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Fig. 1.]

THE CANADIAN PRACTITIONER

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ROENTGEN SKIAGRAPHY.*

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WHEN the announcement of Herr Doctor Roentgen's wonderful discovery was made in December last, a new scientific epoch was begun. His first communication was made to the Wurzburg Physical and Medical Society, in a paper entitled "A New Kind of Rays." He had taken time to settle many important questions, and was sure of his ground before making any public announcement. He *first* took his professional colleagues into his confidence, and did not rush into the public press as many of his predecessors in *great* discoveries had done—he fully satisfied himself that he had a discovery before making it known. Its importance was too great to be long retained by the savants of Wurzburg, however,

* Read before the Toronto Clinical Society.

and within a few days the whole world knew that a hitherto unknown scientist had made a discovery that will revolutionize many ideas scientific. Ever since that time the press, both public and scientific, has been replete with the wonders of the unknown rays. For some time the discovery was looked upon as something too unreal to be seriously thought of; but as the full details became known, and as other investigators began to report their confirmation of the experiments announced, the incredulous had to abandon their position and admit that there really was something new under the sun. To-day all doubts have vanished, and all are pushing forward to increase the applicability of the new ray.

To us, as medical men, it has opened up a great field by perfecting our ability of diagnosis in obscure bone lesions, in the locating of foreign bodies in the limbs, a possibility of making certain of the presence of kidney calculi, in joint lesions, and many other conditions that I cannot mention. We must not expect too much, or we are bound to be disappointed.

The result obtained by the "X" ray is not a sharply defined photograph, but is a shadow picture—a skiagraph. We all know that shadows are more clearly defined by the nearness with which the object is placed to the screen on which the shadow is projected. More or less space must intervene between the object and the photographic plate in all of these cases, and that must be at the expense of sharpness of definition. Time of exposure is, at present, a very serious drawback to the use of these rays in medical diagnosis, but this is being materially reduced from day to day. The tube becomes heated so rapidly with the current from a coil giving a sufficient spark to produce good results that a much longer time of rest is required before the current can be again turned on. The tube used to produce the results here presented was heated in ten seconds to such an extent that it required twenty seconds to cool. The time of keeping the part under exposure is really, therefore, three times that of the actual exposure, but this will be overcome by some form of water jacket surrounding the tube, made of celluloid or aluminium. It would be easily done now if a glass cone could be utilized, but it cannot, as the rays will not pass through glass. Edison has announced a celluloid cup, but the results are not yet known.

The method adopted by the workers at the School of Practical Science here of using a bell jar has not proved as useful in medical subjects as it did for other objects, the refraction of the rays dimming the outline of the part. I have found that by surrounding the upper part of the tube with a funnel-shaped piece of tea lead the rays can be concentrated without the dimming effect on the border line.

Though the results attained by these rays are familiar to everyone, the



Fig. 2.

means used are possibly not so well known. An article by Prof. H. Schubert, in *The Monist*, deals very nicely with the previous history of this new physical agent :

In the year 1789 the electric current was discovered by Galvani, of Bologna ; but it was not until several years later that its most important properties, at least as distinguished from frictional electricity, were disclosed by Volta. Although galvanic batteries, as a means of producing electric currents, were studied and perfected in the next few decades, three great discoveries had yet to be made in the province of electricity before the new agent could attain the importance in civilized life which it to-day occupies, and before theoretical physics could investigate more closely its nature and character. These three discoveries were as follows :

(1) In 1820 Oerstedt, of Copenhagen, discovered that an electric current flowing round a magnetic needle deflects the same, and that a magnetic needle rendered insusceptible to the influences of terrestrial magnetism, and free to rotate in any direction, will place itself at right angles to the plane of an electric current surrounding it.

(2) In 1825, Arago, of Paris, discovered that a piece of soft iron, about which a wire connected with a battery has been wound in spirals, is transformed into a magnet and continues in the magnetic condition as long as the circuit remains closed, but is again unmagnetized when the circuit is broken.

(3) In 1831, Faraday, of London, discovered the so-called "induced currents" of electricity. If, he reasoned, the current was a source of magnetizing action, as Arago had discovered, it was possible conversely that a magnet should be the source of a current-producing action. But Faraday found no confirmation of his conjecture. Twenty years later it could have been decided *à priori*, without experiment, that a magnet *at rest* could not give rise to a current. For that would have violated the law of the conservation of energy, agreeably to which work can be done only provided a like quantity of work has been previously expended in some way. Yet Faraday discovered the law, harmonizing perfectly with the principle of the conservation of energy, that if a magnet be *approached* to a closed spiral circuit it will evoke in the circuit a sudden current lasting only for the moment of approach, but that when the magnet is *drawn away* from the spiral a current in the opposite direction to the first will be momentarily set up therein. Instead of a magnet, a closed circuit carrying a current may be approached and removed, or, instead of the latter, the current in the circuit may be made alternately to appear and disappear, or its strength may be alternately increased and diminished.

Currents thus produced are called "currents of induction," and apparatus designed to generate induced currents, rapidly alternating in direc-

tion, by means of common currents, are called "induction-coils." An induction-coil consists (1) of a soft iron core, (2) of a primary wire spiral or helix enveloping the same and receiving an ordinary electric current, and (3) of a secondary wire spiral of thin wire and many turns, enveloping the first. The current sent through the primary spiral magnetizes the iron core (compare the first discovery). The magnetized core then attracts a little iron hammer which is placed before it and regulated by a spring. This movement of the hammer breaks the metallic connection with the primary spiral so that the current is interrupted and the iron core again unmagnetized. The hammer immediately jumps back from the iron core, the current is again set going, and the action described is repeated anew. By this apparatus, thus, we are enabled to make the current in the primary spiral repeatedly and alternately appear and disappear. According to Faraday's laws, now, every appearance of the main current in the primary coil must produce in the secondary coil an induced or "closing current," as it is called, flowing in the opposite direction, and lasting but for a moment; whilst conversely every disappearance of the current must evoke an induced current flowing in the same direction with the main current, and called the "opening current." Thus are produced in the secondary spiral in quick succession currents which flow in alternately opposite directions. These induced currents are of brief duration, but of enormous tension. Their powerful physiological action on the human body is familiar to every reader.

It is to these induction currents, discovered by Faraday in 1831, that we owe all the recent magnificent development of electro-technics. For not only is the art of telephoning based upon induction effects, but the performances of large dynamos, or machines designed to produce, by mechanical work, electrical currents of great intensity and high tension are primarily rendered possible by induction effects.

So much for the induction current which is produced from the Ruhmkorff coil. The coil must be agitated by an electric current, and the voltage must not be too high; twelve volts, passing through a Ruhmkorff coil, will produce a voltage of, possibly, 100,000, but of very high potential. This current, on passing through tubes that are exhausted to a greater or less extent, produces phenomena characteristic to the degree of exhaustion. The tubes that were first exhausted, and on which experiments were conducted, were made by Geissler, of Bonn, and named after him. The degree of exhaustion was about 1-400 of an atmosphere. In the two ends of these tubes are soldered platinum terminals called electrodes. On connecting these electrodes with an induction current the enclosed gas, through which the current must pass, is set in a vivid state of incandescence. The point at which the current enters is the positive, or *anode*,

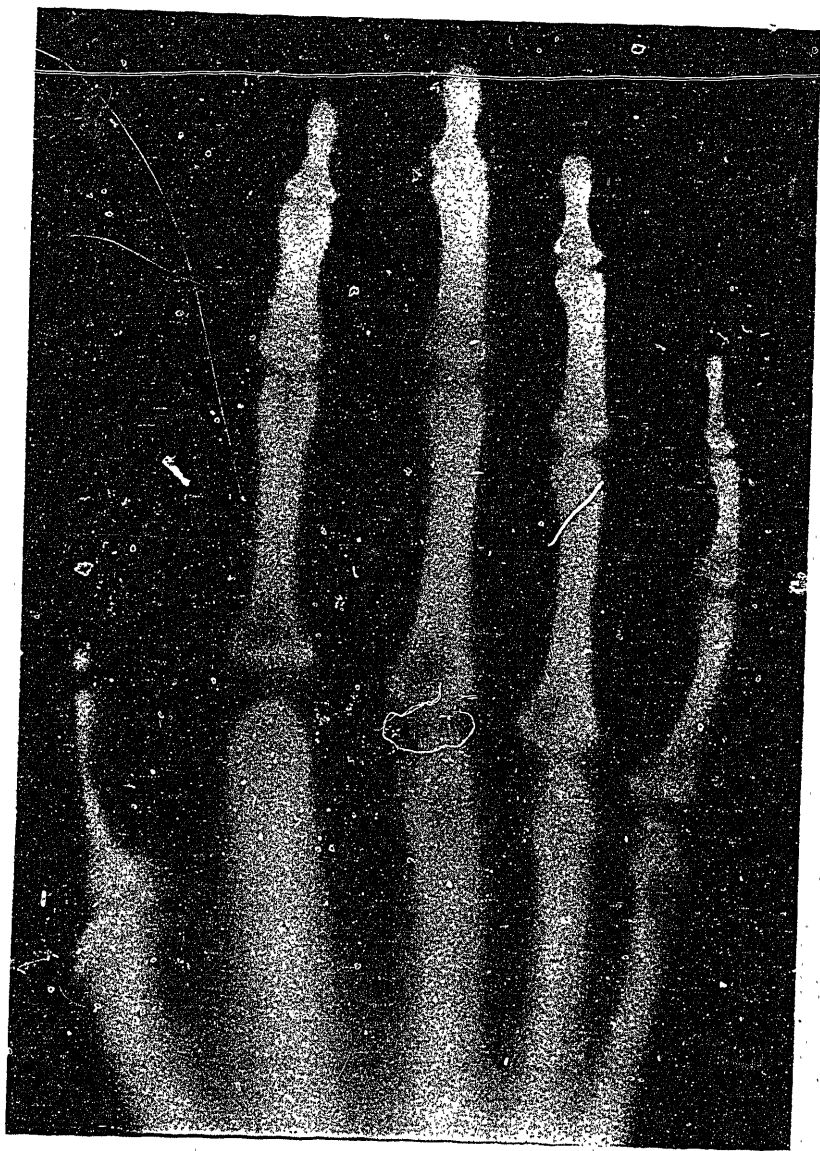


Fig. 3.

and the other the negative, or *cathode*. A bright, narrow fringe is observed at the cathode, and, subsequently, a relatively dark-bluish light, the *glow-light*, or *cathode-light*; whilst at the anode, as also in the largest part of the space intervening between the two electrodes, striæ of bright and reddish-yellow light are distinctly visible.

Hittorf, in 1869, carried the degree of rarefaction in these tubes to a more minute degree of density, and substituted platinum plate in place of the platinum wire electrode. The bluish glow-light of the cathode spread, in this greater rarefaction, until it nearly filled the tube.

Crookes carried the rarefaction still further up to one-millionth of an atmosphere, and these tubes are called Crookes tubes, and from these the "X" rays of Roentgen are produced.

It, therefore, gives me a great deal of pleasure in presenting to you, to-night, some negatives I have succeeded in making by these "X" rays.

We all must appreciate very highly the work done at Toronto University and the School of Practical Science in the early part of the year; yet none of it had any particular bearing on the application of the discovery to medical or surgical investigation. They reduced the time of exposure, and demonstrated the reflection of the rays, etc., which are of great aid in our present investigations; yet the negatives are the first produced in Ontario of medical subjects. Delay has been caused by an entire absence of Crookes tubes suitable for skiagraphic purposes. During this interval I got my battery constructed, and secured a Ruhmkorff coil capable of producing a spark six inches long. As soon as the tubes arrived from Germany I was ready for work.

A patient with a foreign body in the limb not being at hand to be skiagraphed, I resorted to the next best expedient, and that was of skiagraphing foreign bodies through the hand and arm. As you will see by the skiagraph of the hand (Fig. 1), that it shows a needle under the middle finger—the needle was placed under the finger and nearer to the photographic plate—while under the proximal end of the first phalanx of the index finger I placed a piece of glass, and a much smaller particle at the inner side of the proximal end and radial side of the terminal phalanx of the little finger; under the knuckle joint of the second finger a piece of lead was placed. All of these objects show with great distinctness, and most of them through bone. It appears that these foreign objects present a very much greater obstruction to the "X" rays than the bone, which is to an extent penetrable, as seen by the shadow shown of the thicker and thinner portions of the phalanges and metacarpals. The needle under the wrist (Fig. 2) shows the same result through a much thicker portion of the anatomy than the hand. The sharpness with which these objects are shown is due to their being closer to the plate. If they were embedded

in the flesh they would show well enough, but not as sharply, the distance from the plate allowing some light to pass below them. The attention will have to be much more closely drawn to the next skiagraph (Fig. 3), as the foreign object here is one that is within the tissues, and is a source of annoyance. It is situated at the ulnar side of the distal end of the first phalanx of the middle finger. It is a mere speck, and if you overlook it I will not be surprised ; at any rate I cut down on the part to-day and removed a minute speck of metal. The bone was also roughened at the situation. The history of the case is that some ten months ago, the young lady thinks, a part of a needle broke off in her finger. She consulted her doctor, and says a piece of needle was removed, but does not think all came away. The skiagraph showed this spot, and at the operation I found a speck of steel. I shall hope for a recovery from the pain and inflammation which was causing her great annoyance.

Fig. 4 is a reproduction of the first negative that I made, and the letters CANADIAN PRACTITIONER are roughly cut out of tea lead, and one can see how clearly defined they are ; the thickness of the lead is about that of ordinary notepaper. They were arranged on the box above the hand, as they should be if a photograph was to be taken—the negative appearing as a reversal. It was not until the photographic plate was developed that I appreciated that this work differed from ordinary photographic work by being a direct shadow.

I reproduce it just as the result was attained.

I have also succeeded in making a skiagraph of a three months' foetus, which clearly defines the centre of ossification, and shows how clearly at this age the bone restrains the rays, while the cartilage allows them to pass freely ; also one of a wrist on which an excision has been performed, which has given a remarkably clear outline of the wrist joint.

I hope that by our next meeting I will be able to present some further examples of the usefulness of this process in locating foreign bodies, as several subjects are now awaiting to be skiagraphed.



Fig. 4.

THE EPILEPSIES OF THE INSANE.*

BY EZRA H. STAFFORD, M.B.,

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THE generic term Epilepsy has been indiscriminately applied to the manifestation of various nervous phenomena of a certain type. An epileptic seizure may, in its mildest form, consist simply of a partial or a complete lapse of consciousness. The onset is very sudden, and the mental hiatus may be of short duration, or may extend over a considerable period of time. Accompanying the loss of consciousness there may be, in the severer forms of epilepsy, a convulsion of the entire muscular system. Following the paroxysms, which merge rapidly from the tonic to the clonic form, there is a period of profound coma.

This train of phenomena, subject to many unimportant modifications, constitute the external indications of an epileptic seizure. The fits may occur singly, at long intervals of many months, or the first fit may be followed promptly by others of a similar character. A number of these constitute a series. From ten to twenty often occur in a single day.

The mind may be clear in the interim between the attacks, or the patient may exhibit some form of insanity, usually mania, of a furious character, or melancholia. The form of insanity may not last from one fit or series of fits to the next, but may merely precede the attack by a few days, or follow it for a short length of time. Eventually the paroxysms have a tendency to produce dementia in patients who were at first perfectly sane between the fits. The convulsions are identical in both the sane and the insane. The presence of some form of insanity between the attacks is purely incidental, and does not in any way alter the character of the epileptic paroxysm.

These fits are merely the outward and superficial manifestation of an ulterior disease of which, as very little is known, so a great deal is conjectured. "Clinical epilepsy" may be artificially produced by irritation of the cortex of the cerebrum, and pathological conditions which cause irritation to the cortex, such as glioma, abscess and sclerosis of brain and cord, meningitis, tubercular or suppurative, syphilis, embolism, or thrombosis of the cerebral arteries and veins, are occasionally accompanied by epilep-

*Read before the Toronto Medical Society.

tic seizures. When the epileptic seizures co-exist, however, with known pathological conditions, they can only be regarded in the light of incidental symptoms of the primary lesion, and the epileptic fits will correspond in question of time to the course of the primary disease.

Diseases of the nervous system have been separated into four great groups, *i. e.*, (*a*) organic, (*b*) structural, (*c*) nutritional, and (*d*) functional. In the first there is marked change of tissue, while in the second the change is less coarse, and can only be detected by a microscope. Nutritional diseases, such as paralytic dementia, are accompanied by very delicate modification of the nerve elements, while in functional disease of the nervous system no positive alteration of tissue has been observed at all.

As has been seen, the clinical characteristics of epilepsy may be produced by glioma, syphilis, and other forms of organic disease of the nerve tissues. In some structural diseases epileptic paroxysms occur, and they are also produced by some forms of nutritional disease.

But epilepsy is not always secondary to any ascertained form of pathological change. In the great majority of cases where no indications whatever of change in the nervous tissues can be found, nor any concurrent constitutional diseases to which the epileptic seizures may be reasonably attributed, the term idiopathic epilepsy has been applied. In other words, when the etiology of epilepsy is clearly understood, it is the usage to regard the epileptic seizure as a symptom; but when the etiology is not clearly understood, it is called a functional disease.

In idiopathic epilepsy the paroxysms make their appearance in the earlier years of life, as will be shown by the following statistics, drawn by Gower, from a large number of cases: Three-quarters of the cases begin under twenty; nearly a half occur between ten and twenty. One-eighth of the cases occur during the first three years of life. After twenty the percentage of cases falls. The maximum is at the fourteenth, fifteenth, and sixteenth year.

The pathological data of epilepsy are inconsiderable. To a certain extent, this is accounted for by the fact that epilepsy does not frequently end fatally, the life of the patient being brought to a termination by some intercurrent disease. Few opportunities are thus afforded for post-mortem examination at a time when such an examination would be most valuable for pathological investigation. Furthermore, as has been already stated, the brains of epileptics, even when occasion has been granted for their examination, have exhibited no striking pathological changes. Chaslin and Rilliet have vaguely described a form of sclerosis, but their investigations have not been extensive, and, even so, there does not appear to be much significance to the changes they claim to have observed.

