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NEWER METHODS OF DIAGNOSIS OF KIDNEY CASES AS APPLIED TO RENAL SURGERY.*

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I APPRECIATE the honour conferred on me, in being allowed to present a paper before this representative Medical Society of my native Province. Whilst there is practically nothing original in this essay, your attention is called to some of the newer methods in diagnosis of kidney diseases, which have been introduced since 1885, and which aid us in telling whether it is safe to operate, or not on a diseased kidney.

Cystoscopy, or inspection of the interior of the bladder, is performed by two kinds of instruments; one perfected by Nitze, Casper, and Leiter, containing a lens system and using water in the bladder, and the other variety by Howard Kelly and others, in which the bladder is filled with air. It is possible to tell, whether there is any inflammation or ulceration of the bladder mucosa and also the number, position and appearance of the ureteral openings. Sometimes there is only one kidney and one ureteral orifice. The urine is seen to spurt from the ureteral openings, and this spurt may appear clear, cloudy, bloody or purulent. Much information may be gained about the activity of the kidneys by watching the contractions of the ureteral ends, the spurting of the urine and the intervals between them.

Halban observed tears in the ureteral opening after a ureteral stone had passed.

In tuberculosis of the kidney, the cystoscope often shows a tubercular process around the mouth of the ureter. If blood is seen to escape from one of the ureters, that will assist in making a diagnosis between vesical and renal hæmorrhage.

Methylene blue tinges the urine green, which can be recognized in the

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case of a normal kidney in 15 to 30 minutes after taking the drug by the mouth. If we have to wait 60 minutes or longer before one ureter emits tinged urine, then we know there is disease on that side. (Ackard & Castaigne, 1897).

Vu-lcher & Joseph, inject 16 centigrammes of indigo-carmin into the gluteal muscles, and in normal cases, the urine is tinged purple in 15 to 30 minutes. They state that this drug is excreted entirely by the kidneys and is harmless.

In their latest report (1904), Hofmeyer agrees with their views and the advantages of chromo-cystoscopy are stated as follows:—

- (1) Intensity of the color is seen to vary.
- (2) Ureteral whirl may be seen going down towards the base of bladder or upwards, indicating a difference in the specific gravity.
- (3) The opening of ureter may be covered with ulcerations and the only way to find the orifice is to watch for the colored spurt coming out.

The same authors give iodide of potassium by the mouth and fill the bladder with a weak solution of peroxide of hydrogen, containing starch. The urinary spurt becomes bluish as soon as potassium iodide begins to be excreted. These tests aid us in determining whether the kidneys are functioning properly or not.

It is evident, however, that if the urine can be obtained separately from each kidney, without being contaminated by pathological elements coming from the ureters, bladder or urethra diagnosis will be less difficult. There are two methods of accomplishing this, viz., ureteral catheterization and segregation. It is unnecessary at this time to discuss the instruments used for catheterization of ureters, their mode of sterilization, application, etc. Some prefer water dilatation of the bladder and others the air dilatation. From my brief experience in the work, I prefer the water dilatation and the use of a Brenner, or a somewhat similar cystoscope with a lens system, permitting exact and direct images. No matter what instrument is used, all of us will fail at times to catheterize the ureters. Ureteral catheterization is becoming more popular, but at the same time requires much skill and patience. Very few, if any, authentic cases of infection of the ureters follow catheterization. The catheters may become plugged with blood, etc., preventing the collection of urine. Ureteral catheters spoil readily, making the method expensive.

Segregation has for its object the collecting of the urine from each kidney separately without the use of ureteral catheterization. The principle of the segregator perfected by Neumann, Harris and Down, is to raise the centre of the posterior wall of the bladder up, with the aid

of an elevator in the rectum or vagina, and then draw off the urine with catheters, separately, from the divided parts.

Luy's and Cathelin have designed an intra-vesical segregator, which divides the bladder into two halves, by the use of a thin rubber membrane, stretched over a spiral spring. Keen has used this kind with success.

Harris says, however: "After quite an extensive experience with the segregator, I can state that its intelligent use in suitable cases furnishes results which are reliable and gratifying. It should be used in connection with the cystoscope."

