impaired. Nor does this appear improbable when we consider, for example, how readily one can detect the smell of turnips in milk when cows have been fed on them even for a short time, and how readily milk is rendered poisonous by the cows taking certain poisonous herbs in their food. All these things point to the conclusion that, in some cases, certain chemical substances contained in the food material can pass through the so-called biological filters, and can be detected in the food products derived from the animals whose systems they have entered, and shows the probability of such food products being deteriorated by the drinking of sewage and sewage-polluted water by the cattle. Dr. Young, then, while speaking cautiously about the consumption of sewage produce, thinks that there need be no hesitation in saying that the flesh and milk of animals which have drunk sewage itself in any form should not be consumed by human beings till sufficient time has elapsed for the deleterious effects to pass away. In practice, probably more harm is done by the common crude methods of irrigation practised by the uneducated farmer, who floods his fields with whatever comes to hand, than by even the largest sewage farms which are conducted on proper principles with the definite aim of producing a pure effluent, for on such farms the cattle would never wallow in sewage or drink sewage-polluted water.—*British Medical Journal*.

OBITUARY.

JOHN A. BURGESS, M.D.—We have to record with deep regret the death of Dr. John A. Burgess, of Toronto, which occurred June 30, 1896, in the thirty-fifth year of his age. Dr. Burgess received his medical education in the Toronto School of Medicine, and graduated in Victoria University in 1885. After completing his course he commenced practice in Toronto, and very soon attained marked success. About two years ago his health commenced to fail and he was compelled to give up a portion of his laborious work. For a time he gained strength, but a serious pulmonary hæmorrhage weakened him to such an extent that he decided to try a warmer climate for a few months. At first good reports reached his friends; but a few weeks later a message came to his brother to the effect that his condition was serious. He returned from California to his home in Toronto early in June, and gradually sank till death relieved him from his sufferings.