There has been no such dearth in the clinical facts of the disease, and for centuries it has been described clinically with the various ornaments that imagination could devise or ambition suggest. The admirable state of confusion into which the literature upon any subject may be brought by diligent ignorance may be gathered from the fact that in a standard work upon psychiatry there occurs under the heading of epilepsy a sombre enumeration of sixty-five varieties, which for epic simplicity (not without grandeur) reminds one of the catalogue of Achaean ships.

Nevertheless, a careful analysis of even forty or fifty cases will illustrate the diversity of the clinical features; and while an extended clinical report of half that number would be as irksome as crude masses of clinical detail, clumsily piled up without logic or scientific intuition usually are, a few notes upon a dozen typical cases will cast some light upon the subject, and by occasion afford data also for questions subsequently to be brought under consideration.

CASE 1. A child of nine. Father an epileptic. In the child the disease had first appeared a year before. The first fit, and such reports must always be received with a reservation, was said to have followed a fright. During the year the fits had become more frequent, and more severe in character. The child had a fit in my presence. Falling suddenly to his hands and knees, the muscles were drawn for a moment in a tonic spasm, followed by tremor and a jerking of the extremities when he rolled about on the floor. While in this position he bit at my leg and hand. Lifting him to his feet a moment afterwards the fit passed off, and he answered my questions rationally, but in a very slow, hesitating voice. He was unaware of the fit that had just passed, and did not remember having bitten at me. He seemed below the average in intelligence, and was cachectic physically.

CASE 2. A young man of twenty. He has had fits for some three years, but at long intervals. His manner is restless, and his speech excitable, indicating an entire lack of self-control. An impossible religiousness is his favorite affectation, but his conscientious scruples are inconsistent with the rest of his life. Led by one impulse, he suddenly amazed a group of strangers with the most puerile antics, and, carried away by another, he broke forth into a violent tirade against the nude in art, threatening to tear down a small picture upon which his chaste eyes were riveted, and which shocked and pained him. He is given to closing his eyes and moving his lips for a few moments, after which he will take the company into his confidence, and say that he had been engaged in silent prayer. He knelt by a fountain for half an hour and glared at a small fish. Said that the fish and himself were parts of God. As his fits occur

at night and this sort of religious drivel is thought just about the right thing by a great many sane people, it is possible that the impairment of his mental faculties will have advanced very far before his actions will cause serious comment. He has been through the Christian Science treatment, with no more marked result than an increase of piety and a prolonged and obstinate constipation. He has fed also on thyroid glands, and the "cerebrine" and "cardine" and "testine" of the sheep, until a sufficient air of sheepishness has been permanently produced. *Similia similibus curantur.*

These cases are both typical, the first being one of a class which, by reason of the early advent of the disease, and the increasing frequency of the paroxysms, often terminates in dementia without previous mental symptoms. In the second case, the mental symptoms, which are very marked, may merge in to outright mania or melancholia, as the primary disease itself progresses. But the dementia in the one case and the mania in the other can be regarded in no other light than secondary results in the career of a primary disease.

CASE 3. A man of forty. Robust constitution, and without mental peculiarities. Has from youth probably been subject to epileptic paroxysms, though for a number of years they occurred only at night, and were not suspected until the lacerations of the tongue and lips aroused suspicion. Weeks often pass without his having a fit. Then a number appear in close succession. For a week previous he is moody and silent. Some hours before the paroxysm he is conscious of a vague sensation passing upwards through the viscera. Immediately before the fit there is a second aura, when he is aware of an intensely disagreeable odor, which arises, he affirms, from a decayed tooth (he has no decayed teeth), and which, he insists, causes the fit. The advent is sudden; with a low shout, he falls prone upon the floor as if struck. He falls always in the same position, and so exactly, indeed, that he wounds himself repeatedly in identically the same place. A piece of sticking plaster applied to the right temple after one fit has, later in the day, been worn off in another fit. Upon falling to the ground, there is, first, a condition of tonic spasm of the entire muscular system. It lasts for some seconds. The pallor of the face gives way to lividity, as respiration is impeded by tonic spasm of the respiratory muscles. The pupils are dilated, and the eyes are turned upwards and to one side. The tonic spasm is greater upon the same side than on the other. Clonic spasm now intervening, the jerking of the head and extremities becomes more and more marked. The sphincters are sometimes relaxed. The tongue is often caught and bitten between the teeth, and a bloody foam is blown from the mouth. In a few seconds the clonic spasms also pass off, and he falls into a condition of coma, which passes away in an hour or more. Following these fits, there is

occasionally an attack of violent mania. I have seen him in a wild frenzy, raging from place to place, and breaking everything he could lay his hands on, and attacking everyone who approached him. When the mind is recovered to repose, he has no recollection whatever of either the fits or the frenzy which followed it.

CASE 4. A man of thirty, subject to epileptic seizures from childhood ; loquacious, and good-natured, and lazy. As in the preceding case, the paroxysms may not occur for days, when, after a short period of uneasiness, a number of fits appear in rapid succession. These fits present nothing unusual, being similar to one described above in detail. The mental condition after the fits is interesting.

(1) Sometimes he will remain for two or three days in a condition of stupor, from which he emerges gradually.

(2) Occasionally he falls into a state of blind fury, when he attacks the attendants with great ferocity, dashing the furniture about him, yelling and shrieking, and smashing the windows with a chair or with his hands.

(3) More rarely I have noticed a state of double consciousness analogous to somnambulism. A few months since, he made his way through the open country to a point more than a hundred miles distant where he had once camped for the summer. When discovered he had not the slightest recollection of how he had got there, the few preceding days being an entire blank.

CASE 5. A man of forty-five. Disease of long standing and intellect much obscured. After having three or four fits, he is rather uneasy for a couple of days, after which he becomes violently excited and runs, or rather leaps, continually from one end of the ward to the other, shrieking harshly. This continues sometimes for days. When in his bedroom he still continues his unearthly ululations. Upon being questioned as to the cause of his terror he explained that myriad spirits were constantly following him, and that they caught hold of him and tried to get into his brain. He is quite communicative upon these and kindred points, but to gather information it is necessary to run beside him as you question him, and the velocity of motion discomposes the mind of the scientific enquirer. To facilitate comfort of conversation, a learned New York physician has suggested following such patients on a bicycle, when a person not accustomed to sprinting can keep enough breath in his body to ask questions. I have not tried the New York method,

CASE 6. I have frequently seen the Duke of York, for so this man of forty-five styles himself, bend forward and grow rigid for a moment, after which his arms jerk spasmodically, as if in intense excitement. Upon these occasions he makes assaults upon divers persons. Having in one of these encounters broken one of the metacarpal bones by a blow of the

fiat, he broke the same bone again within the month in a similar manner. He appears to retain no memory afterwards of these periods, and is, I feel assured, quite unconscious of what happens.

CASE 7. Has one or two very severe fits about once a year, when he grows violent with homicidal mania. In the interim he is demented, and inclined to be filthy in his habits.

CASE 8. A woman of about forty; mind clear between paroxysms. Each fit is ushered in with an aura of a psychological nature, consisting of a flood of memories relating to her girlhood.

CASE 9. A woman of about thirty. Is always aware of a coming fit by an aura commencing in the left hand. An "aura," like an imagination, is a special gift, enjoyed only by a few; though many receive every encouragement to have one.

CASE 10. Man, aged forty; was never known to have a fit before. A violent paroxysm came on while in bed. Consciousness never returned. The next evening there was another seizure; the spasm being so severe that some of the tendons of the knee broke with a loud snap. An hour later another fit occurred, bearing, like the two previous ones, a strong resemblance to epilepsy. He died a few minutes afterwards. Signs of recent cerebral hæmorrhage were discovered at the autopsy. There were no signs of organic or structural cerebral disease.

CASE 11. "Breathing out threatenings and slaughter, he journeyed near Damascus; and suddenly there shined round about him a light, and he fell to the earth, and heard a voice, and he trembled; and arose from the earth; and when his eyes were opened, he saw no man; but they led him by the hand; and he was there three days without sight, and neither did eat nor drink, and when he had received meat he was strengthened. Then was Saul certain days with the disciples which were at Damascus."

CASE 12. "And I see men become mad and demented from no manifest cause, and at the same time doing many things out of place; and I have known many persons in sleep groaning and crying out—some in a state of suffocation, some jumping and fleeing out of doors, and deprived of their reason until they awaken and afterwards become well and rational as before, although they are pale and weak; and this will happen not once, but frequently; and there are many and various things of the like kind *which it would be tedious to state particularly.*" (Hippocrates, "Sacred Disease.")

CASE 13. "Hence some have called it the sacred disease, as from the greatness of the evil, or because the cure of it is not human, but divine; or from the opinion that it proceeded from the entrance of a demon into the man. Such symptoms as accompany this disease in its acute form have been already detailed by me. If it become inveterate, the

patients are languid, spiritless, stupid, inhuman, unsociable, subject to many horrid dreams, of a leaden color, slow to learn, dull of hearing, and utterance indistinct and bewildered. The disease also sometimes disturbs the understanding so that the patient becomes altogether fatuous. The cause of these affections is coldness with humidity." (Aretæus of Cappadocia, "Chronic Diseases," Book I. chapter 4.)

Besides the cases described above there is also a rather rare form of paroxysm which affects one region only of the muscular system at a time, and without occasioning loss of consciousness. Somebody seems to have noticed this. It was a puzzling and unsatisfactory phenomenon. There was uneasiness for a time in the shrine of science, but Hughlings Jackson, by making an arbitrary division of the nervous system somewhat different from any other, was able to explain it, and thereupon comfort and repose was re-established in the shrine of science, and a writer in the "Dictionary of Psychological Medicine" insists that this sort of thing be called Jacksonian epilepsy—and it is.

The foregoing serve to illustrate how widely the clinical features of a given disorder may differ. I have not referred to the designations used often to express the different varieties. If a division be imperative, however, one might group the above, and indeed all cases, into mild and severe, or *petit mal* and *haut mal*.

In the milder forms the paroxysms are absent, or so slight as to pass unnoticed. In the severer forms the spasm of the muscles occurs immediately upon loss of consciousness.

Hippocrates naïvely declines to enter into a consideration of clinical details. Later writers upon epilepsy have not followed the example of the father of medicine, and it is only fair to Hippocrates that I should honestly confess that I have found their conscientious enumerations of details quite as tedious as Hippocrates said such details would be.

Clinical details are of no historic value in themselves, but only as they may serve as clues or steps for scientific reasoning. Hence the great mass of interesting gossip about "warnings," or "auræ," and kindred phenomena is not only tedious, as the Greek writer said, but, in great part, useless. Furthermore, a great deal that is reported is not reliable, for being merely medical gossip it has the weak points of lay gossip. In a search after facts to stand on, the student has to make his way through a prodigious mass of irrelevant detail to lay hold of some very scanty evidence.

It will be noted that both of the ancient writers speak of mental disturbance as a complication of the epilepsy. If symptoms of insanity follow phthisis and syphilis, there is surely nothing remarkable in the fact that insanity should be occasionally associated with epilepsy. The title

of this paper was therefore determined upon in much the same spirit as that which led a conscientious author to make his traditional chapter upon the snakes of Greenland.

A contemporary American writer upon insanity, besides grand and petit mal and convulsive movements without loss of consciousness, includes as "epileptiform affections" vertigo, double-consciousness hystero-epilepsy, procursive epilepsy, and laryngeal epilepsy. Certainly the accumulation of such clinical forms in families, and classes, and cohorts, as in botany, is a work of profound importance (and lucidity), and some few writers enter into the work with almost as much enthusiasm as if they were collecting postage stamps.

The treatment of epilepsy has been empirical from the first. The inhalation of nitrate of amyl often relieves a severe paroxysm. The different salts of bromide control the seizures. The British Pharmacopœia has been diligently administered to the epileptic patient without adding any benefit to either the pharmacopœia or the patient. By far the best results have been obtained from a close attention to sanitary science. Institutions known as epileptic farms are being tried in various civilized countries. Outdoor air, sunlight, wholesome exercise, and simple food, without excitement, have proved the best form of treatment for the unfortunate community. There is no such institution that I know of in Canada.

Both the friends and the physician of the patient will labor in the dark until some clearer light is cast upon the true nature of the fundamental disease.

As I have said, the clinical data are so varied and so confused that it is difficult to reason upon them. Pathology, on the other hand, has discovered nothing of any practical value, and it seems to have been popularly taken for granted that, like perpetual motion, the discovery of the true nature of epilepsy was utterly beyond the reach of either luck or logic. Witness the helplessness confessed by such a writer as Theodore Kirhhoff :

"Concerning the anatomical basis of epilepsy and its associated mental disorders, we really know nothing positive. The most frequent cause is heredity, then follow alcoholic excesses, next come the cerebral diseases of early childhood. Another important cause is concussion of the brain and the allied form of psychical trauma, viz., fright."

Aræteus is quite as logical according to his lights, and ten times more assuring, and I have it not in my heart to say that "coldness and humidity" are not very great evils.

Sylvius is almost a modern writer, and in 1657 he divulged the "true cause" of epilepsy in the following words: "Suspīcamur ergo et tantum non opinamur, veram et adæquatam epilepsiæ omnis causam esse spiritum

acidum volatilem quacunq̄ue demum in parte generatum, coacervatumve, atque inde ad cerebrum delatum, spiritibus animalibus junctum, ipsos divellentem, impetuose commoventem, ac proinde a blando, continuo, ordinato, et voluntatis imperio subjecto motu ad interruptum, inordinatum, conturbatum, impetuosum et violentum deducentem."

With the advantage of such charming predecessors one has a right to expect more of Kirchoff and Landon, for beyond the banalities suggested by the feeblest common sense they have nothing to suggest, and as much may be said of twenty other more gifted writers. Pathology failing to make a direct discovery much may be gained indirectly by inference and analogy, basing our conclusions upon: (1) The more significant clinical details. (2) General physiology. (3) Statistics. (4) Results of special forms of treatment.

The clinical signs are of no value without an understanding of the physiological counterpart. To a certain degree the physiological functions of the nervous system are understood, and, though only imperfectly, this knowledge is of great value when studied in connection with the clinical signs.

As irritation of the motor centres of the cortex of the cerebrum, either in disease or when artificially produced, is followed by epileptic convulsions, the cortex of the cerebrum is accordingly referred to by many as the location of the disease, and fits, they say, are "explosions" of nerve force. This is not, it seems to me, a warrantable deduction, for though it is possible that all the external indications of an epileptic fit may trace their origin to the motor centres in the cortex (the irritation of these centres being so severe as to cause unconsciousness in the higher centres of cerebration), it would be quite possible for many diseased conditions to cause from time to time a violent irritation in the cortex without being seated within it.

The fact that no pathological change can be constantly detected in the brains of those who are long subject to epilepsy does not point, by any manner of means, to the airy, transcendental condition of things, without form or color, which produce very substantial results of a form and color too decided to escape notice. Rather, this suggests that the present methods of pathology are altogether too one-sided. Microscopy is only a branch of pathology, and a preliminary one at that; but the pathologist is prone to regard his favorite maker's instrument as the open sesame into the entire realms of the unknown. This is mere puerility. The study of biological evolution and of physiological chemistry are as much a part of pathology as a magnifying glass and a paint-box of colors. Above and beyond all this, it is possible that a more lucid method of applying facts and reasoning upon them, for the purpose of reaching conclusions useful to science,

might be invented. Aristotle and Bacon would surely not resent a deviation from their formularies if found convenient in a special branch of research. What is now very necessary is improved machinery of logical inference—and sundry brains to make the most of that machinery.

The end of science is not to pick up everything in sight and stow it away. Yet this seems to be the popular method of the day, and many text-books recently written have the dazzling incongruity of a general museum—profoundly respectable, learnedly classified, but inclined, nevertheless, to be rather miscellaneous.

The statistics show that epilepsy is (presumably) a disease of development, and this is borne out by other facts. It seems to belong to the degenerations.

If the bromine salts act merely by benumbing the nerve centres, their efficacy in controlling epilepsy would point to the disease as being essentially one of irritation. This does not altogether follow. I should be inclined to think that the disease, being of the nature of an obscure degeneration, was essentially due to the inability of deteriorated tissues to resist the action of agencies which lacked the power to irritate in a similar manner tissues perfectly sound.

The epileptic, born without the ability to resist the stress of certain conditions, advances through life till he first meets that stress. That stress may relate to the performance of a function, or may be allied to a toxic agent.

In the quality of toxicity two quantities are to be considered: the toxic quantity, so called, and the quantity upon which it has a toxic effect. The issue will depend upon the toxic intensity of the one, and the power of resistance in the other. If there is no power of resistance in the second quantity, there is great danger of overestimating the toxic properties of the first quantity. If the power of resistance is very great, there is danger of underestimating it. In health the power of resistance is very great; indeed, health means resistance. In disease the resistance is at a minimum.

The degenerate reaches a certain stage where the stress of physiological life is greater than the power of resistance. There is a temporary loss of equilibrium, accompanied by certain external signs, or perhaps none. Idiosyncrasy, accident, and a thousand chances, go to determine the exact nature of the external signs. The balance of the system is shortly regained, only again to be lost. On the other hand, the toxic agent or the physiological stress may be constant, and the power of resistance instead subject to repeated fluctuations, with accompanying arrest of function, the waves of which disturbance are clinically visible at the periphery.

The salts of bromine act either as a sedative or stimulant, since

they allay the irritation or tone and arouse the defective tissues, but how these salts act it cannot be said with assurance, for physiological chemistry is very imperfectly understood, and when it is better understood it may be found that these salts neutralize some irritating agent (or agent which degenerate tissues have not the power to resist) secreted in the physiological laboratory, or form a compound with some substance in the organism which neutralizes the irritating agents.

Finally, the great benefit derived from living a purely animal life, as opposed to the strain of an artificial life, points to but one conclusion ; for the organism, however hampered by degeneration, will do much, if the chance be given, to repair and rebuild the most serious ravages (as la grippe), and so long as it is impossible to retain a perfect state of equilibrium between physiological stress and physiological resistance there will be repeated interregna in the psychological continuity of the patient, or periods of functional chaos, from which, as the nervous system gradually regains strength (or possibly as the cause itself relaxes), the higher centres will slowly arise, dazed and uncertain, as from a prolonged period of physiological anarchy.