Segregation does not supplant entirely catheterization of the ureters, as there are cases in which the latter is more suitable, but that it does have a very useful field is certain. As many of the diseases of the kidneys require surgical operations for their cure, or even that one of the organs be sacrificed entirely, the necessity in the latter case of being able to estimate the functional capacity of the remaining organ became at once apparent, for upon this point depends the life or death of the patient.

Before the days of ureteral catheterization and the segregator, the determination of this point was practically beyond our power, unless we opened the peritoneum for digital examination of both kidneys, but now by an examination of the separate urines, we are able to determine the amount of work done by each organ with almost mathematical precision. In order to do this, it is necessary to take into consideration, when examining the urines, the time occupied in their collection, the amount collected from each side, the body weight of the patient, the diet and the amount of solids, such as urea, chlorides, etc.

Some of the objections to segregation are:—

- (1) There may be ulceration of bladder and urine is contaminated.
- (2) Segregators cannot be used when the bladder is much contracted, when bladder tumors of any size exist, or when the prostate is much enlarged.
- (3) The Segregator cannot be left in much over an hour.
- (4) The ureteral openings are usually close to the median line. Kinnell tells of a case where the right kidney had been removed and yet with Luy's Segregator, the urine escaped from the right side.

Albarran, lately made a number of comparative examinations on the kidneys of dogs, and found the left kidney 15 to 20 grammes heavier than the right. He says that the longer the urine was collected from each kidney, the less the difference, and from a study of the anatomy,

physiology and pathology of the kidneys, they are organs of the same kind, but not symmetrical.

Nicollet reports a novel method, which he has employed with success in three suitable cases.

The patient rests for a few hours and the bladder is emptied. He uses abdominal massage over one kidney, collects the urine and bladder is washed; then the other kidney is massaged and urine collected.

Collecting the urine separately from each kidney is certainly the greatest achievement introduced into this field of work. For example in tuberculosis of the kidney, if a nephrectomy is to be done, which kidney is tubercular and what is the condition of the other? These questions may be decided by examining the urine obtained separately from each kidney by the use of the ureteral catheters. If a tubercular process be visible around the ureteral opening, then it is unnecessary to catheterize that ureter, as it no doubt leads to a tubercular kidney. Catheterization of the opposite and apparently healthy kidney is, however, indicated and the urine so obtained, examined chemically, bacteriologically and microscopically. These "older" methods of examining the urine should not be discarded, but used in every case.

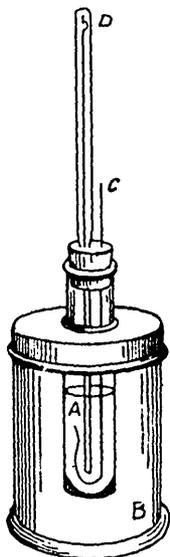
Cryoscopy (cryos-frost) was suggested by De Coppet, in 1871. He pointed out the interesting fact that when a molecule or a definite part by weight of any substance is dissolved in a definite quantity of distilled water, the freezing point of the solution is always lowered to a definite degree: or in other words the lower the freezing point of a solution, the greater the concentration.

Raoult developed this idea in 1882, when he published the first systematic work on the subject of cryoscopy. This was not made use of in medicine until 1898, when Koryani, of Budapest, saw the value of this method in diseases of the kidney.

Cryoscopy of the urine has no value, except as compared with the blood. By the examination of a great number of normal cases, the urine has been found to freeze at from -0.9° to -1.8° cent. and when the molecular concentration diminishes sufficiently to cause a freezing point above -0.9° , it is an indication of renal insufficiency. When renal insufficiency exists, waste products are retained in the blood and its freezing point is lowered. The normal freezing point of blood varies slightly between -0.57° and -0.55° , the normal being taken as -0.56° (Dreser).

Barth says: "The freezing point of the urine from diseased kidney is less than that from the sound or partially diseased, and the greater the difference, (one side being near normal) the greater the pathological process on the diseased side."

The apparatus used for the determination of the freezing point is that of Beckmann:—



It consists of an outer jar, B, in which the freezing mixture of ice and salt is placed. Suspended in the jar is the tube, A, and projecting into this is a wire stirring-rod, C, and a thermometer, D. This thermometer is graduated in one-hundredths of a degree centigrade, usually from one degree above to four degrees below zero. The scale is sufficiently coarse to allow of the reading of 1/200 of a degree.