A CASE OF CHOLECYSTDUODENOSTOMY FOR LITHIASIS, WITH THE AID OF THE MURPHY BUTTON.*

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MRS. S., aged 39 years, the mother of four children, had suffered for fifteen months from cholelithiasis, with marked reflex disturbances of digestion, but no jaundice. There was tenderness over the gall bladder, but no enlargement.

The diagnosis was calculus in the cystic duct.

Treatment with olive oil, salicylate of soda or arsenic, gave no relief.

In March an aggravation of her symptoms confined her to bed, and from the hopelessness of her case surgical interference was deemed advisable.

March 29, 1895, assisted by Dr. Sweetnam, Dr. Elliott administering ether, I made an incision in the upper part of the right *linea semilunaris*. The omentum and the duodenum presented at the wound, the gall bladder was naturally distended, and could readily be brought in apposition with the duodenum. On examination, a gallstone the size of a hazel-nut was felt in the cystic duct, and could not be dislodged. Murphy's intestinal compression forceps were found unsatisfactory, as they repeatedly slipped off and allowed the contents to pass. A large flat sponge was placed in front of the kidney. A running thread was placed in the duodenum, and another in the gall bladder. Half of button was now inserted into the bowel, and the remaining part into the gall bladder. Owing to the thickness of the latter, stretching was difficult, and the usual incision—two-thirds the diameter of the button—required to be extended. When the button was in place, this was drawn together with a suture, and made to include the running thread. Considerable pressure was used in bringing the button together, while the centres were avoided. All was cleaned, and silkworm-gut sutures were inserted, but before tying the patient coughed, and bile was seen to well up at the wound. On examining the

* Case presented to the Toronto Medical Society, April 2, 1896.

button, bile and gas were seen to escape between its parts at each expiration. Great pressure was now used, and the button clicked twice. The escape ceased. It was thoroughly cleansed, and a drainage tube inserted into the depression above the kidney.

March 30. Dressing changed ; was soaked with sanious fluid.

March 31. Dressing changed ; tympanitis was causing distress and intermittent pulse ; the rectal tube passed in the genu-pectoral position gave relief.

April 1. Tube removed and stitch tightened.

April 4, p.m. Temperature (first rise), $100^{\circ}.2$; pulse, 88.

April 5, p.m. Temperature, $100^{\circ}.1$; pulse, 100.

April 6, p.m. Temperature, $99^{\circ}.2$; pulse, 80 ; dressing changed and sutures removed ; serum seen at point of drainage.

April 7, p.m. Temperature, $99^{\circ}.6$; pulse, 90.

April 8, p.m. Temperature, $100^{\circ}.4$; pulse, 104. Dressing changed ; some pus in wound.

April 10. Dressing changed.

April 11. Calculus passed per anum.

May 1. Wound healed.

The button probably passed towards the end of the third week, but was overlooked by the nurse.

April, 1896. Completely restored to health ; scar healthy.

In November, 1895, Murphy reported fifty-one cases of this operation for cholelithiasis, with two deaths. One died from hæmorrhage from the liver as a result of separating adhesions, and the other resulted from septic peritonitis, due to the escape of the septic contents of the gall bladder.

As happens in other branches of surgery, so here, no doubt, a much greater proportion of the successful cases find their way into literature than of the failures.

A more reliable method would be to take the entire number operated upon by individual surgeons, or all those occurring in hospitals. It would then vary according to the surgeon's familiarity with the technique of the operation, as well as to his selection of cases.

The results are most brilliant, and a great advance upon all former methods which had a mortality of 35 per cent.

Its indications, as given by Murphy, are :

(1) Permanent obstruction of cystic duct or marked reflex disturbances.

(2) Obstruction of common duct.

(3) Septic cholecystitis.

(4) Fistula of gall bladder, if patient is becoming emaciated.

(5) To drain gall bladder of accumulations.

(6) In perforations of choledochus.

Contraindicated :

(1) Gall bladder too small for button.

(2) Adhesions prevent bowel and bladder coming together without kinking.

(3) Obliteration of cystic duct.

(4) Enormously enlarged gall bladder. Then, if choledochus is free, do a cholecystectomy; and, if blocked, amputate a part and use the button.

Such conditions may necessitate one of the following procedures :

(a) Incisions and drainage *in situ*, or button tube drainage. Required on account of gangrene or adhesions.

(b) Cholecystectomy. Mortality 17 per cent.

Indicated :

(1) Hydrops and empyema of gall bladder if cystic duct is occluded.

(2) In severe chronic recurrent cholelithiasis vesicularis.

(3) In severe diseases of bladder, as ulceration, gangrene, contraction, and carcinoma.

(4) Rupture of gall bladder when suture is difficult.

Contraindicated :

(1) Strong adhesions.

(2) In permanent closure of choledochus.

(c) Choledocholithotomy. Mortality, 40 per cent.

Indications :

(1) Large stone in duct, with fever and chills.

(2) When stone is in the choledochus, if cysticus is obliterated.

(3) If stone has perforated. If not healthy, then remove and do a cholecystenterostomy.

Several other operations formerly in vogue are now seldom resorted to.

(1) Cholecystostomy. In two sittings, mortality 10 per cent. ; in one sitting, mortality 19 per cent.

(2) Cholecystotomy. Mortality, 25 per cent.

(3) Cholecystendysis. Mortality, 23 per cent.

(4) Choledocholithotripsy. Mortality very high, but Teale reports three cases of needling of calculus in choledochus, with one death.

Selected Articles.

THE MEDICAL PROFESSION IN SOUTH AFRICA.

BY H. LAING GORDON, M.D. EDIN.

MEDICAL men have been intimately associated with the growth of South Africa. The earliest settlement at the Cape of Good Hope was made on hygienic and dietetic grounds, possibly by medical advice. Scurvy had caused much suffering on the ships going to the Indies, and carried off many lives. Both the Dutch and English East India Companies were made aware of the advantage and saving of life likely to result by having a station where their men might have a run ashore and obtain fresh provisions in the course of the long voyage. The little station founded in 1652 by the Dutch company was meant only for this purpose. Its first commander was Jan Van Riebeeck, formerly a ship's surgeon. The most recently founded settlement in South Africa has for five years also had a medical man at its head. In 1890 L. S. Jameson, M.R.C.S. (Eng.), L.S.A. (London), and M.D. (Univ. Lond.), was appointed Administrator of Mashonaland, and subsequently of the whole district now popularly known as Rhodesia. Between these two makers of history the medical profession has been playing a steady, if unostentatious, part in the development of the country.

At a time when many inquiries are being made by medical men contemplating emigration to South Africa, it may be well for one who has had some experience in the country to give some practical information on the subject of the profession and medical practice there. My remarks will be concerning Cape Colony chiefly.

It may be said without exaggeration that the profession rests on a good foundation in Cape Colony. This may possibly be due to the fact that the Government has received from time to time much valuable assistance in questions seriously affecting the public health, and has granted a reward. At the present time there are several able practitioners in the Colonial Legislative Assembly, and one has been recently admitted to the Cabinet.

The Colonial Medical Council, sitting at Cape Town, consists of seven

practitioners—three nominated by the Governor and four elected by the profession—and one dentist. The duties of the Council are set forth in the Medical and Pharmacy Act of 1891. They are briefly as follows: The admitting of properly qualified persons to practise as medical men, dentists, midwives, or trained nurses, and the removal from the register of those who have been proved to the Council's and the Governor's satisfaction to have been guilty of infamous or disgraceful conduct in *any professional or other respect*. The fee for registration as a medical practitioner is £5, as a dentist £2 10s. An annual license of £5 has to be taken out for leave to dispense. The Council appoints examiners to examine such nurses and midwives as present themselves without recognized qualifications, and on their recommendation grants certificates of competence which admit the holders to the register. There is no fee for registration as nurse or midwife. A section of the Act provides for the punishment of persons falsely using professional titles, or implying that they are licensed, or registered, or qualified, and of persons practising without a license. By the strict enforcement of this section the Council has protected the profession from the doings of quacks and others who seem to find a happy hunting ground in the South African Republic. Until quite recently the Council acted as adviser to the Government in public health matters; it is doubtless relieved of this duty by the Public Health Department now formed. A much-needed Act providing for the registration of births, and deaths, and stillbirths came into force for the first time last year. There is an institution devoted to Bacteriology at Grahamstown, attached to the Government agricultural department; it manufactures and distributes vaccine virus, which, however, has scarcely given universal satisfaction.

The chief medical appointments in Cape Colony are :

(1) *Resident Medical Officerships* in hospitals and asylums. These are usually given to men of standing and experience, in whose hands the whole practice of the institution generally lies. They do not engage in private practice. The salaries vary from £250 to £600 a year, with quarters and rations.

(2) *District Surgeoncies*, under Government. There are upwards of one hundred of these. The usual salary is £75 with allowances, but it is larger in districts where there is little or no private practice to be had. The District Surgeon's chief duty is a daily visit to the local jail.

(3) *Railway Surgeoncies*. These are filled up by the Government railway department. The surgeons are remarkably well paid and are supplied with drugs. They make weekly visits over the portion of the line allotted to them, in a special carriage attached to a goods train. They engage in private practice also.

There is always keen competition for all these appointments, and it

cannot be said that professional worth is the only consideration which guides those who make them. As a rule, men of colonial birth naturally have the preference.

Medical practice in the larger towns greatly resembles that in an ordinary provincial town in England. Fees are perhaps somewhat higher, but so is the cost of living. There is the usual competition, and there are few, if any, towns which present any attractive opening to would-be emigrants, unless possessed of considerable capital and patience. "Specialism" does not flourish. There are one or two eye specialists, but no others; although there are some who successfully devote a large portion of their time to some special subject, for example, gynecology. There is no town large enough or with a sufficiently populous surrounding district to support specialism.

The bulk of the colonial profession is engaged in country practice, living in townships or villages, mere hamlets, or sometimes upon a farm. The inhabitants of the small townships are: a magistrate—the Government representative—a lawyer or two, the ministers of several denominations headed by the Dutch Reformed, the storekeepers and the various tradesmen who depend upon the custom of the Boers (farmers). In the colony as a whole and in most districts the inhabitants of Dutch origin outnumber those of English origin, and this is also true of the Orange Free State and South African Republic. Cape Dutch, a patois which is fairly easily picked up, is the language commonly spoken. In many districts English is very seldom heard, but near the large towns the Boers are better able and more willing to speak it. The English farmers come into the village only when occasion demands; the Boers come once a quarter in large numbers to attend *Nachtmaal* (Communion) at their church; they bring their whole family on these occasions and occupy the houses which each possesses in the village, and which are shut up for the rest of the year. When serious illness occurs on a farm, medicine is first of all sent for; if this proves inefficacious the doctor is fetched, often in the Boer's own Cape cart. Long journeys may thus have to be performed, varying from one to six, eight, or more hours the one way. Six miles are reckoned to the hour, and the usual remuneration is £1 per hour of actual travelling. The roads are far from good. When possible, patients are brought into the town houses. Where the distance is very great and the patient is too ill to be brought to the township, the circumstances naturally prevent frequent medical visits. It is astonishing, however, how cases recover under circumstances which would in England be regarded as certain to lead to a fatal result. Even for such diseases as typhoid and rheumatic fever, mutton mealies, pumpkins, coffee and Cape brandy are at some seasons the only articles of diet available on many remote farms.

Some up-country villages have reputations as resorts for European consumptives, and this adds to the practice considerably. The Boers are what are known as "good payers," although they expect and receive quite twelve months' credit. It is a great advantage to hold the District Surgeoncy; many doctors come and go in up-country villages, and are run after for the time owing to reports that they are "fresh from Europe with all the new drugs and instruments," but the District Surgeon generally goes steadily on. The Boer dearly loves his medicine, and likes it strong.

Both town and country practices are to be purchased, but as a rule it is not wise to give more than a small sum for either. A young Englishman, ignorant of the language, stands little chance against an Afrikaner doctor, who may take advantage of the chance to set up in opposition. The number of villages with only one medical man grows less almost daily, and the days of making large fortunes by the practise of medicine in Cape Colony are practically over. In the Orange Free State and Transvaal, however, there are still districts where lucrative practices may be stepped into or made, but such openings are being rapidly filled up by Afrikaner youths who have come home to qualify. In Mashonaland and Matabeleland there is no population to support any more than the holders of appointments. The medical emigrant to South Africa should possess a fair amount of capital, and be prepared for an isolated and monotonous country life. There are few assistantships to be had; a newcomer would do best to take a locum tenency for a man who wishes to run home for a few months; in this way he learns the language and the ways of the people. "Practices for sale" and "locum tenens wanted" are advertised in the *Cape Times* *Cape Argus*, and other papers, or are placed in the hands of one of the firms of wholesale druggists. A few letters of introduction are useful, but it must be remembered that every man of position and influence receives scores from all sorts and conditions of people in the course of a year.

The total white population of Cape Colony at the last census was 376,812. The number of names on the medical register for 1894 was about 530. The colored population totals 1,148,927, but these cannot be included in estimating the proportion of medical men to the population. The register shows that 242 hold Scottish, 159 English, 54 Irish, and 67 foreign or American qualifications; the remainder are unqualified men in practice before the Medical Act came into force. The majority of the Afrikaner students are educated at Edinburgh. Whether or not there is any of the much-talked-of racial hatred of the English by the Dutch in Cape Colony is not for me to say here, but it is acknowledged that they prefer Scotsmen. The resemblance of the Dutch Reformed religion—the prevailing form in South Africa—to the Scottish Presbyterian is offered as an explanation of this fact.

The *South African Medical Journal*, published monthly at Cape Town, is the only organ of the profession in South Africa. It does not receive the support it deserves from the country practitioners. It carries on a crusade against the advertising nuisance. There are one or two peculiar forms of advertising in the country. It is usual to see the ordinary announcement of a death in the public press followed by a paragraph of thanks to the medical man who attended the deceased. Operations performed on local worthies are often chronicled in country papers with an accuracy in detail which betrays the source of the information. The arrival of a new practitioner to a town or village is often the subject of a news paragraph in which his qualifications, experience, and the number of certificates, etc., he obtained as a student are set out. In the Transvaal advertising and quackery go practically unchallenged. The *Medical Journal* (June, 1895) says: "In a new country where men, things, and convictions shift about with unexpected rapidity, perhaps the ethical rules of our profession will bear slackening in some directions. Not, however, in this matter (advertising), if we wish to retain a foothold for mutual respect and mutual assistance." Probably the South African Medical Association now in course of formation will devote some practical attention to the advertising question.

The amount of disease met with in the country is apt to astonish one who has read the many misleading statements about the "health-giving climate of the Cape." Typhoid and typho-malarial fever, diphtheria, rheumatic fever, and dysentery are met with in all parts, even in the high altitudes, where pneumonia, bronchitis, and asthma are almost as common as at the coast. Leprosy also occurs; the lepers are segregated on Robben Island, situated in Table Bay. Syphilis prevails to an alarming extent amongst the colored population; it is said that the Hottentots look on it as such a necessary evil that they inoculate children born without evidence of the disease. A mild form of malarial fever is met with in many parts of the Colony; in Mashonaland and Matabeleland it is also more prevalent and more severe. Smallpox has occurred from time to time in terrible epidemics; the earliest was in 1713, when it was introduced by means of some infected clothing sent ashore from a ship to be washed. Outbreaks are continually occurring, chiefly in Kaffirland; it is, as a rule, introduced from the Transvaal. Vaccination is not enforced as strictly as it might be, although at the first alarm of an outbreak the colored people flock voluntarily in hundreds to the public vaccinator (District Surgeon). One outbreak came under my own observation; it arose from a native who spent a night in a small Kaffir location on a farm on his way from the Transvaal to Kaffirland. The infected persons were removed to huts situated about six hundred yards from the others on the open veld, and about a mile from

any other habitation. Members of the Cape mounted police force posted round in tents kept watch night and day over the whole location, and supplied food to the affected and quarantined. When the outbreak was over the quarantined built new huts for those who had recovered, to which the latter were transferred after proper disinfection. The infected huts, together with all the clothing and utensils used during the illness, were then set fire to and speedily completely consumed. Under such favorable circumstances it is comparatively easy to stamp out an outbreak.

South Africa is well off for mineral springs. The best known are at Caledon, about eighty miles from Cape Town—hot chalybeate (100° to 112°); at Aliwal North—hot sulphur (95°); and near Robertson—also hot sulphur (100° to 113°). There are other less known springs at more than a score of places. In the Transvaal the Waterberg district has valuable springs. These mineral springs are one of the resources of the country, which have been neglected owing to reasons it is unnecessary to enter into here. At none of these places is there suitable provision for the systematic use of the waters, nor any adequate accommodation for patients. Rough experience has proved that some of the waters—notably those of Caledon—might be highly beneficial if applied systematically in various complaints.

It is unnecessary to do more than mention the fact that certain parts of South Africa are well adapted, as far as climate goes, for the treatment of persons predisposed to pulmonary tuberculosis, or afflicted with very early phthisis, but otherwise in good health. A sanatorium for phthisical persons is reported as about to be erected at Kimberley; it is far from being a suitable site for such an institution.

To the often asked direct question, "Is there any opening for a medical man in South Africa?" it may fairly be answered, "Yes, for a suitable man." Before emigrating it is most important for every man to first ascertain all he possibly can concerning the country he is going to and the people he is going amongst, and then to put himself honestly the serious question, "Am I a suitable person?"—*The Medical Magazine*.

SOME CONSIDERATIONS WITH REGARD TO COUGH.

BY ROBERT H. BABCOCK, A.M., M.D.,

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THE aim of this paper is simply to call attention to some rather interesting peculiarities and conditions concerned in the symptom of cough, and to illustrate that this may often be found depending upon some condition remote from primary disease of the respiratory tract. It is well to bear in mind that the reflex sensibility of the air-passages is not the same throughout. Chronic congestion and mechanical irritation, as from mucus, if situated in the pharynx or about the epiglottis, will often occasion frequent and violent paroxysms of cough, deceiving both patient and practitioner into the belief in a most serious pulmonary affection.

CASE 1. Mrs. W——, between twenty-five and thirty years of age, consulted me with regard to the state of her lungs. She gave a history of chronic and obstinate cough for the previous five or six years, but with little or no expectoration. She had been treated by a number of physicians for pulmonary consumption, and had taken inhalations of some kind for many months, with great improvement to her general health and weight and lessening of her cough. I found her well nourished and presenting no special indications of anæmia. Careful examination of the chest disclosed a perfectly normal pair of lungs. There was absolutely nothing either in pulse or temperature to indicate a suspicion of pulmonary tuberculosis. Indeed, I was so sure that the seat of irritation was in the upper respiratory tract that she was referred to a specialist in nose and throat diseases, who reported the discovery of a lingual tonsil. This body, by its irritation of the epiglottis, was undoubtedly the cause of her obstinate symptom, as shown by the result of treatment, for upon this being applied to the lingual tonsil her cough disappeared. Here was a case in which the patient was not only put to years of needless worry and expense, but whose cough had not the remotest connection with pulmonary disease.

CASE 2. Mrs. D——, aged forty-three, consulted me in the summer of 1886 because of a distressing dry cough. I had seen her in consultation about a year previous, when she was suffering from cardiac palpitations;

I had not been able to determine organic lesion of the heart, but concluded that the palpitations were of reflex origin, as the lady was a sufferer from chronic cystitis and indigestion. Upon her consulting me for the cough, therefore, I not only carefully examined the lungs, but directed my attention also to the heart, and, to my astonishment, discovered well-marked signs of mitral stenosis. As the lungs were healthy, the cough was attributed to chronic pulmonary congestion secondary to the valvular lesion. Treatment addressed to improvement of the circulation entirely relieved her symptoms.

CASE 3. C.E.—, male, age fifty-three, physician, was seen in consultation because of a persistent dry cough. He had passed through a pleuro-pneumonia a couple of months before, and the existence of pleuritic adhesions at the left base was easily determined. In addition, however, he had a moderate dilatation of the left ventricle, probably secondary to a chronic interstitial nephritis shown by urine analysis, as well as to moderate arterio-sclerosis. It was questionable, therefore, whether the cough was due to irritation from the pleuritic adhesions or to chronic bronchial hyperemia consequent upon the cardiac asthenia. The latter was thought the more probable, and the result of treatment bore out this conclusion. With the improvement of the heart's action from infusion of digitalis, the cough entirely disappeared, as did the dyspnea.

Anyone who has observed many cases of heart disease must have been struck by the fact that passive pulmonary congestion is not always associated with cough. I have records of cases of mitral disease in which stasis within the pulmonic system could not have failed to be marked, and yet cough was almost never complained of. I can only explain the striking contrast between such cases and the two narrated above as due either to individual differences in reflex excitability of the nervous system or to preponderating congestion of the large bronchi in the cases of cough, the bronchioles bearing the brunt of the stasis in those without cough. Such a hypothesis is not altogether at variance with anatomical facts. According to our present knowledge of the anatomy of the lungs, there is a two-fold connection between the bronchial and pulmonary blood vessels. There is an anastomosis between the pulmonary capillaries and those of the smaller bronchi, that is, bronchioles of a diameter of less than one-twenty-fifth of an inch. Furthermore, according to Zuckerkandl, some of the veins originating in the walls of the larger bronchi communicate with the pulmonary veins. As neither pulmonary nor bronchial veins are provided with valves, backward pressure from the former into the latter is unhindered; congestion of the bronchial mucosa results, leading to bronchial catarrh. Sensory filaments are supplied to the entire bronchial tree from the vagus through its connections with the sympathetic. It is by

means of these sensory fibres that irritation of the pulmonary tissue produces cough. Yet statements on the part of physiologists as to the sensibility of the lower portion of the bronchial system are rather indefinite; clinical observation of instances of catarrh of the small bronchi with but little if any cough would seem to indicate, therefore, that this symptom is most troublesome when dependent upon congestion and catarrh of the larger air tubes.

The next case illustrates the production in still another manner of cough in instances of mitral disease.

CASE 4. A. D.—, aged twelve, was under treatment for uncompensated mitral regurgitation. Treatment had improved his condition, but he was still kept in the recumbent position on account of the cardiac feebleness. Frequent severe cough now came on, with but scanty mucous expectoration; no fever and no substernal pain. The cough was attributed to increase of the already existing bronchial congestion; but examination of the chest disclosed slight dullness and numerous fine râles in the left infraclavicular region and extending posteriorly to below the middle of the scapula. Impaired resonance over this area, particularly in front, had been recognized upon my first assuming charge of the case, and had persisted even when there was no cough. Here, then, was a conjunction of symptoms and signs very suspicious and rather puzzling at first. Dullness and râles at the apex, together with cough, were suggestive of pulmonary tuberculosis; but the breath sounds were puerile rather than bronchial, and there was absolutely no fever. Indeed, the absence of febrile temperature excluded the idea that this was an acute inflammatory or tubercular process. Nevertheless, why were physical signs unilateral? This was the query. And the answer to this query necessitated the hypothesis of some other condition than pulmonary congestion. The process was non-inflammatory and not chronic, since only impairment of resonance had previously existed, the râles being of recent development. Obviously the solution lay in the suggestion of a mechanical cause; the one mechanical factor conceivable was pressure—pressure upon the upper lobe by the greatly distended left auricle. Had the auricle pressed upon and occasioned partial stenosis of the left main bronchus, then the physical signs should have involved the entire left lung. Acting on the hypothesis of pressure and consequent retention of bronchial secretions, the patient was ordered to assume a partially erect position. The result proved the correctness of the assumption. Cough and râles gradually disappeared, the percussion note growing more resonant *pari passu* with the improvement in the heart and the lessening of its dilatation. The patient subsequently got up and about and was free from cough, although an appreciable difference in the resonance of the two infraclavicular regions still existed. . . .

A rather extended experience with the symptomatology of thoracic disease has taught me that cough bears no definite relation to the gravity of the primary affection. I have seen so serious a disease as a large aortic aneurism pressing upon the left main bronchus and producing tracheal tugging accompanied with an insignificant amount of cough; whereas some of the most obstinate cases of cough I have ever treated have been in persons with arterio sclerosis in whom repeated examination of throat and chest failed to show changes commensurate with the symptom complained of. In some instances it has been so much relieved by a brisk purge as to suggest its dependence on venous (bronchial) congestion or a toxæmia of intestinal origin.

The cough of consumptives is so variable in respect to frequency, severity, and extent of lung involved, that when particularly distressing and intractable it suggests the probability of laryngeal complication or irritation of the bronchial mucosa from tubercular ulceration or the passage over it of septic sputa. In some instances the frequency of the cough is largely a matter of habit; that is, the patient yields to his desire to cough upon slight provocation without any attempt to check it. Accordingly, it is well to tell patients that they must as far as possible restrain their inclination to cough.

In conclusion, I desire to bear testimony to the value of codeine salts in the management of this symptom in some cases.

Although the first principle of correct treatment is the removal of the cause where possible, there are cases in which this cannot be done, notably in heart disease and pulmonary tuberculosis. In such, if the cough be allowed to go on unchecked, it may not only exhaust the patient, but often aggravate the existing malady. Under such circumstances, it is advisable to administer a sedative, and nothing has yielded such satisfactory results in my hands as phosphate of codeine in half-grain or grain doses by the mouth. In administering any form of sedative to quiet cough, one should remember that this means the deadening of the patient's sensibility to the presence of secretions in the air tubes, as well as the sensibility of his respiratory centre. Therefore, in case of extensive bronchitis of the small tubes, the obtunding of the patient's sensibility may permit a dangerous accumulation of bronchial mucus; the bronchioles may become so much occluded as to greatly interfere with oxygenation of the blood. In feeble patients with hypostatic congestion, the administration of a sedative often requires great caution and judgment. In the last stages of consumption the patients are often robbed of sleep and exhausted by the frequency of their cough. In such cases codeine is by far the best remedy at our command; yet in its employment one should remember that the fever and other symptoms of sepsis may be intensified by the retention of the sputa.

Codeine is preferable to morphine or crude opium, because it rarely disturbs appetite or digestion, and is generally free from their unpleasant after-effects. The phosphate of codeine is preferable to the sulphate, because containing a larger percentage of the base, besides being readily soluble and suitable for hypodermic administration. In cases of la grippe with frequent paroxysmal cough, I have employed Wyeth's hypodermic tablets of codeine phosphate and been greatly pleased with this mode of administration. Quite recently, in several cases in which dry spasmodic and prolonged cough called for a sedative and antispasmodic remedy, I have obtained quite brilliant results from bromoform combined with gelsemium, as follows: Bromoform, 7.5 gm.; tincture gelsemium, 8 gm.; syrup of lactucarium, to make 65 gm.; powdered gum arabic, a sufficient quantity. A teaspoonful three or four times a day was the dose prescribed. One female patient with pulmonary tuberculosis, who was unable to sleep because of harassing cough without expectoration, was instructed to take a teaspoonful of this prescription, and repeat in half an hour if necessary. The remedy did not prove very efficient, and, to my horror, the patient reported the next day that she had taken almost the entire quantity during the night, although apparently without injurious consequences. In another case, in which severe and almost incessant coughing due to acute bronchitis threatened to break down the heart, already greatly enfeebled from mitral and aortic disease, the prescription accomplished the very happiest results:

R. Bromoform.....	7.5 gm.
Codeine phosphate....	1.0
Compound syrup of squill....	10.0
Syrup of lactucarium... ..	to make 130.0
Powdered gum arabic.....	q. s.

M. et. fiat emuls. Sig.: Two teaspoonfuls every two hours.

In the very early stage of an acute bronchitis with substernal soreness, squill is inadmissible, and the hive syrup of this formula had better be replaced by syrup of ipecac or a minute amount of tartar emetic.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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ANEURISM OF THE HEPATIC ARTERY.

Mester (*Zeitschrift für klin. Med.*, B.J. xxviii., p. 93) reports a case in which a man of forty-two years was kicked in the abdomen by a horse. This was followed by pain in the hypochondrium, intermittent icterus, vomiting of blood, and the passing of fresh or altered blood by the rectum. The diagnosis was ulcer of the duodenum. Laparotomy was performed, but without revealing the seat of the hæmorrhage. Nevertheless gastroenterostomy was made. The patient died five days later. Autopsy showed a spurious aneurism of the right branch of the hepatic artery, in the liver tissues, and communicating with the right branch of the hepatic duct. An analysis of the nineteen cases previously reported is given, from which it appears that the diagnosis is never made during life, the condition being mistaken for ulcer of the duodenum or gallstone.—*American Journal of the Medical Sciences.*

THE DIAGNOSTIC VALUE OF THE COUNTING OF LEUCOCYTES IN URINE.

Reinecke (*Berliner klin. Wochenschrift*, 1896, No. 49) has made some investigations in this subject, with the result of adding greatly to the knowledge already available regarding it. An interesting feature of theoretical importance was the confirmation of Hottinger's discovery that leucocytes in pyuria often exceed in the course of a day the total number of leucocytes in the blood, thus casting doubt on the idea that pus-corpuscles are all derived from the leucocytes of the blood. The practical results of the

investigation are stated in the following conclusions: (1) Counting the pus cells in urine frequently, but not invariably, gives an exact measure of the excretion of pus. (2) Continued daily estimations give a picture of the clinical course, enable us to control the treatment, and give an interesting idea of the enormous number of cells lost by the body in severe pyuria. (3) In connection with albumin-estimations, the quantitative estimations of pus may, in some cases, assist in determining whether a pyuria is complicated by nephritis.—*American Journal of the Medical Sciences.*

LANDRY'S PARALYSIS FOLLOWING INFLUENZA.

*The following case is reported by Dr. Pailhas in a recent number of the *Archives de Neurologie*, and is of considerable interest because of its close resemblance to the toxic condition following another acute infectious disease, viz., diphtheria. The patient was a man aged twenty-three, who, towards the end of February, 1895, while serving in the army, experienced severe headache, especially in the occipital region, and cold feelings between the shoulders. His legs also became weak, and he had pain in the stomach and faintness. He was admitted in this state to the regimental infirmary. Three days later he experienced severe articular pains in the legs, which were ascribed to rheumatism, and there was at this time also a difficulty in articulation, the patient speaking slowly, pronouncing the syllables separately and pausing between the words. A fortnight after the onset of his illness the symptoms included great feebleness of the legs and of the body generally, inability to stand, and the articulatory difficulty alluded to above. The knee-jerks were completely lost; the heart was extremely feeble, only beating between 45 and 50 times in the minute, and the cardiac sounds were feeble, but otherwise natural. The hands were cold and cyanosed and the pupils dilated, but reacting to light. During the next two weeks there was slow but gradual improvement, but three weeks after the commencement of the illness it was noted that the leg muscles did not react to electrical stimulation. A week later the knee-jerk still remained absent, but the patient was able to walk, and the articulatory difficulty had almost disappeared. He was still feeble, and suffered occasionally with pains in the knees and shoulders. Three months later there was a recrudescence in a slight degree of the weakness in the legs and the pains in the joints, as well as a threatening of the articulatory difficulty, after exposure to cold. The symptoms, however, rapidly cleared up without attaining anything like the severity they had shown before; but it is to be remarked that the knee-jerks still remained in abeyance. As we have said, the case is particularly interesting on account of the fact that

the disability was evidently the result of a toxic process which is said to have followed influenza. Its resemblance in many points to post-diphtheritic paralysis is very striking, in none, perhaps, more than in the continued absence of the knee-jerks after all the other signs of disease had disappeared. It may be thought, with some degree of justice, that the evidence that the primary disease was influenza is not conclusive, but there can be little doubt that the resulting condition was a toxic one.

CHILLS IN TYPHOID FEVER.

Chills may occur in connection with typhoid fever—first, at the onset of the disease, as seen in thirteen cases out of a total of seventy-nine treated at the Johns Hopkins Hospital during the sixth year. Second, at the onset of the relapse, due to an irregular or a disturbed elimination of the poison, a large volume of which is thrown into the blood in a short time. Third, as a result of treatment, antipyretics being particularly prone to produce chill, and this phenomenon may occur after the injection of sterile cultures of bacilli and after the external application of guaiacol. Fourth, with the onset of complications, such as pneumonia, pleurisy, acute otitis, suppuration in the mesenteric veins, pyæmic abscesses of the kidney, perforation of the ileum or appendix, or an acute periostitis. It may occur with thrombosis of the femoral or saphenous veins, and it may precede acute and fatal hyperpyrexia. Fifth, during convalescence in severe and protracted cases. In such cases there may be no local symptoms to account for the chills, and, though alarming, they may gradually subside, with complete recovery. They may possibly be septic. Sixth, chills may be due to concurrent malaria. While attributed, as a rule, to malaria, chills in the course of typhoid fever are very rarely due to this cause. Among three hundred and thirty-three cases of malaria and three hundred and eighty-nine cases of typhoid fever treated at the Johns Hopkins Hospital, in no instance have the diseases been concurrent.—*William Osler, M.D., of Baltimore, in University Medical Magazine, November, 1895.*

SURGERY

IN CHARGE OF

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THE OBJECTS AND LIMITS OF OPERATIONS FOR CANCER.

The above title has been chosen by Mr. Watson Cheyne for an interesting series constituting the Lettsomian lectures delivered recently before the Medical Society of London. The subject is of great importance, and is treated in a masterful manner by the author. The following is a brief abstract of the three lectures:

The last few years have seen marked alterations in the older methods of operating in these cases, and also the introduction of operations in regions and to an extent formerly not thought of. It is with a view of trying to estimate the value of the work done in this department that I have decided to discuss in these lectures the objects which we should aim at, and the limits to which we may go, in operating for cancerous diseases.

By cancer I mean carcinomata, the essential feature of which is continuous and excessive growth of epithelioma. Once this growth has commenced, nothing that we know of has any power to stop it. It invades the tissues, it spreads along the lymphatic vessels, or is carried by these vessels to the nearest lymphatic glands; it passes from one lymphatic gland or one chain of lymphatic glands to another, till it ultimately reaches the main lymphatic trunks, through which it enters the blood stream, and is deposited in distant organs and parts of the body. Deposited in these distant organs, it again grows, and the same cycle of events follows, or would follow, were it not that the patient soon succumbs from general poisoning as the result of absorption of materials elaborated at the seat of the disease, from interference with the vital functions owing to the presence of the growth in important organs, from suppressed hæmorrhages due to erosion of blood vessels, and so on. Once this overgrowth of epithelioma has begun it goes on inexorably, unless we can arrest it, to the fatal end.

The primary object of operation in cancer is, of course, the prolongation of the patient's life and the alleviation of his local trouble, and what I propose to assert in these lectures is that these results are, in most cases, best attained by aiming, wherever it is possible, at the cure of the disease.

In discussing the curability of the disease I have already mentioned elsewhere evidence as regards cancer of the extremities, lips, and uterus, which shows that a real cure is obtainable in a very considerable proportion of cases, and in the following lectures I shall produce similar evidence as regards other parts. The first question to be kept before us in investigating a case of cancer is whether there is any possibility of curing the disease or not. Such a point of view makes a very great difference in the operation, for it is not then sufficient to remove only the noticeable disease, but it is necessary to take away as far as possible the parts in which disease may have become disseminated, although still unrecognizable—in other words, possibly infected lymphatic areas. Thus, if the skin is infected, a considerable portion around must be taken away, and this is the more necessary where the infection of the skin has come from beneath, as, for example, when cancer of the breast reaches the surface, for the dissemination in the cutaneous lymphatic plexus is often, under these circumstances, very rapid and extensive, and this is probably due, in part, to the larger size of the deep cutaneous plexus, which will, in the latter case, be first involved. Again, where muscle is infected, the cancer cells are very rapidly and early driven along the lymphatic vessels of the muscle, and, even though there may only be one visible nodule in the muscle, the whole, or the greater part of it, must be looked on as suspicious, and must be removed if there is to be anything like certainty in attaining the object of the operation, namely, the patient's cure. Again, as regards the lymphatic glands, we know from a very early period they become affected, and that, of course, without any visible enlargement in the first instance, and, in addition to this infection of the glands without enlargement, plugs of cancer cells very often stick in the lymphatic vessels on their way to the glands. Hence it is necessary in all cases where the disease has lasted any length of time, or extended at all deeply, not only to remove the primary mass freely, but also to take away the whole lymphatic area up to and including the nearest lymphatic glands. Thus the operation performed with the object of curing the disease becomes a much more extensive one, and, consequently, much more serious than that which simply aims at getting rid of the main trouble for a time, and prolonging the patient's life.