Heidenhain's modification differs only in having an extra tube around the tube A, thus providing an air space between the liquid to be tested and the freezing mixture, so that the cooling will be more gradual. There is also a somewhat simpler apparatus in which the freezing is done with carbon dioxide gas.

Before using the thermometer it must be tested by taking the freezing point of distilled water, and any variation from the zero point noted, subsequent reading being corrected by this difference.

The ice and salt, in large pieces are placed in the jar in alternate layers, and from 10 to 20 cubic centimeters of the fluid to be tested poured into the inner tube. While the solution is cooling it is constantly stirred by means of the rod, to insure a thorough mixing and a uniform temperature throughout. The mercury at first sinks below the freezing point, but as coagulation takes place it again rises and the freezing point read.

In testing the urine, Claude uses a portion of the mixed 24 hour amount; while others use a fresh specimen from each kidney. Blood for the test may be withdrawn from one of the large veins in the arm, by means of an aspirator, about 10 c c being required to determine the freezing point.

Lindermann finds that there is no deviation from the normal freezing point so long as the suppurative process is limited to the bladder and pelvis of the kidney, but as soon as the parenchyma of the kidney is involved, there is a deviation at once i. e., the freezing point of the urine is higher than normal and approaches that of distilled water. There is also a change in the freezing point of the blood if the kidneys are affected to a pronounced degree and the blood will freeze lower than normal i. e., below -0.56° centigrade.

Moritz's investigations are also valuable, as he was able to study the pathological conditions of the kidneys after death in all of his cases. He had studied the freezing points of the urine and blood for weeks before the patients died. Claude and Balthazard, Casper and Richter, and others have reached conclusions practically identical.

Kümmel and his assistant Rümpel, are very enthusiastic in advocating the use of cryoscopy in renal surgery. Kümmel reports a series of 245 cases, which includes nearly every pathological condition of the kidney in which surgical interference could be considered. It includes cases of renal stone, tuberculosis, perinephric abscess, hydronephrosis and pyonephrosis, movable kidneys and tumors of many kinds. He gives his experience in his latest publication, 1903, and states that his faith in cryoscopy as a means of diagnosis remains unshaken. In over 500 determinations of blood and urine, cryoscopy has not disappointed him once, and it is of the greatest value, when used in relation to surgical diseases of the kidneys.

Kümmel claims that the differences in the results obtained by recent writers are due to errors in technique. He does not rely alone upon cryoscopic examination in any case, but employs it in connection with the usual methods as a supplementary test.

Before the introduction of cryoscopy of the blood and urine and ureteral catheterization, the surgeon was in constant fear after every nephrectomy, until the danger period had passed, lest the other kidney be unable to carry on the function of elimination properly or become incompetent as a result of the operation. At that time, the mortality was 16 per cent. or more. Since using the newer methods of diagnosis, Kümmel has not lost a single case in 72 operations, where the evidence showed that he was on the safe side.

Tieken, who has made over 500 estimations of the freezing point, says that when we have exhausted all the usual methods of examination and are still in doubt, we should make a careful cryoscopic examination of the blood and a specimen of urine obtained from each kidney separately, by ureteral catheterization or by the use of some good segregator, and then be governed accordingly as the results may indicate. He usually advises against operative interference in a kidney lesion when the freezing point of the blood showed a concentration far beyond the danger point.

I hope to report at a future time, on a series of cases where cryoscopy has been used.

Phloridzin Test, another aid in determining the functional activity of the kidneys, is the comparative estimation of the amount of sugar

eliminated by each, during a given time following the administration of .005 phloridzin hypodermatically. In 15 minutes, if the kidney is functioning normally, a temporary glycosuria occurs. The test for sugar may be made with the catheters inserted. This glycosuria does not occur so quickly nor in such large amounts in a diseased kidney, nor in one which is not functioning properly.

Another method for the estimation of the sufficiency or insufficiency of the kidneys has been brought into experimental use. It is the electric conductivity of the urine and can be carried out readily and with small quantities of urine. It gives comparative figures with cryoscopy and depends also on the inorganic molecular concentration of the urine.