The first question to be considered, then, with regard to a case of cancer, is the anatomical one, namely, whether it is anatomically possible to remove all the local disease and the probably infected lymphatic area so thoroughly as to give a fair chance of non-recurrence. If it is anatomic-

cally possible, the next questions are, What are the chances of death as the result of the operation? and, What will be the subsequent functional result? In considering these questions we must remember that we are dealing with an otherwise incurable disease, one which is comparatively rapidly fatal, and one which in certain regions—for example, the throat—is often the cause of very extreme suffering before death supervenes; and, therefore, even though the risks are very great, unless the result of the operation is certainly fatal, the question of operation ought to be presented to the patient if there is a reasonable chance of removing the disease. I do not think the patient should be refused operation unless the disease cannot be removed, unless early recurrence is very highly probable, or unless operation means almost certain death, or yields a hopeless functional result. Of course, if one has something better to substitute for the radical operation, such as colotomy in extensive rectal cancer, the matter is quite different; but where this is not the case the patient should be told all the circumstances, and allowed to take his choice.

The primary object in these cases being, therefore, cure, the limits of the radical operation are where there is no reasonable prospect of removing the whole disease, or where, along with a very poor prospect of success, there is a very high mortality from the attempt. In such cases I do not think that operation should be mentioned at all, for even where the patient recovers from it, and has presumably two or three months added to his life, few would, I think, thank one for it, seeing that these two or three months have been spent in convalescing from a serious and, in the end, useless operation.

But even in cases where hope of cure or marked prolongation of life by a radical operation is out of the question, operation may sometimes be advisable with the object of removing symptoms which are immediately threatening life, such operations, for example, as tracheotomy, colotomy, etc., or, in the second place, with the object of taking away the primary disease from a part, such as the mouth or throat, where its continued development means intense pain and trouble, and thus by substituting for these troubles an easier death from exhaustion. A *sine qua non* of such operations must, however, be that they are reasonably free from immediate risk; and, with regard to the second class, that there is a prospect of attaining the object of the operation, namely, the entire removal of the disease from the part operated on. I do not think that a dangerous operation is allowable for simple relief of symptoms, however proper it may be if a cure may be hoped for.

There are thus two different objects to be held in view, and two different questions as regards operation which we must bear in mind in treating a case of cancer, namely, (1) Can we reasonably hope for a cure? for, if we

can, a serious or dangerous operation is permissible ; or (2), cure not being possible, can we decidedly ameliorate the patient's condition by operation such operation, however, not involving any great risk of life?

I have selected three regions for examination, namely, (1) the breast, (2) the throat, and (3) the intestinal tract, as these three regions illustrate very well all the points bearing on our subject.

CANCER OF THE BREAST.

As antiseptic surgery began to exercise its influence, and as it became evident that the extent of the operation did not increase the risk of septic disease, the tendency was towards more extensive operation, and in this, as in many other departments of surgery, for which he gets no credit, Sir Joseph Lister took the lead and began to extend the area of operation, especially in the way of more extensive and, finally, of more or less complete removal of the axillary contents and of the pectoral fascia. It was not, however, till the researches of Heidenhain, and subsequently of Stiles, Johnson, and others in this country, that we knew exactly how the disease extended, and, indeed, how extensive the mammary gland itself was. As the result of these researches we now know that by the older methods of operating, and, indeed, by any method which does not take proper cognizance of the facts which these recent researches have brought to light, the patient never really has a chance of cure, properly speaking, and the wonder is not that recurrence so constantly takes place, but that in any cases apparent cure follows.

Knowing the very early period at which the cancer cells get into the lymphatic vessel, an operation, to be at all complete, must include the primary disease, the lymphatic channels leading from it, and the whole mass of the nearest lymphatic glands. It does not, however, follow that when these glands are enlarged it is absolutely necessary to go beyond the first group, because, for a time at any rate, the disease seems to be held back at this point ; but, as I say, the minimum operation for cancer of the breast which will offer anything like a real chance for cure must take away everything up to and including the first chain of glands. Hence, in the case of the breast, we must remove the primary disease, the whole breast, the tissue in which the lymphatics run from the breast to the axilla, and the whole of the axillary glands. In this connection we must remember that recent researches have shown that the breast is a very much more exhaustive organ than was formerly supposed, and that by the old method of operating practically only the central part was taken away. Lobules of the breast run in the fat over the pectoral muscle nearly up to the clavicle, well into the axillary line, almost on to the sternum, and downwards on to the region of the abdominal muscles. In the deeper part, also, the lobules

of the breast are intimately connected with the pectoral fascia, and the removal of the breast without simultaneous, thorough removal of the pectoral fascia inevitably means that numerous lobules are left behind. Hence our skin incisions must be very much more free than formerly was the rule, and, for my own part, I always take away the skin co-extensive with the prominent part of the organ.

There is another reason for taking away this large amount of skin, namely, the existence of the suspensory ligaments of the breast, in which lymphatic vessels run from the region to the skin, and these are not at all infrequently infected with cancer cells. In addition to this portion absolutely taken away, the skin all around must be raised, leaving fat and lobules of the breast, as high as the clavicle, as far inwards as the middle line of the sternum, downwards on to the abdominal muscles, and outwards on to the latissimus dorsi; and one advantage of this free undermining of the skin is that, in the great majority of cases, one can subsequently bring the edges together by means of stitches. Where the tumor is situated towards one side of the heart, additional portions of skin must be taken away in a V-shaped manner, so that all the skin from the vicinity of the disease is removed. The skin flaps being held up, the pectoral muscle must be exposed at the upper part, and then, in order to ensure the removal of the fascia, a layer of the whole surface of the muscle must be taken away; and, when the lower and outer edge of the pectoral muscle is reached, the fascia over the serratus magnus, and the whole fatty tissue containing lymphatics, as far back as the edge of the latissimus dorsi, must be detached. In this way the primary disease, the breast, and the lymphatic vessels running in the fat and the pectoral fascia towards the axilla are separated, and then one proceeds to clear out the whole contents of the axilla, finally leaving the nerves and vessels thoroughly cleaned, as in an anatomical dissection. One first follows the fat and fascia running between the pectoralis major and minor on to the costo-coracoid membrane, and then I explore the axillary artery and skin at the lower part and tear open its sheath in its whole length; then, raising the pectoralis minor, I begin at the very apex of the axilla, right up under the clavicle, and, with a curved, blunt instrument (the one I find most useful is a periosteum detacher invented by Dr. Greville MacDonald for operations on the nasal septum) and the finger, detach the whole fat and included glands and lymphatic vessels, till everything except the important structures in the axilla has been got away. It is very important also that the whole tissue should be removed in one piece; in the first place, it is of great advantage, in clearing the axilla, to have the part dragged down by the weight of the breast; and, in the second place, it is very important not to cut through tissue which may be actually diseased, and which may lead to

subsequent infection of the wound. Had I time, I could bring forward evidence to show that recurrence may be due to this cause ; and, if it can possibly be avoided, a malignant tumor should not be cut into, and on no account should it be removed piecemeal, as is sometimes done in other parts of the body.

Where the skin is much tacked down over the tumor, although it may not be actually involved in the disease, the cutaneous lymphatic vessels and those running in the suspensory ligaments are apt to be affected over a wide area, and hence it is necessary, in such cases, to cut exceptionally wide of the disease. Where the tumor itself actually involves the skin, we know that the disease has almost certainly spread widely in the cutaneous lymphatic plexus, and, in such a case, one must not hesitate to remove the skin extremely freely, and to have a wound the edges of which it may not be possible to bring together. If such a wound is left, it can very readily be closed by skin-grafting, either at the time of the original operation, or, if the patient is too exhausted, about ten days or a fortnight afterwards.

Where the tumor is adherent to the pectoral fascia, as is very often the case, I think it advisable to take away the whole thickness of the muscle at that part, and as the lymph tends to be forced onwards in the direction of the muscular fibres the mass of muscle removed should be detached along its whole length, from its origin to its insertion. In operating in such cases, as I approach the neighborhood of the tumor, I usually sink my hand through the muscle, and then rapidly separate the part grasped from origin to insertion, and detach it at both ends ; and, as a matter of fact, in many of my cases I have done this, and have then removed a considerable part of the lower portion of the pectoral muscle. Halsted and others advise that the pectoral muscle, at any rate its sternal origin, should be taken away in every case, partly in order to get thoroughly rid of the pectoral fascia, and partly in order to be able to clear out the axilla more effectually. As will be evident in comparing my statistics with Halsted's, this is really not necessary unless there are actual nodules in the substance of the muscle ; more especially where the lower portion of the muscle is removed in the manner I have described, there is no difficulty whatever in pulling up the remains of the pectoral muscle sufficiently to obtain complete access to the upper part of the axilla. I am inclined to think that even in cases in which there are nodules in the muscular substance, it is often sufficient to take away the sternal origin of the muscle, and that the clavicular portion may be left unless there is actual disease present in it.

Where the glands in the axilla are markedly enlarged, the question arises as to how far one should go. In the first place, it is well to see

what one is doing ; and still, if the pectoral muscle is not affected at all, I prefer leaving it, and think it is well to divide it transversely, and after the operation stitch it up. The chief question which has to be considered is whether, having found the higher axillary glands enlarged, one ought not to go further and remove the glands from the posterior triangle of the neck. Some have, indeed, tried to make it a universal rule that if the auxiliary glands are at all enlarged, those in the posterior triangle must be taken away ; but, as I have already said, the first chain of glands opposes a barrier for a considerable time against the onward spread of the disease, and if only it is thoroughly removed I think one may, in most cases, be content. Where the cancer is a slow-growing one, and only the lower axillary glands are noticeably enlarged, I do not therefore open up the posterior triangle of the neck, and, so far as I can recall, I have only twice had recurrence in the supraclavicular glands. If, however, the highest axillary glands are noticeably affected, it stands to reason that the posterior triangle of the neck should be opened up. Unfortunately, however, the line of infection does not so much run into the posterior triangle as along the subclavian vein into the thorax, along a route that is imperfectly accessible, even when the posterior triangle is opened, and I have not seen much benefit in the way of finding and rooting out the disease as the result of opening up the posterior triangle.

The conditions under which amputation of the arm would be necessary are the presence of a large mass in the axilla involving the nerves, for involvement of the vein or artery, or even both, does not necessitate amputation. I have more than once removed portions of the axillary vein to which glands were firmly adherent, and in one case I removed both vein and artery without any loss of vitality or other trouble to the limb ; but where the disease is so diffuse as to involve the nerves, I think it may be taken as certain that it has extended beyond reach.

(To be continued in the next issue.)

OBSTETRICS

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Physician to Victoria Hospital for Sick Children.

VERATRUM VIRIDE IN PUERPERAL ECLAMPSIA.

Ever since the publication in 1871 of the noteworthy paper of Fearn, in which he highly praised the administration of what we then considered heroic doses of veratrum viride in the treatment of puerperal eclampsia, the profession has been giving this method a larger trial each year, and the results of this increasing experience seem to endorse even the enthusiastic views of the originator of this method. As long as eight years ago the *Therapeutic Gazette* published in its editorial columns an article calling attention to the paper of Dr. Oatman, recommending doses equally large or larger than those of Dr. Fearn; and more recently there has come to our hand, in the shape of a clinical contribution from the pen of Dr. Reamy, of Cincinnati, additional evidence of the good results obtained by this treatment. Further than this, we believe that many of the great obstetric teachers of the day recommend this method to their classes, while they equally strongly condemn the employment of pilocarpine for the production of a sweat. Thus, Hirst directs that veratrum viride should be given in the dose of fifteen drops of the fluid extract hypodermically for the purpose of reducing the pulse rate to 60, and, if this dose fails to do good, he advises that additional doses of five drops each shall be administered with sufficient frequency to obtain this circulatory result. Dr. Lusk and Dr. Parvin mention the treatment and state the advantages which are claimed for it, but the former expresses a dread of its depressing effects, while the latter, quoting the authorities who recommend it, fails to state his own personal opinion.

Among persons who are accustomed to obtain by five- or ten-drop doses of the tincture of veratrum viride marked circulatory sedation in the

early stages of acute inflammatory processes the massive doses which are recommended by obstetricians will seem unsafe, but a careful examination of the subject seems to prove that, in reality, the boundary line of danger is not passed when these doses are given. In the first place, there are a large number of cases on record in which poisoning has been produced by very much larger doses than any employed in obstetrics, with recovery as a result, and we all know that the number of casualties from the ingestion of this drug in any dose is very small.

The method by which veratrum viride is supposed to do good in cases of puerperal eclampsia is a double one. Chiefly from the action of its alkaloid, jervine, it powerfully depresses the circulation, and so bleeds the woman into her own vessels, relieving by this means congestion of the cerebral and spinal vessels, and reducing, in all probability, any spasm of the renal blood vessels which may be present, thereby causing marked increase in the flow of urine. In addition to this action, jervine also acts as a powerful sedative to the motor tracts of the spinal cord, and so directly quiets nervous excitation, while the copious sweating which often follows its administration aids in relieving the blood of impurities, the kidneys of congestion, and relaxes the peripheral blood vessels. In the experience of Dr. Reamy, the doses which were given with successful results by means of the hypodermic needle consisted of twenty drops of Norwood's tincture of veratrum viride, a preparation which, it is to be remembered, is a saturated tincture many times stronger than that which is official in the United States Pharmacopœia. Personally, we believe that Norwood's tincture ought never to be called for, as its sale in the drug store is apt to cause confusion with the official tincture, and because it is not of a definite strength. We believe that the official fluid extract, or normal liquid, of veratrum viride should always be chosen in the treatment of this condition. We trust that those of our readers who have had a large experience in this method of treatment will write to the *Gazette*, giving their fellow-subscribers the benefit thereof.—Editorial, *Therapeutic Gazette*.

ON THE DANGER OF THE USE OF POLYPUS FORCEPS FOR THE REMOVAL OF RETAINED FRAGMENTS OF PLACENTA.

Dr. Alberti (*Centralblatt für Gynakologie*, 505, 1895) reported, at a meeting of the Gesellschaft für Geburtshilfe und Gynakologie at Berlin, a case of hæmorrhage after abortion, in which the attending physician, after curetting, introduced a forceps into the uterus to remove some remains of the placenta. On withdrawing the forceps he found that he had dragged part of the intestine into the vagina. Alberti performed a cœliotomy three hours later, and found the uterine wall thinned away in

every part. The intestine which had been dragged through the uterus into the vagina was constricted at the internal orifice, and could not be returned until this had been slit in several places. The woman made a good recovery.

In the discussion which followed, Veit, Olshausen, Gusserow, and Orthman reported cases almost identical which had occurred in their practice, not, as a rule, with the same good result. All agreed that the forceps was a most dangerous instrument. Martin mentioned a case in which a very busy practitioner, believing that, although he had used a curette, he still felt some membrane in the uterus, introduced a forceps and extracted about thirty inches of intestine, which he tore from the mesentery. Telling the family that this was the umbilical cord which had been retained, he left the patient in a state of collapse with his assistant, and hastened for Dr. Martin. The latter found the woman *in articulo mortis*, with the intestine between her thighs. The most he could do was to return the bowel into the abdomen and ask the attendant to report the events. The woman died in a few hours.

Martin also spoke strongly against the use of polypus forceps in such cases. Flaischlen had found them necessary and useful in cases in which the abortion occurred in a uterus fixed in retroflexion.—*University Medical Magazine*.

RIGIDITY OF THE PARTURIENT CERVIX AND LOCAL ANÆSTHESIA IN LABOR.

Dr. T. H. Weagly (*Times and Register*, October 5, 1895) speaks highly of the results he has obtained in cases of rigidity of the cervix by the use of local anæsthetics applied directly to the parts by means of a spray apparatus. He uses the following solution :

- R. Phenolized cocaine solution (3 per cent.)..... f ʒ i.
 Trinitrin solution (2 per cent.) m x.
 Sulphate of strychnia gr. ʒ.
 Listerine f ʒ i. M.

He claims that this solution will expedite and soothe the first stage of labor, and that even when the occiput has entered deeply into the pelvis, by spraying the vaginal surface of the perinæum and outlet, the pains accompanying the expulsion of the head may be reduced to a minimum.—*University Medical Magazine*.

HYGIENE AND PUBLIC HEALTH.

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital ;

AND

E. HERBERT ADAMS, M.D., D.D.S.

SANITARY science is continuously extending its domain in France. The city of Montpellier has recently given peremptory orders that no article of food shall be delivered by the grocers and butchers of that town unless it is wrapped up in clean wrapping paper, and this new wrapping paper must not be colored.

HOTEL INSPECTION.

The following strongly-worded circular has been sent out by Mr. Henry Totten to the License Commissioners of the province: "On previous occasions circulars have been addressed to you setting forth that the Commercial Travellers' Association of Canada had brought to the notice of this branch several matters to which you were asked to give your consideration and attention. It was represented that in not a few licensed hotels, patronized by members of this association, the outside closets and inside lavatories were in a filthy and unhealthy condition ; that the sleeping apartments were indifferent in accommodation and kept in an uncleanly and slovenly manner ; that the sample rooms were poorly lighted, heated, and untidily kept. You were particularly instructed to make most careful inquiry as to the truth of these representations, with the view of removing all causes of complaint. A delegation of the above-mentioned association recently waited upon this branch, and urged that there was still much to be done in improving the sanitary condition of not a few of our hotels. Special mention was made of the unhealthy condition of the urinary and closet accommodation. I am directed by the Hon. the Provincial Treasurer to again point out to you that, in the interests not only of the association and the travelling public, but on sanitary grounds generally, it is your duty to see that there shall be no cause for complaint in this regard in future, and that all licensed hotels in your district shall have proper accommoda-

tion in every respect. It is hoped that it will not again be necessary to call your special attention to this matter. A special report will be required from you not later than the first day of May next, advising this branch of the sanitary condition of the hotels in your district."

CONSUMPTION SANITARIUM.