Engelmann, after making a series of experiments in Kummel's laboratory, reported last month as follows:—

(1) The freezing point of blood in healthy persons varies within certain limits *i.e.* from -0.55° to -0.58° and the concentration of the urine, in health, is subject to daily changes.

(2) Increase of the concentration of the blood over normal is a sign of beginning insufficiency of the kidneys and means disease of both kidneys, unless some severe disease, as advanced cancer be present elsewhere, causing disturbances of the circulation. Other diseases as a rule and unilateral affections of the kidney do not change the freezing point of the blood. Large tumors in the abdomen do not change the freezing point of the blood.

(3) The electrical conductivity of the blood serum is not changed by insufficiency of the kidneys. Always in acute uræmia, and generally in chronic uræmia, the freezing point of the blood is considerably increased but the values for electrical conductivity do not go above normal. After intravenous infusions of normal saline solution, the osmotic pressure of the blood returns in a few minutes to its original condition.

(4) In the beginning of a disease of one kidney, even when other clinical symptoms are absent, differences in the concentration of the separated urines can be found. Also the electrical conductivity shows the same differences as the cryoscopic values.

The x-rays have been of service in this work, during the past three years. McArthur, Leonard & Bevan were the first in America to demonstrate skiagraphs of kidney stones, which were later verified by operations. A skiagraph negative as to stone does not prove the absence of a stone, yet a positive skiagraph, which shows one or more stones is invaluable to the surgeon.

Schmidt reports a case where he injected oil, through a ureteral catheter, into the pelvis of the kidney and a stone escaped afterwards.

Kolischer and Schmidt have adopted a unique method, which consists in the passage of a lead bougie into the ureter as far as possible and then while in place, a skiagraph is taken. By this method, the course of the ureters can be determined, the location of the renal pelvis, whether dilated or not, and the exact topography of renal calculi can be determined. It aids in differentiating gall stones from renal stones.

Kelly had designed wax tipped bougies, in order to locate ureteral stones, which produce markings or scratchings on the wax.

I believe that these newer methods are beginning to, and should to a great extent, take the place of exploratory operations on the kidney, so that now the surgeon may be almost positive of his diagnosis before operating. If this resumé shall be the means of arousing the interest of some of the members of this Society in these methods, I will be amply repaid for the time spent in preparing it. My thanks are due to Max Ballin for assistance in translating.

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LITHOTOMY *VERSUS* LITHOLAPAXY.*

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THE subject of stone in the bladder, notwithstanding the fact that it has been so often discussed, is of great interest to the surgeon, who is always inclined to give a favorable reception to any suggestions which may help to throw any light on the subject.

There are certain parts of the globe where stone is very prevalent, such as the north-west of India, the delta of the Nile, east Anglia, and, on this continent, the Mississippi valley, while in other countries of the world stone is only occasionally met with, or indeed, is almost unknown.

In a review of the literature of the subject of urinary calculus, I have taken advantage of the writings of those who have had wide experience and unrivalled opportunities in dealing with this affection. These include Freyer, Keegan, Keith, and Baker, in India; Milton, in Egypt; Ferguson, Thompson, Harrison, Cadge, and Burton, in England; Guyon, Dittal and Volkmann, in Europe; and Briggs, Cabot, Keyes and Bangs, in America.

No single operation meets the requirements of all cases of stone. We have several entirely different methods, each of which has certain advantages and also its own peculiar difficulties and dangers which must be recognized and avoided. The best results will be attained by the surgeon who has a thorough practical knowledge of all methods of operating, and who will study each case by itself, and, in the best interests of his patient, select the operation which best meets the indications and requirements. He will, in this way, obtain better results than are possible to the mere advocate of a special operation however expert he may be in its performance.

* Read before the Ontario Medical Association, June 14th, 1904.

Where a stone in the bladder is too large to pass *per vias naturales*, one of two methods may be adopted, either opening the bladder through the perineum, or above the pubes; or crushing the calculus, so that it may be removed through the urethra.