A meeting of the provincial trustees of the National Sanitarium Association was held at the National Club. Among those present were Chief Justice Meredith, Edward Gurney, W. E. H. Massey, W. J. Gage, Hugh Blain, D. E. Thomson, and Dr. Powell. Chief Justice Meredith was appointed chairman, and George A. Cox, treasurer. A resolution was passed expressing the trustees' deep sense of loss in the death of the late chairman, Mr. H. A. Massey. The secretary, Dr. Powell, read a letter from Prof. Osler, of Johns Hopkins University, warmly approving of the proposal to start a home for consumptives in Canada, similar to that of Dr. Trudeau in the Adirondacks, which American medical men held in the very highest estimation. The chairman of the Interim Committee reported that the town of Gravenhurst had passed a by-law granting a bonus of \$10,000 to the Muskoka sanitarium; that a site of well-sheltered bush lands of some forty acres had been secured, with the option of purchase of thirty acres more adjoining; that Mr. Booth, of the Parry Sound & Ottawa Railway, had offered; on behalf of his company, to carry patients free from Ottawa to junction of that road with the G.T.R.; also that a deputation had waited upon the Minister of Finance asking for assistance of the Dominion Government. In view of the great and general interest taken in the project, and of the encouragement received from so many quarters, it was suggested that an effort should be made at once to increase the subscriptions to not less than \$250,000, so as to place the institution in Muskoka on a permanent basis immediately, and to open another institution at an early date at some suitable point in the Rocky Mountain district, and a committee was appointed to prepare a statement on which to base an appeal to the public.

IMPROVEMENT OF MANCHESTER MILK SUPPLY.

Dr. Niven, medical officer of health for Manchester, has made some valuable suggestions for improving the polluted milk supply of Manchester, at a meeting of the Medico-Ethical Society held at the Queen's Hotel. His principal plan, after the model of that in working order in Copenhagen, was the formation of a company with a capital of, say, £10,000, combining the rôles of a supply association and a milk laboratory for the preparation of prescriptions by physicians. The amount of milk consumed

in Manchester at present, says the *City News*, might be estimated from a calculation made at considerable trouble by Mr. Rooke, the superintendent of the sanitary department. On the basis of his figures, the annual consumption of milk would be 7,600,000 gallons—not a large amount for a population of over half a million. The money value of this at $3\frac{1}{2}$ d. a quart would be £443,314. The establishment of a milk company would be a boon to the people, would benefit the farmer, and would inflict no harm on the milk purveyor, provided he reformed and amended the error of his ways. In the discussion which followed Dr. Ashby pointed out that those who advocated the formation of a dairy company did not suggest that it would do away with the evils arising from back-to-back houses and other unsanitary arrangements, but it would undoubtedly cope with one very serious source of danger, especially to young children. What was wanted was an institution where not only pure milk could be obtained, but which would include a laboratory in which milk could be prepared in accordance with the prescriptions of medical men. The following resolution was passed unanimously by the meeting: "That this association looks with approval on the project of the formation of an association for the supply of pure milk, as well as of scientifically modified milk, and are prepared to support the movement by their recommendation."—*Sanitary Record*.

HOW WE INTEND TO CHECK SUBSTITUTION OF DRUGS.

Owing to the fact that substitution of drugs is practised to a great extent, we earnestly request our readers to assist us in reporting to us all cases in which they may have been the victims of this criminal offence, giving the name and address of impostors; also all particulars to substantiate their statement, such as sworn affidavit, etc.

We will expose in our columns the names of fraudulent dealers on receipt of satisfactory evidences.

All our readers will admit that a doctor who prescribes a certain remedy expects that his prescription shall be filled accordingly. A druggist has no right whatever to use his own judgment in the matter; otherwise he places the reputation of the physician as well as the life of his patient in jeopardy.

Feeling that all doctors, honest druggists, and manufacturers of legitimate preparations will be benefited by our action in this matter, we solicit their assistance.

The above notice must be considered as a warning to druggists who believe that they are at liberty to substitute drugs.—*Journal of Medical Science*.

Editorials.

CANADIAN MEDICAL ASSOCIATION.

ON August 26, 27, and 28, the next annual meeting of the Canadian Medical Association will be held at Montreal. This will probably be the largest held for some years. The dates have purposely been fixed near the end of August, so as to enable large numbers from Ontario, as well as from the other provinces, to be present.

Already the Bluenoses are talking the matter up, and the council of New Brunswick has appointed delegates to the Committee on Interprovincial Registration. This committee is to meet on the day before the commencement of the general meeting, namely, on August 25, thus giving plenty of time to work out the whole problem as to how this desirable end is to be accomplished, and it is to be hoped that some feasible scheme will be proposed. It is, as yet, too early to make any announcement as to the programme; but we are sure it will more than come up to the usual standard, which is always high.

An effort will be made to secure a better travelling rate, which will ensure a much larger attendance than would otherwise be the case.

The secretary, we are sure, will be pleased to hear from any who expect to be present.

THE ONTARIO MEDICAL ASSOCIATION.

THE next meeting of the Ontario Medical Association will be held in Windsor, June 3 and 4, 1896. As we intimated in our last issue, the various committees entrusted with certain duties in connection with the meeting have about completed their final arrangements. From the secretary, Dr. J. N. E. Brown, of Toronto, we learn that Dr. W. B. Geikie, of Toronto, will probably lead in the discussion on "Practice of Medicine"; Dr. H. T. Machell, Toronto, will lead on "Obstetrics"; Dr. Burt, Paris, it is hoped, will lead on "Surgery." Several papers have been promised by prominent physicians in various parts of Ontario. Dr.

Vaughan, of Ann Arbor, Dr. Carstens, of Detroit, and many other physicians of the United States, have promised to attend. We understand that Detroit, and a good portion of the State of Michigan, will be well represented. Dr. Pepper, of Philadelphia, has been invited, and, although at the time of writing we cannot speak with certainty, we are authorized to say that it is probable that he will be able to attend. The physicians of Western Ontario are quite enthusiastic over the matter, and it is expected that they will turn out in full force. The Committee of Arrangements is composed chiefly of physicians in Windsor and other towns in the west. We are told that they will leave nothing undone to make matters pleasant for the visitors, and that they are extremely anxious for a large representation from all sections of Ontario. We think that this is highly appreciated in Toronto, and that a large number of her doctors will accompany the president, Dr. Grasett, in his trip to Windsor, and will do all in their power to assist him and the various officers of the association in making the meeting an unqualified success. Those who intend to write papers are requested to communicate with the secretary as soon as possible.

TRINITY MEDICAL ALUMNI ASSOCIATION.

THE fourth annual meeting of the Medical Alumni Association of Trinity University was held in the Convocation Hall on Tuesday, April 7. There were two sessions, morning and afternoon, and a number of papers were read, some of which called forth some very interesting discussions. Much interest was added to the proceedings by the prominent part taken by two distinguished outsiders, Sir William Hingston, of Montreal, and Dr. J. H. Carstens, of Detroit, both reading very interesting and instructive papers. There was a good attendance of graduates and friends of the association, and all appeared to be very much interested in the discussions. Dr. T. H. Stark, vice-president, acted as chairman. The following officers were elected for the present year: President, Dr. J. C. Mitchell, Enniskillen; vice-president for Western Ontario, Dr. J. W. McCullough, Alliston; vice-president for Eastern Ontario, Dr. Douglas, Cohourg; vice-president for Toronto, Dr. Allan Baines; treasurer, Dr. W. H. Pepler; general secretary, Dr. Elias Clouse, Toronto; assistant secretary, Dr. D. J. G. Wishart, Toronto. In the evening a very pleasant banquet was held in the Rossin House, under the chairmanship of the retiring president, Dr. A. McKay, M.P.P. It was essentially a "family dinner," and especially interesting to members of the Trinity faculty, and the numerous graduates who were assembled to do honor to their *alma mater*. There were a few guests who had been invited in an informal

way, and among these was our genial friend from Detroit, Dr. Carstens. The dinner was a decided success. In response to the various toasts, the Dean of the college, Dr. Geikie, Dr. Temple, Dr. Carstens, Dr. O'Reilly, and others, including many of the graduates, made very neat and appropriate speeches. The members and friends of the association have every reason to be thoroughly satisfied with the success which attended both the meeting and the dinner.

RAILWAY RATES AND MEDICAL ASSOCIATIONS.

PHYSICIANS the world over are commencing to learn the value of medical meetings. They find that their patients are benefited because of this annual outlay. At the same time they feel that they pay pretty dearly for something that is for the benefit of someone else.

Heretofore in Ontario the railways have kindly granted the usual convention rate of a fare and a third under certain conditions, and single fare under certain other conditions. These latter conditions, we believe, no association has yet fulfilled; hence the members do not derive the benefit of the single fare.

There are reasons why medical men should be granted a single fare return rate, or even better, without reference to numbers, and these we shall proceed to point out. Take a conference; for instance, where each delegate pays his fare and a third, or better, but he is reimbursed, his hotel expenses are *nil*, and someone supplies for him, usually, *gratis*; hence his work goes on just as well as if he were at home. With the medical man it is different; he pays his travelling expenses; in addition to this there is an outlay for a good, big hotel bill, and he leaves his patients to be looked after by a medical friend, who collects for the work done. When one considers the fact that he is doing this for the benefit of his patients, one will readily see that he pays pretty dearly for his experience.

Without doubt, the railways would be more than repaid if they would grant medical men a better travelling rate. In support of this we would refer to the maritime provinces, where a single fare is granted. When the Canadian Medical Association met at St. John, N.B., there were eighty-seven maritime province physicians present, and when it met at Kingston there were forty-nine Ontario men in attendance. When one remembers that in the maritime provinces there are only a little over eight hundred practitioners altogether, and in Ontario about two thousand four hundred, one must look for some reason for this disparity; and taking it for granted that in each case the programme was equally attractive, we think it is reasonable to suppose that the difference is due to the better travelling rate.

We thought it unfortunate that the railways should thus stand in their own light, as well as in that of the medical profession, and we have taken this opportunity of pointing out to them an additional source of revenue. Knowing the keen-sightedness of railway men, we feel sure that they will see the advantage to themselves of a better rate for physicians attending medical associations ; and when they are granting this additional privilege we would respectfully suggest that they extend the time limit as well.

THE MEDICAL CURRICULUM.

THE present regulations of the Ontario Medical Council with reference to the length and character of the course of study in medicine are not altogether satisfactory. The following regulation is the one which is called in question : " Every student must spend a period of five years in actual professional studies . . . and the prescribed period of studies shall include four winter sessions of six months each, and one summer session of ten weeks. The fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario, and six months at one or more public hospitals, dispensaries, or laboratories devoted to physiological or pathological research." The matter was discussed at a meeting of representatives of all the medical colleges of Ontario, excepting the Medical Faculty of Western University in London, recently held in Toronto. We understand that nothing definite was settled at that meeting ; but the following facts were generally agreed to by those present : The winter sessions are too short, and ought to last eight months instead of six. It was thought this would be in the interest of both students and medical schools, because the large amount of work at present demanded of the student cannot be completed satisfactorily in the present short winter session ; the students complain that they cannot properly fulfil the requirements of the curriculum ; the proposed change would lessen the strain on the teachers and enable them to devote more time to practical instruction in the laboratories and hospitals. It was also suggested that the summer session and the fifth year of study be abolished, the result being that the same time would be employed in studying, and it would be arranged in a more profitable manner ; thus—proposed course, four years of eight months each—thirty-two months ; present course, five years of six months each, and summer session of two months—thirty-two months. It was thought that four continuous sessions of eight months each would be more satisfactory than the present five years' course. The opinion was also expressed that the summer session has always been unsatisfactory. We are not prepared to endorse this latter opinion, because some years ago certain of the summer sessions were eminently satisfactory. On the whole, however, we think that the opinions expressed are correct, and will be

generally acceptable to the profession. There was evidently no desire to propose any changes which would have the effect of lowering the standard ; and, as the fifth year, "devoted to clinical work," has not proved to be an unqualified success, it is quite probable that the council will modify its curriculum in the way proposed.

DR. JAMESON.

DR. JAMESON stands accused of high crimes against the British Government ; but a large portion of his countrymen think of him not as a criminal, but rather as a hero. Much has been written about him since his unfortunate escapade in South Africa. Those who knew him most intimately before he left England refuse to believe that he was capable of doing a dishonorable act. We learn from *The Practitioner*, March, 1896, that he gave up his practice in 1888, and became intimately associated with Mr. Cecil Rhodes, the uncrowned *king* of South Africa. He undertook several missions which required ability, skill, and bravery to accomplish successfully. He soon developed into an expert diplomat, and a great general. Acting under the directions of Mr. Rhodes, he first went to Buluwayo to negotiate with Lobengula, the savage king, for certain concessions, and for permission to occupy his country with a pioneer force and develop its resources. In 1890 he went with a body of troops to occupy Mashonaland for Mr. Rhodes. He next went along the Biarra road prospecting for a railway to the east coast, and took his share in rowing 100 miles while suffering from fractured ribs. Soon after this he explored the Ghaza country on foot, suffering great hardships. He and his party had to subsist for some time on grasses for food, with an occasional meal provided by the gun. His knowledge of botany served him in good stead during that perilous trip. After Mr. Colquhoun resigned his position, Mr. Rhodes appointed Dr. Jameson administrator of Mashonaland, which post he retained until the recent raid. He is said to have developed extraordinary ability in connection with his duties in Mashonaland.

KITSON v. PLAYFAIR.

THE action recently brought by Mrs. Arthur Kitson against Dr. William T. Playfair and his wife for libel and slander has caused a great sensation in Great Britain. Mr. Kitson, the plaintiff's husband, who is also Mrs. Playfair's brother, went to Australia, and was married there in 1881. Mrs. Kitson's first child was born in 1882 ; a second child was born two years later. Afterwards, as it appears from her own evidence, she was constantly attended by medical men for uterine affections. She suffered from what she presumed to be a miscarriage just before leaving

Australia, but she had no medical assistance on that occasion. Her husband had been estranged from his family for some time, and received an allowance from one of his brothers. By agreement with her husband she came to England in October, 1892, and was ill more or less during the next sixteen months. In January, 1894, she called in Dr. Williams, who, after seeing her a few times, called in Dr. Playfair in consultation. Under chloroform Dr. Playfair removed something from the uterus, which, in his opinion, was a piece of fresh placenta. He concluded that she must have become pregnant within three or four months, and, as she had not seen her husband for about sixteen months, she must have committed adultery. She was receiving an allowance from her brother-in-law, Sir James Kitson, of \$2,500 a year. Dr. Playfair considered it his duty, on the grounds of morality, and in the interests of the family, to tell his wife and brother-in-law; and, as a consequence, Sir James Kitson stopped the allowance.

In court the plaintiff complained that after she had placed herself under the professional care of Dr. Playfair he had broken the solemn seal of professional confidence by betraying to his wife knowledge which he had acquired in the course of his professional duties. The defendant replied that the communication made by Dr. Playfair to his wife was a privileged communication, and if he *bona fide* believed that it was correct it was his duty to make it. The defendant, through his counsel, did not plead justification, nor ask the jury to say Mrs. Kitson was not chaste; but in the witness box he practically gave a positive opinion that she had committed adultery. It came out also incidentally that Dr. Spencer, Professor of Midwifery in University College, who had examined the plaintiff on two occasions, and had examined the "body removed," expressed the opinion that it might have resulted from legitimate conception, *i.e.*, conception before she left Australia. Mr. Arthur Kitson believed in the chastity of his wife, or, as the judge expressed it, "he believed in her truth and goodness, and stood by her." When Mrs. Kitson ascertained Dr. Playfair's opinion she begged for an interview that she might explain or answer any questions. The judge, in his charge, referred to this, and asks: "Why did not Dr. Playfair grant that interview? Would it have been such a professional indignity to have gone and heard her explanation? He, with his vast knowledge and experience, could have put questions to her that would have been vital to her case." In one of her letters to Dr. Playfair she asked, "Why did you not let my unhappy life go? I am hunted out like the veriest outcast." Dr. Playfair certainly did not temper his *justice* with much mercy. We have looked over the evidence in the action, and the charge of Mr. Justice Hawkins, with considerable care, in the hope that we might find something in the way of justification for the conduct of Dr. Playfair, either as a professional man, or an English gentleman; but we have to say, with deep regret, we have discovered nothing.

Correspondence.

HYDATIFORM MOLE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—In your March number Dr. Hastings reported an interesting case of hydatiform mole, and called attention to its rarity. A short time ago I had occasion to report a case at our local Medical Society. Dr. H. K. Casgrain had a case a few weeks prior to this, and I noticed in the *Medical Counselor* of January, published in Detroit, a case reported by Dr. Mary Stevens.

It seems to me cases are not so rare as published accounts would indicate.

G. R. CRUICKSHANK.

Windsor, April 1, 1896.

EMPYEMA.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—In the last number of THE PRACTITIONER, the article on empyema by Dr. Primrose concluded with a few notes I sent him, giving the final chapter in the history of one of his illustrative cases, with an account of the conditions found post-mortem. There was one important omission from the latter, and, as the whole case was of unusual interest, I shall be obliged if you will kindly make the insertion in this month's issue. The sentence was to this effect: "Dr. John Caven pointed out that the rarity of the case consisted in the fact that only red hepatization was found, no gray being visible." This would account for the late appearance of the pneumonic symptoms.

I also pointed out that the left lung was adherent from apex to base, thus showing the complete obliteration of the pleural cavity. This was, without doubt, chiefly due to the operation.

With apologies for troubling you, I am,

Yours sincerely,

JOHN STENHOUSE.

159 Bloor street east, March 7, 1896.

Meetings of Medical Societies.

TORONTO MEDICAL SOCIETY.

THE society's regular meeting was held in the council buildings, March 19, President Dr. Wm. Oldright in the chair.

ULCERATION OF STOMACH.

Dr. N. A. Powell presented a stomach showing a small funnel-shaped ulceration which had perforated its posterior wall.

The patient, a healthy man, aged forty-two, was seized suddenly while at work with a severe pain, which prostrated him. It was not definitely localized. Death ensued inside of twenty-four hours. The doctor called attention to the various causes of gastric ulcer and their pathological anatomy.

He read the report of a second case, occurring in a girl aged eighteen, who first consulted her physician for amenorrhœa and rushes of blood to the head, which were relieved by manganese dioxide. Later, he was consulted for symptoms of indigestion. The pain continuing, he administered morphia. There was some improvement. He was called suddenly, and found the patient suffering extreme abdominal pain, accompanied by tenderness and tympanites. Death followed.

Dr. Powell then discussed the technique of operating in these cases. Reports of some thirty cases showed that only early interference would afford success.

Dr. McMahon referred to a case operated on by Dr. J. F. W. Ross with success after thirty-two hours. He called attention to the differences between perforation of the appendix and that of the stomach. At the height of digestion the stomachic contents were aseptic, which accounted for the great tolerance of them by the peritoneum where the leakage was small.