The first method, or "cutting for stone," is one of the oldest operations known to surgeons, and dates back before the time of Hippocrates, and, since Celsus with a scalpel alone cut blindly "on the gripe," the operation of perineal lithotomy has undergone many modifications. It was practised by priests and laymen with great success as late as the earlier part of the eighteenth century. To Cheselden, in England, is due the credit of placing the lateral operation on a scientific anatomical basis. He performed 213 lateral lithotomies with a mortality of only 5 per cent. Suprapubic lithotomy was first performed by Pierre Franco, in 1550, but was not recommended by him and was lost to sight for a long time. It was revived in the eighteenth century by Douglas and Cheselden in England, and was frequently practiced during the earlier part of the last century, but gradually declined in popularity, being more dangerous than the perineal route. In 1880 it was again revived by Petersen, of Kiel, who improved the operation by distention of the bladder and rectum with water. To this procedure, and the application of antiseptic methods, the operation owes its present popularity.

In 1818, Civiale published his work on lithotrity. He advocated the crushing of the stone in the bladder, at many short sittings, and left the fragments to be passed with the urine. His first successful operation was performed in 1824, and, although operating with inferior appliances, he demonstrated the possibility of pulverizing stones by instruments introduced through the urethra. Subsequently various improvements were made in the instruments used, until the invention of the modern lithotrite, when the operation reached a high degree of perfection, although the death rate was high.

It was, however, to the genius of Henry J. Bigelow, of Boston, that the origin of "lithotrity at one sitting" or litholapaxy is to be attributed. This occurred in 1878 when he introduced improved instruments, and proposed, under anaesthesia, not only to crush the stone through the urethra, but by a powerful evacuator, to wholly remove the fragments at one and the same sitting.

This procedure was eagerly accepted by the profession. It revolutionized the old operation of lithotrity and up to the present time, has been universally accepted as the best method of treating uncomplicated cases of vesical calculus.

Bigelow showed that the bladder was much more tolerant to instrumentation than was previously believed, and pointed out that the greatest danger of lithotrity was not in the use of instruments but from the subsequent irritation of the bladder by the fragments of stone left in it.

In 1875, Otis, of New York, pointed out that the calibre of the urethra was greater than had formerly been supposed, and this has been found to hold good in children. Notwithstanding the fact that lateral lithotomy had been eminently successful in children, Surgeon-Major Keegan, in India, extended the operation of litholapaxy to males up to the age of puberty, and in the *Lancet* of January 16, 1897, published the following table showing the comparative safety of crushing operations in children :

Nature of operation.	Number of cases.	Average age.	Percentage mortality.
Litholapaxy	509	6.35	2.35
Lateral Lithotomy	267	6.90	5.24

In making a choice of several entirely different methods, it will be necessary to carefully consider various factors, which, in great measure, contribute to a successful issue. These may be arranged as follows: (1) age and mortality; (2) size and consistency of the stone; (3) completeness of cure; (4) the state of the urethra, bladder and kidneys, and (5) the damage done to anatomical structures and interference with the functions of the parts. To these must be added the skill and experience of the operator.

Age and Mortality. The mortality of all the stone operations is least in children, and increases with each decade after puberty and cases may consequently be conveniently arranged in three groups according to age: (a) infancy to puberty, (b) puberty to middle age, (c) middle age to old age. This division marks, more or less accurately, certain epochs in the development and decay of the genito-urinary organs.

The following table, compiled from various sources by Cabot, of Boston, for *Morrow's System*, includes the records of many operators, and also embraces Barling's Tables from six large London and six provincial hospitals, but excludes the statistics of surgeons who, by long practice and exceptional opportunities, have become exceedingly expert, as with Ferguson, Cadge and Agnew, in lithotomy; and Guyon, Keith, Keegan and Freyer in the operation litholapaxy.

Group (a) Infancy to puberty.

	Cases.	Deaths.	Percentage mortality.
Perineal Lithotomy.....	602	19	3.1
Suprapubic Lithotomy.....	637	84	13.1
Litholapaxy.....	284	5	1.7

Group (b) Puberty to middle age.

	Cases.	Deaths.	Percentage mortality.
Perineal Lithotomy.....	226	22	9.7
Suprapubic Lithotomy.....	159	18	11.3
Litholapaxy.....	485	22	1.7

Group (c) Middle age to old age.