Dr. Carveth spoke of a case in which the perforation had taken place through the stomach wall, the contents making their way through the lung into a bronchus.

Dr. Greig outlined the pathology of gastric ulcer, and also referred to the etiology.

DISEASE OF MIDDLE EAR.

Dr. McMahon reported a case of middle ear disease followed by cerebral abscess. The first symptom was pain, referred to the ear, which was readily controlled by morphia. This was followed by vomiting and headache and some vertigo. Pulse was good and temperature not high. The fever, however, ran up to 103°. Physical examination showed a systolic murmur. Post-mortem showed pus in the petrous portion of the temporal bone, and in the mastoid cells. There was also lymph in the meninges. The speaker compared this case with one of cerebellar abscess he had reported to the society a year ago.

Dr. Powell related a case he had seen. The patient was delirious, and had been suffering from cranial sepsis. The tympanic membrane was bulging. This he perforated, did Politzeration, probed carefully, and succeeded in evacuating a mass of inspissated matter, followed by a quantity of pus. A good recovery followed.

Dr. Peters presented a rough phosphatic calculus, three-quarters of an inch in diameter, which he had, by dilation of the urethra and the introduction of fenestrated forceps, removed from the bladder of a pregnant woman, aged 32, who had suffered greatly from pain, frequency of micturition, and the passage, previously, of smaller calculi.

Dr. Carveth related the history of two cases of perforating typhoid ulcer. One had not been diagnosed, not having been closely watched, till after death. The second was treated by the eliminative plan.

Dr. McMahon protested strongly against the eliminative form of treatment, as he had seen many patients succumb to its use.

THE regular meeting was held in the Council buildings, March 26, 1896. The president, Dr. Wm. Oldright, in the chair.

Dr. McPhedran presented a specimen of an

ANEURISM OF THE ABDOMINAL AORTA.

The specimen was from a man who died in the Toronto General Hospital in October, 1895. Specimen showed the heart, lungs, and liver. The patient was thirty-five years of age, a harnessmaker by trade. He had not lived very regularly. He had had gonorrhœa, but he gave no history of syphilis. Sometimes he was dissipated and exposed to severe strain. Until two years ago he made no complaints especially, but in May, 1894, he noticed a pulsation of the epigastrium, and called the physician's attention to it. He suffered no pain or discomfort. On examination, a tumor was found which was diagnosed an aneurism.

The speaker saw him in June, 1894, when he entered the hospital. Patient remained in till the following May. Was kept in bed and given low diet—eight to ten ounces of liquid and what solid food he wished. When he came in the tumor occupied the angle at the ensiform cartilage.

It was $2\frac{1}{4}$ inches in diameter each way. Two-thirds of it extended to the right of the median line. It raised the abdominal wall over the epigastrium, making it prominent. There were well-marked pulsations, the tumor was the expansile, and a bruit could be heard. The normal pulse was behind the radial pulse. He improved; the tumor, retracting moderately, became harder, and the expansion was less marked. He was allowed to sit up, which produced no change. To hasten matters, if possible, he was transferred to the surgical side, with a view to needling; but as this was not decided upon, he was returned to the medical wards, where he remained for some little time longer, and then went out. He lived quietly during the summer. In September he went to work. Dress-making. This caused pain and distress in the epigastrium again. He lost appetite and felt weak. On the 1st of October he returned to the hospital, when an abdominal tumor was noticed. One part of it was to the right of the median line, two inches in diameter, hard, slightly expansile. The other was larger, about three inches in diameter, and occupied the left side of the abdomen, reaching over the middle line, extending to the ninth cartilage, and reaching almost to the umbilicus. It was a soft tumor, and very expansile. It was thought the second tumor had erupted from the side of the first, rather than from the aorta. The question arose as to whether the first sprang from the aorta or from the cœliac axis. The second tumor caused very little pain—some in the back. Could move about in bed. He was treated as before. Potassium iodide was given in small doses, and nitro-glycerine to lower blood tension. Was kept in bed about two months, the tumor undergoing very little change. Thinking there was little chance of material benefit, he was allowed to sit up, which produced no change in the tumor. A short time after he felt some distress in the epigastrium, which was followed with collapse, and he died in a few hours. The autopsy showed that the tumor occupied the whole circumference of the aorta. The bodies of two vertebral spines were eroded. The light tumor was consolidated and very thick, from having a great deal of deposit in its inner surface.

The second aneurism was very thin-walled. The entrance from the aorta into the tumor was contracted so as only to permit the point of the index finger. There was some atheroma and some dilatation above this point. This contraction must have lessened the tension in the aneurism. The tumor had ruptured to the right and posteriorly, the blood passing behind the right crus of the diaphragm and piercing the pleura.

The doctor gave the history of a somewhat similar case that had been under his charge a year or so ago, which he had reported to the society before.

Dr. Machell asked how it was proposed to needle. He thought it

would be risky. Dr. McPhedran replied that to do so it would be necessary to make an abdominal section.

Dr. Oldright recalled a case he had had under his care where the patient had been insured shortly before he was consulted. Patient at this time was complaining of pain from indigestion, for which he prescribed. The patient, coming again, told the doctor he had a lump in the abdomen, which proved, on examination, to be a full-grown aneurism, which had eroded one of the ribs. The patient died in four or five months. The post-mortem showed that the aneurism had pierced into the lung, had formed a cavity there, and some weeks after, the speaker thought, had pierced into the pleura, causing collapse and death.

Dr. Grasett recalled a case of abdominal aneurism where the patient, who was in a ward in the hospital, was suddenly seized with a burning pain in the abdomen, ran across the ward, jumped over the bed, and died. The post-mortem showed ruptured abdominal aneurism. He thought in many cases, perhaps, the symptom of epigastric pulsation sometimes led to errors in diagnosing abdominal aneurism. He thought they were extremely rare.

Dr. McPhedran said that the only way which one could be sure of was by the presence of the tumor, its being expansile and pulsating. Large abdominal aneurisms were sometimes difficult to diagnose. He reported a couple he had seen where the greater part of the abdomen was occupied by the tumor.

Dr. Grasett read the history of a case of

TENO-SYNOVITIS.

He related the history of a case. Patient was a man who, four years ago, first noticed a small, soft lump forming in the centre of the palm of the left hand. When he flexed the fingers it caused pain in that region and across the first phalanges. He had been working in a livery stable. One of his duties was to carry a large bucket about twice the size of an ordinary one, which had an iron handle unprotected by any wooden ferule. As a result, it caused, first, soreness, and then a contraction of the fingers, followed by a tumor in the palm, which caused him to desist from his occupation. The lump grew larger, and he consulted a medical man, who ordered the application of iodine. After a time the tumor became somewhat soft near the hypothenar eminences.

At this point the doctor in attendance opened it. This operation seemed to do no harm, but did no good. He said out of this opening, which persisted, small bodies would pop out. He went into the hospital, where he came under the speaker's care. Swelling occupied the whole palm, and extended above the wrist for three or four inches. A diagnosis of teno-synovitis was given, likely implicating the flexor tendons.

There was no tubercular family history given, although the patient looked somewhat tuberculous himself. A free incision was made in the palm and also in the wrist, and the annular ligament cut through, when a large number of rice bodies were evacuated. (These specimens were examined by the members of the society.)

Dr. Grasett said that he remembered the first case he saw, some twenty-five years ago, while a student in Edinburgh. The custom had been to treat them by blisters, etc. They were supposed to be next to incurable. Then Syme conceived the idea of free incision and drainage, which idea he put into practice, with the effect of causing a complete cure. The doctor discussed the pathology of these rice bodies, and stated that they are usually supposed to be caused by tubercle.

Dr. Oakley said that two months ago he had a case of fracture of the humerus above the condyles. Recovery took place, but on examining the wrist recently he found it to be about twice the size it should be. The swelling was rather soft and elastic. With a consultant, he examined it carefully, and the decision was that it was probably tuberculous. He thought that it was probably a case similar to the one which Dr. Grasett had reported.

Dr. W. J. Wilson reported a case he had seen some few years ago, where a man had trouble in the flexion of the wrist. There was no tubercular history, but a strong rheumatic one. Quite a large collection of these rice bodies escaped when it was incised.

Dr. H. H. Oldright reported a case he had seen in a washerwoman, the whole palm being swollen. When she stopped work it improved. She opened it with a needle herself. He extended the opening a little larger. After that he lost sight of the case.

He reported another case where these rice bodies were present.

Dr. Machell referred to a case. The patient was a young man about twenty. The wrist had the appearance of being tuberculous. Careful examination revealed a deep fluctuation. He opened in the palm and in the wrist, and flushed through the two openings. A large number of these rice bodies were evacuated. They were larger than the one presented at the society to-night, and flatter.

Dr. W. H. Oldright reported some cases that had come under his observation. He also referred to the treatment of cases of ganglion he had had. He reported one growing on the flexor tendon of the wrist, which he pierced, dissipating the fluid, but which reformed, and then he excised. He described the method by which he did the operation subcutaneously.

If these cases were tubercular, he thought it would be wise to remove them radically rather than temporize.

Dr. Grasett closed the discussion.

Dr. McKenna read the following paper :

About six weeks ago I was called to see Mrs. D., æt. 46. About an hour previous to my visit she had had a severe chill, accompanied by vomiting of tenacious mucus tinged with bile. A few minutes after the vomiting a violent pain seized her in the right portion of the epigastrium.

When I arrived I found her writhing with agony and throwing herself from one side of the bed to the other ; the surface was cold and covered with a clammy sweat. She complained of severe pain radiating through the shoulders and back, but the situation of the greatest pain was in the region of the gall bladder, which was also exquisitely tender.

After the hypodermic administration of morphia and atropine and the application of hot fomentations the pain entirely ceased, and as my patient was now feeling fairly well I left, first instructing the nurse to search the stools carefully for a gallstone.

When I visited the patient the following morning I found her deeply jaundiced ; there was extreme tenderness extending from the lower margin of the liver to the umbilicus; temperature 102° . As there was now no vomiting I administered opium freely, and ordered the hot fomentations to be continued. Under this treatment she continued to improve, and in two or three days was apparently well. I now prescribed phosphate of soda, and ordered the inspection of the stools to be continued. In one week from the date of my last visit I was hurriedly summoned in the night, and found the patient in precisely the same condition as before ; the same routine was gone through, with a like result.

After remaining well for eight or ten days she was again attacked, but the pain and tenderness did not at this time cease entirely, and for several days there were slight exacerbations. She now began to pass by stools the specimens which I here offer for your inspection. They were voided in lumps imbedded in tenacious mucus, and continued to come away for seven or eight days. After the last of these little bodies had made their appearance—and there must have been two or three handfuls of them—there was passed by stool an ounce or more of fine black powder, hard and gritty, closely resembling powdered coal. I am sorry I cannot show you this substance, as it was thrown out before I could obtain possession of it. I examined it, however, and it presented the appearance described.

During the course of her illness, careful palpation, owing to her obese condition, failed to discover anything like a tumor. I had almost forgotten to say that in the month of July last I attended her during a severe attack of gastro-duodenal catarrh. Since the disappearance of these little substances, about two weeks ago, she has remained entirely well.

After showing these specimens to Dr. W. Oldright, and having them examined under a powerful glass, I questioned her closely as to what she had been eating lately, and she assured me that she had not eaten anything containing seeds since last summer. During the summer of last year, however, she ate large quantities of berries and tomatoes. This admission, I think, will explain the nature and cause of her severe attacks.

The question arises, Where did these mischievous little fellows take up their abode? Was it in the transverse arch of the colon, or where? At any rate, they must have been very affectionate, for they evidently stuck together like brothers.

Dr. J. Spence presented the following case :

On November 26, 1895, Mrs. W., strongly built, æt. 45, the mother of ten children, consulted me. She had been under the care of Dr. Wallace, but as she had moved to my locality Dr. Wallace recommended her to me. She was in the seventh month of pregnancy, complained of intense headache, spots before the eyes, etc. She was very œdematous over her whole body, including face, arms, and legs. Dr. Wallace had told her she had kidney affection. The amount of urine she passed in the day was scanty. On examination it was found about two-thirds full of albumin. I prescribed hydragogue purge, and gave diuretics—this was about six o'clock in the evening. About 11.30 I was summoned in a hurry by her son, who said his mother was in a fit. She was in her second fit when I arrived. I gave a hypodermic of morph. sulph., 1 gr., and *m. 10* oil crotonis on the tongue. She became restless, and continued so for about two hours, when I gave her another $\frac{1}{4}$ gr. morph. She slept then till about seven in the morning, when she took another convulsion. Her bowels had moved freely in the night, and she had passed water. I examined, and found the os slightly open and soft. Dr. Wallace arrived, and we determined to empty the uterus. I dilated with my fingers and introduced my hand, secured the feet and delivered. It took about an hour to dilate, turn, and deliver. The child was dead, and was more œdematous than the mother. It seemed to be entirely destitute of the red blood; otherwise seemed perfectly developed. The mother made an excellent recovery. In these cases I depend on morphine.

Dr. McIlwraith asked if there were any casts in the urine.

Dr. Brown asked if he usually gave one grain dose of morphine.

Dr. W. J. Wilson asked if there was any old kidney trouble present. He said that he had used the morphia treatment, and had found it very efficacious.

Dr. A. R. Gordon related a case occurring in a primipara, who married at the age of 37. She had a narrow pelvis and a rigid perinæum. She had seven convulsions before delivery took place. She was badly

lacerated. Chloroform was given, but no morphia. Both mother and child lived.

Dr. A. A. Macdonald said he considered it wise that prophylactic measures should be used. In such cases, besides using the eliminative treatment, the patient's general health should be built up by the administration of iron. In the treatment of convulsions he favored chloroform instead of the morphia, although he admitted that morphia had been used with good effect, and he would not be afraid to use it in suitable cases. As a rule, croton oil worked well in these cases. Sometimes, however, the oil was of an inferior quality, or the patient might not be able to swallow it. In that case it might be introduced into the stomach per catheter.

Dr. Hunter referred to cases of puerperal convulsions occurring in the country in districts remote from a medical man, where no treatment was given, recovery following. He thought it was difficult to say just how much good any particular form of treatment did. Many of these cases aborted.

Dr. Oakley said he had known many of these cases recover without treatment, and he had seen some where all forms of treatment seemed ineffectual.

Dr. Machell said that he considered Dr. Hunter's last statement explained the cure that took place spontaneously, viz., that they aborted. Regarding Dr. Spence's recommendation of the use of diuretics, he was unable to say positively whether their use was helpful or not. The plan of treating an inflamed eye, say, with stimulants would not be wise; and this was true with other inflamed organs. He thought stimulation of the kidneys when in this condition unwise. The practice, however, was a common one among the members of the profession. As yet opinion was divided as to whether diuretic treatment was of value or not. There was no two opinions about the value of the purgatives. He recalled a case he had seen two or three years ago, where the woman had convulsions. She was absolutely insensible when he arrived. The cervix had not commenced to dilate at all. She was breathing stertorously. The uterus was emptied with difficulty, and a child six and a half months old delivered. In another case he had seen, the patient never regained consciousness after convulsions. The Americans were using *veratrum viride*, and with some of them the effects were marvellous. They give it in large enough doses to bring the pulse down to fifty, and hold it there. Dr. Jouett, of Boston, had never seen it fail where the pulse had been kept down to fifty. Other prominent Americans had claimed equally good results. We in Canada had not such results with it, nor with morphia, chloral, or chloroform. The speaker was recently called to see a patient who had had seventeen convulsions before his arrival. Ninety grains of

chloral had been injected into the bowels, which controlled the convulsions for a few hours. The cervix began to dilate, but as the pain became stronger the convulsions reappeared. Chloroform was given, and delivery accomplished as soon as possible. The fœtus was about six months old, and dead. The patient did very well. No one line of treatment would answer in all cases.

Dr. Wilson said he had known the convulsions to come on after labor in the country where there was no attendance, and the patient recovered. He recalled a case he had had where the woman had no convulsions at the time of labor, but they came on after he left to the number of twenty. No treatment was given. Some of the worst cases he had known of had come on after the uterus was emptied. He recalled a case where the convulsions came on fourteen hours after delivery, and continued till death. In early cases of albuminuria he recommended the tonic treatment referred to by Dr. Macdonald, as well as the eliminative. He had administered diuretics. His idea for doing that was not with the same idea he had in treating the inflamed eye. He considered there was a mote there, and was trying to remove it, to get the casts out of the tubes. On that account he administered saline diuretics, and as much water as he could get the patient to drink. In these cases where albuminuria was present to a marked degree, if treated after this manner labor would pass over without untoward results generally.

Dr. Oldright said that any cases he was called to attend in labor received always an examination of the urine. Where he had taken this precaution he had never seen any convulsions.

Dr. Spence said, in reply, that he thought there was no old kidney affection. He did not know if there were any casts in the urine. He gave one-grain doses of morphia, repeated within an hour or two if the first dose did not act. He had not seen any bad results follow its free administration. He was in favor of the use of diuretics, for the same reason as it was given in nephritis—following scarlet fever—to flush out the kidneys and eliminate the poison.

LONDON MEDICAL SOCIETY.

THE regular monthly meeting of the London Medical Association was held at the Medical College building on Monday evening, March 9, 1896. Dr. Meek, president, occupied the chair.

Dr. Charles Moore read a paper on a case of

INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR

in a boy fourteen years of age. The doctor pointed out the liability of mistaking this injury in a child for hip-joint disease. Dr. Wishart had

met with only one case of this fracture in a child. The patient was presented to the association. The injury happened three months ago. He is going about with the aid of a crutch. There is one inch shortening, slight prominence of the trochanter, flexion and abduction somewhat limited.

Dr. Hobbs, of the London Insane Asylum, read a paper on

GYNÆCOLOGY AMONG THE INSANE.

His report covered nineteen cases, including subjects suffering from acute, chronic, and puerperal mania. The operations consisted of curettage, divulsion, trachelorrhaphy, amputations of cervix, the Alexander operation, vaginal hysterectomy, removal of ovarian cysts, and cœliotomy. Of the nineteen cases, eight were discharged as recovered physically and mentally, two are discharged on probation, six are still inmates of the asylum, and three died, one of them six months subsequent to operation, another on the twelfth day, and the third on the fifth day after operation from exhaustion. Of the sixteen surviving patients every one of them improved physically, while ten out of the nineteen have recovered mentally. Dr. Hobbs noted the significant fact that the majority of insane women with pelvic lesions studiously avoid referring to any symptoms that would excite suspicion as to the presence of such disease, and stoutly maintain that the pelvic organs are all right.

Drs. Hodge, Moore, Wishart, Meek, Kingsmill, and Ferguson discussed the paper and commended the work being done by Dr. Hobbs. Dr. Meek stated that having assisted Dr. Hobbs in nearly all of his cases and watched the after-effects, he could testify that the doctor had underrated rather than overrated the character of his results.

Book Reviews.

THE PRINCIPLES OF BACTERIOLOGY : A PRACTICAL MANUAL FOR STUDENTS AND PHYSICIANS. By A. C. Abbott, M.D., Laboratory of Hygiene, Philadelphia, Penn.

This is the third edition of Dr. Abbott's very useful book. The new matter is not great in amount, but useful, and the character of the book is such that one cannot but hope to see new editions very frequently. It answers the purposes of a laboratory guide and text-book combined better than any other work of which we know. We notice that on page 57 the author speaks of the difficulties to be met with in using the autoclave for sterilizing. We must say that to us it appears that these difficulties have been greatly overestimated. Clouding or loss of stiffening power in gelatine treated by steam under pressure is always spoken of, but we have never met with them even on exposure to 120° C. for twenty minutes.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY. Being a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Collected and arranged with critical editorial comments by eminent American specialists and teachers, under the editorial charge of George M. Gould, M.D. In one royal 8vo volume of about 1,200 pages, uniform in size with the "American Text-Book" series. Profusely illustrated. Prices : cloth, \$6.50, net ; half morocco, \$7.50, net. Philadelphia : W. B. Saunders, 925 Walnut street.

Dr. Gould, the very able editor of this admirable "year book," tells us in his preface that the general design is to give general practitioners an annual epitome of the new and progressive medical truths published during the preceding year in all departments of medicine and surgery. No effort is made to furnish a literary review of all published matter, but, rather, a summary of medical progress, including those things which are actually contributory to such progress, both scientific and practical. We cannot attempt to review such a book, but are glad to say, without the slightest hesitation, that Dr. Gould and his able staff of editors have done their work well. We would, of course, expect nothing less after looking over the list, including, as it does, Doctors Pepper and Stengel, General Medicine ; Keen and Da Costa, Surgery ; Hirst and Derland, Obstetrics ; Baldy and Derland, Gynæcology ; Starr and Westcott, Pædiatrics.

EPITOME OF MODERN SURGICAL PROGRESS. For Students and Practitioners. Urinary Surgery. By E. Henry Fenwick, F.R.C.S. Eng. 220 pages. Illustrated. \$1.00. Bristol: John Wright & Co. Toronto: J. A. Carveth & Co.

That a volume of this kind should go through a first edition, and demand a second within a year, speaks very highly for the value of the work. No one that we are acquainted with is more capable of bringing the subject of urinary surgery up to date than Mr. Fenwick. He has devoted a great deal of time to this special branch of surgery, and is a master of its details. We cannot, at this age, by any possible means, keep up to the vast amount of work done in all branches of the profession. These epitomes are of value in aiding us to keep abreast of the times. We cannot speak so highly of all epitomes, because they are often carelessly compiled. But of this particular one too high praise cannot be given. It is liberally and beautifully illustrated. The general practitioner should have the work at his hand, for he will find that many difficult problems can be easily solved by reference to its pages. The typography and letter-press are in the usual good style of Messrs. Wright.

A MANUAL OF OPERATIVE SURGERY. By Lewis A. Stimson, B.A., M.D. Surgeon to the New York, Bellevue, and Hudson Street Hospitals, Professor of Surgery in the University of the City of New York, etc., and John Rogers, jr., B.A., M.D., Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, New York, etc. Third edition. 334 illustrations and 3 colored plates. 733 pages. Cloth. Philadelphia: Lea Brothers & Co.

It is next to an impossibility to compress a lucid description of all the multitudinous operations in surgery in any one 12mo. volume of six hundred pages. Something has to suffer. A manual of operative surgery is a great aid to the general practitioner, who, in the great rush of general work, cannot, by any means, keep in touch with all the advancements of technique and what not. He possibly forgets many of the details of some of the older operations. A little furbishing up will bring them all back, and in the newer ones make him well acquainted with the details. Whether this is a wise procedure or not, we will not say; yet it is and will be done.

This volume furnishes the material for such information very nicely, indeed. It is now in its third edition. On page 410, in speaking of the operation for removal of vermiform appendix without pus contamination, a drain is advocated in all cases. We doubt the wisdom of this course, and believe that drainage, where not required, is a serious admission of lack of faith in the technical procedure of the operation. Again, it is advocated that in operating during the period of inflammation to always remove the appendix. This is an open question, and should not be placed in any such positive manner in a volume of this kind.

We have nothing but praise for the work as a whole, and recommend it to the profession.

THE INTERNATIONAL MEDICAL ANNUAL and Practitioner's Index for 1896. Edited by a corps of thirty-seven department editors—European and American—specialists in their several departments. 728 octavo pages. Illustrated. \$2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The fourteenth yearly issue of this valuable one-volume reference work is at hand ; and it richly deserves and perpetuates the enviable reputation which its predecessors have made for selection of material, accuracy of statement, and great usefulness. The corps of department editors is representative in every respect. Numerous illustrations, many of which are in colors, make the "Annual" more than ever welcome to the profession, as providing, at a reasonable outlay, the handiest and best yearly résumé of medical progress yet offered.

Part I. comprises new remedies, and a very complete review of therapeutic progress of the year. Some of the remedies mentioned have only been placed on the market a few months, yet we find them well described ; for instance, argonin, one of the salts of silver, very useful where a precipitation of the chlorides is not desired.

Part II. includes a number of recent articles by eminent authorities : "How to Determine the Parasite of Malaria" ; "The Diagnosis of Toothache and Neuralgia" ; "The Remedial Value of Cycling" ; "Sensory Distribution of Spinal Nerve Roots" ; "Angeio-Neurosis" ; "Life Insurance." Part II. again shows how closely the work is kept up to date. Roentgen's skiagraph was not announced to the world until December, 1895, yet we find it well described and illustrated in this volume.

Part III., comprising the major portion of the book, is given to the consideration of New Treatment. It covers 500 pages, and is a retrospect of the year's medical and surgical progress.

The fourth, and last, part is made up of miscellaneous articles, such as "Recent Advances in Sanitary Science" ; "New Inventions in Instruments and Appliances" ; "Books of the Year," etc.

The arrangement of the work is alphabetical, and, with its complete index, makes it a reference book of rare worth.

In short, the "Annual" is what it claims to be—a recapitulation of the years' progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world.

Medical Items.

DR. JAS. H. BURNS, of Toronto, spent a portion of March in Washington.

A "DISAPPOINTED CONTRIBUTOR" said that his editor was "subject to fits of rejection."

PROFESSOR ROENTGEN is more correctly Herr Doctor Roentgen (pronounced "Renken").

DRS. ALLEN BAINES and George Bingham spent a fortnight in Atlantic City in March and April.

THE examinations of the medical department of the Western University are now in progress at London.

DR. G. STERLING RYERSON, M.P.P., sailed for Europe, where he will spend a few months recuperating.

THE annual meeting of the American Public Health Association will be held in Buffalo in September, 1896.

THE forty-fifth annual meeting of the Iowa State Medical Society will be held at Des Moines, April 15, 16, and 17.

DR. ECCLES, of London, and Dr. Holmes, of Chatham, are at present spending some weeks at Johns Hopkins, Baltimore.

DR. CHARLES A. L. REED, of Cincinnati, has been appointed a member of the Ohio State Board of Medical Registration and Examination.

CARRYING CHILDREN ON BICYCLES.—San Francisco has passed an ordinance prohibiting bicyclists from carrying on their machines any child under the age of six years.

FORTY-ONE of the forty-six practitioners in London signed the agreement *re* lodge practice; but, owing to the refusal of the remaining five to sign, the agreement has fallen through.

THE MEDICAL RECORD'S THIRTIETH BIRTHDAY.—The New York *Medical Record* completed its thirtieth year on Saturday last, the first number having been issued March 1, 1866.

DR. J. T. DUNCAN, Parliament street, is going to Moorefields, London, to devote special attention to the eye. When he returns he will give up general practice and devote his time to ophthalmology.

THE National Confederation of State Medical Examining Boards will hold its sixth annual meeting in Atlanta, Monday, May 4, 1896, under the presidency of Dr. William Warren Potter, of Buffalo.

THE *Medical Record* gives the *Medical Press* as its authority for the statement that sixty-one deaths have occurred from anæsthetics in Great Britain during the past year. Fifty-two of these have been due to chloroform.

THE American Climatological Association will hold its next annual meeting in Lakewood, N.J., in May, 1896. The president of the association is Dr. James B. Walker, and the secretary Dr. Guy Hinsdale, both of Philadelphia.

DR. BALFOUR, superintendent of the London General Hospital, is not a candidate this year for the presidency of the Canadian Wheelmen's Association. He hopes, however, to bring the meeting of that association to London next year.

THE medical men of Windsor, Ont., at a meeting held lately, passed a resolution condemning the water supply of that city, and attributing the recent outbreak of typhoid fever to the pollution of the water by sewage from the town of Walkerville. Dr. Bryce, Provincial Health Officer, has instituted an investigation.

SALE OF QUININE IN TOBACCO SHOPS.—A bill has been introduced into the Italian Chamber of Deputies to add quinine to the other government monopolies of salt and tobacco, and to confine its sale to those who have a government permit. If this became a law the druggists would be forbidden to sell the drug, and those who wanted it would be obliged to procure it from a tobacconist.

MEDICAL MEN TO AVOID.—The one who has acute exacerbations of insanity when exposed to any new fad. The one who is always successful with all his difficult operations. The one who always sees hundreds of cases of a rare disease. The one who can always match your case and improve on your treatment. The one who always finds you have omitted something in the examination of your case. The one who thinks he can talk well, and is always ready to discuss any paper of the evening. The one who is always the first to do the new operation. The one who is in a chronic fear of being anticipated in his important discoveries. The one who in consultation feels it his conscientious duty to explain to the patient why he differs with the attending physician.—*Medical Record*.

DOCTORS SHOULD NOT BE SO MODEST.—I know that there is a general feeling among physicians of the better sort that conspicuous interest in public affairs may be misconstrued and looked upon as in some sort a means of professional advertisement. And one cannot choose but to appreciate and admire the sensitiveness and high sense of honor of which the sentiment is born. But, after all, there are greater misfortunes in life than being misunderstood, and I think that the fine feeling which leads the physician so often to waive the privileges of social and public life in the interest of what he conceives to be professional ethics is capable of a richer fruitage yet, in the defiance of mis-

construction, when impelled to whatever performance of public duty he can justify to himself.—*Dr. T. Mitchell Prudden, Address before Yale Medical School; Medical Record.*

IN his book, "A Little Tour in America," Dean Hole, of Rochester, Eng., quotes with unctiousness many specimens of what he regards as typical American humor. When he was in Cincinnati the thing that most impressed him was the following bit of doggerel which he heard recited in that city :

Little Willie from his mirror
 Sucked the mercury all off,
 Thinking, in his childish error,
 It would cure his whooping cough.
 At the funeral Willie's mother
 Smartly said to Mrs. Brown :
 "'Twas a chilly day for William
 When the mercury went down."

THE directors of the Post-Graduate Medical School and Hospital have named one of their wards in memory of the late Dr. Charles Carroll Lee, who was for many years a professor in the institution. They have placed a tablet in the ward, giving the names of those who combined to contribute the ten thousand dollars which was given for the purpose of the memorial. These names are as follows : Dr. Robert Abt, Dr. L. Bolton Bangs, Mrs. James Beales, Dr. Stephen S. Burt, Miss Caldwell, Dr. Charles L. Dana, Dr. Bache McE. Emmet, Dr. George H. Fox, "A Friend," Dr. Horace T. Hanks, Mr. and Mrs. Eugene Kelly, Mr. and Mrs. Henry J. Lamarche, Dr. Daniel Lewis, Mr. and Mrs. William Lummis, Mr. and Mrs. Frank A. Otis, Dr. Clarence C. Rice, Mr. Eli K. Robinson, Mr. Nelson Robinson, Dr. D. B. St. John Roosa, Mrs. Eliza M. Sloan, Dr. Andrew H. Smith, Mrs. M. E. Sparks, Dr. Reynold W. Wilcox. It will be seen that the faculty of the institution participated largely in the memorial gift.

TOLD IN CHICAGO.—Freddie had the croup, and Mr. Burton dressed hastily with the help of his wife, who insisted upon his taking his revolver, and rushed out for the doctor.

The night was very dark, and in going around a corner Mr. Burton collided heavily with some one, and then jumped backward.

"Excuse me," said the man, and walked on.

Burton grasped his weapon, thought a moment, felt for his watch ; it was not there, the man had taken it.

Burton drew his revolver and shouted : "Stop, or I'll shoot." The man stopped. "Now, said Burton, "give me that watch." The robber handed it over.

Burton returned and related his adventure, only to learn that his wife had removed the watch before he went out. A half-hour later the doctor came in somewhat agitated, and explained that while returning home from an urgent case he had been held up by a most villainous-looking highwayman and robbed of his watch.—*Medical Record.*

THE FORTHCOMING INTERNATIONAL PERIODICAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.—The second session of this congress is to be held at Geneva, Switzerland, in the first week of September. In the section for gynæcology the following is the official programme: (1) "Treatment of Pelvic Suppurations"—Reporters: Dr. Bouilly, of Paris; Dr. Kelly, of Baltimore; Dr. Zweifel, of Leipsic. (2) "Surgical Treatment of Uterine Retro-Deviations"—Reporters: Dr. Küstner, of Breslau; Dr. Pozzi, of Paris; Dr. Polk, of New York. (3) "What Method of Closing the Abdomen Presents the Best Guarantee against Abscesses, Eventrations, and Hernias?"—Reporters: Dr. Granville-Bantock, of London; Dr. La Torre, of Rome. In the section for obstetrics: (1) "Relative Frequency and Most Common Forms of Pelvic Contractions in Different Races, Groups of Countries, or Continents"—Reporters: Dr. Fancourt Barnes, of London; Dr. Dohrn, of Königsberg; Dr. Fochier, of Lyons; Dr. Kufferath, of Brussels; Dr. Jentzer, of Geneva; Dr. Lusk, of New York; Dr. Reir, of St. Petersburg; Dr. Pawlick, of Prague; Dr. Pastalozza, of Pavia; Dr. Traub, of Leyden. (2) "Treatment of Eclampsia"—Reporters: Dr. Charles, of Brussels; Dr. Charpentier, of Paris; Dr. Halbertsma, of Utrecht; Dr. Loeblein, of Giessen; Dr. Mangiagalli, of Milan and Pavia; Dr. Parvin, of Philadelphia; Dr. Smyly, of Dublin.

PROF. LEWIS A. SAYRE'S NINETEENTH BIRTHDAY.—Our distinguished townsman, Prof. Lewis A. Sayre, although seventy-six years of age on Saturday last, had reached at that time but his nineteenth birthday, it coming only in leap years, or on February 29. When Professor Sayre celebrated his eighteenth birthday in 1892, the Rev. Dr. William R. Huntington, pastor of Grace Church, sent him the following poem:

"Dear Doctor Sayre, and is it true
That Nature set her clock for you
Some four and fifty years too slow?
How clever of her to foreknow
That you would keep yourself so young,
So firm of heart, so stout of lung;
That she would never be detected,
Or you so much as e'en suspected
Of being older by a day
Than leap-year records seem to say!
Eighteen, dear friend, or seventy-two,
Which e'er it be, good luck to you!"

"So say we all of us." Thousands of his professional brethren on both sides of the Atlantic, his numerous friends and patients, and all his old associates, wish him many returns. Few are privileged to get the better of their birthdays in this way and receive the twice-doubled congratulations that attend them. You are welcome to all, old friend. Smell the flowers while you can.—*Medical Record.*

PROFESSIONAL ADVERTISING.

The editor of our esteemed contemporary, the *British Medical Journal*, has been cast in damages to the amount of £150 for speaking too strongly of the conduct of one of our profession.

It appears that Dr. Kingsbury, the plaintiff, had permitted his name to appear upon the prospectuses of two hydropathic establishments, and that the defendant journal, in answer to a query from a correspondent, had said that his conduct in doing so was "wholly incompatible with the honor and dignity of the profession," and suggested that he deserved "reprobation" at the hands of his professional brethren. That is the whole case in a nutshell.

Some months ago—November last—we felt impelled to speak on the question of professional advertising, and we then pointed out the unfairness of denouncing and worrying the younger and less distinguished members of the profession for offences of this description, which were in reality no worse, if they were even as objectionable, as those committed every day with impunity by men in the higher ranks of the profession. We said that while many struggling general practitioners were promptly jumped upon for any slight error in the way of publicity, men of high repute did what amounted to the same, or worse, and no notice was taken of it. We spoke strongly on that occasion. We said, after giving instances: "The transparent humbug of permitting this sort of thing to go unnoticed, while the poor practitioner is hauled across the coals daily for offending not one whit more grossly, is a disgrace to the profession," and we say so still.

It is disagreeable and even humiliating to have to speak on this subject, but it is one which must be spoken of so long as things are permitted to go on as they are going at present. Should we not have some new reading of Shakespeare's delightful couplet:

"What in the captain's but a choleric word
Is in the soldier rankest blasphemy"?

The evidence given the other day at the Manchester Assizes must have been highly amusing, if not indeed confusing and even bewildering, to those who for the moment were happy in not belonging to the honorable profession. Will someone who knows—we do not—inform us what is the difference, socially or professionally, between a hydropathic establishment and a home for inebriates? Will the same gifted person, or some other, tell us why permitting your name to appear upon the prospectus of one kind of establishment to which you are medical adviser—say, a hydropathic establishment—should be penal, "incompatible with the honor and dignity of the profession," while permitting it to appear on the prospectus of another business concern—say, an insurance company—is honorable and dignified?

The whole thing is pitiful in the extreme, and well calculated to demean the whole profession in the eyes of the public—and its own.—*The Medical Magazine*.