	Cases.	Deaths.	Percentage mortality.
Perineal Lithotomy.....	69	13	19
Suprapubic Lithotomy.....	91	17	18
Litholapaxy.....	581	40	7

The above statistics being based on the results of operations performed by various surgeons outside the "stone districts" will perhaps give a truer estimate of the relative mortality than the following table, which represents the returns of operations performed on patients of all ages by experts in India, where the stone is very common.

Operation	Cases	Cured	Died	Mortality
Lateral Lithotomy.....	7,201	6,407	794	11.02
Suprapubic Lithotomy.....	147	86	61	42.17
Litholapaxy.....	10,073	9,665	399	3.96

Keegan, *Lancet*, Jan. 30, 1897.

These figures show that in childhood the crushing operation is one of comparative safety, although there is little to choose between it and the time-honored lateral section. The *sectio alta* is, at this age, much

more dangerous. After puberty, the enlargement of the urethra and development of the prostate, with a consequent increase in vascularity, increase the dangers of cutting operations through the perineum. These changes, however, facilitate the crushing operation, and render the performance of litholapaxy comparatively easy and safe. In old age the mortality is decidedly in favor of litholapaxy, being little higher than it was earlier in life, whereas the danger of all cutting operations is markedly increased at this age. This is due to a loss of vigor, the increased size of the prostate gland with its injurious effects on the bladder.

Size and consistency of the stone. The limits as to size, under litholapaxy, are being from time to time extended as instruments become more perfected. Stones weighing as much as $6\frac{1}{2}$ ounces, which could not at first have been attempted, have been removed successfully in this way. (Freyer, B. M. J., 1894.)

The hardness of the stone does not now contraindicate litholapaxy, but where a very large or dense calculus is encountered, which defies the powers of the lithotrite, the surgeon will have to resort to one of the cutting operations.

Completeness of cure. That there is a greater danger of leaving a fragment of stone in the bladder after crushing, than after lithotomy is one of the chief objections urged, but this is due rather to a want of thoroughness on the part of the surgeon, than to a lack of completeness in the operation, for with a variety of evacuating cannulae, both straight and curved, in competent hands the chance of recurrence, from retained fragments, is very small indeed. The danger of retention of fragments is, however, greatly increased by any obstruction to the flow of urine, such as enlarged prostate. The bladder is then more apt to be sacculated and the chance of fragments being missed by the evacuator are decidedly greater. A healthy bladder would, no doubt, rid itself of such debris.

The state of the urethra, bladder and kidneys. Stricture of the urethra, in any part of its course, is no longer an obstacle to crushing, for it may be first dealt with either by divulsion or internal urethrotomy. If, however, an old indurated, tortuous stricture exists, especially if complicated with fistulae; or if the urethra is intolerant of instrumentation and rigors and fever follow any attempt at dilatation, it will be necessary to cut, for this would permit the removal of the stone and the cure of the stricture.

Enlarged prostate does not prohibit litholapaxy if the necessary instruments can be introduced and many brilliant results have been

obtained in such cases, but it may be difficult or impossible to seize the calculus with the lithotrite, and even if the stone be broken, there may be great difficulty in finding the fragments and also the danger of leaving fragments behind while aspirating. Here the supra-pubic operation in the hands of the general surgeon, will be advisable.

In old men with enlarged prostates, the necessary mechanical disturbance attending litholapaxy stirs up the vesical neck so that a cystitis, more or less intense and prolonged, follows the operation. E. L. Keyes, in a paper read before the Med. Soc. N. Y., in 1892, pointed out that "these cases do well under lithotomy and in them the supra-pubic method should be adopted, because it allows the surgeon to deal at a single sitting, not only with the minor necessity—the small stone—but also with the more important and permanent disability—the enlarged prostate—by prolonging the suprapubic lithotomy into a prostatectomy and making the patient's necessity the surgeon's opportunity."

Where the stone is encysted, or lodged in the opening of the ureter, or urethra, and cannot be dislodged, or a concomitant tumor or tuberculosis of the bladder exists, suprapubic lithotomy is the operation of election, for by no other method can both be dealt with. In diseased conditions of the bladder or kidneys, which so militate against the chances of recovery in all operative procedures, or in cases of unhealthy urine arising from either, the opinion of Sir Wm. Hingston of Montreal is to the effect that "the lithotrite is as safe an instrument as the lithotomist's knife. Nor should an attempt at the removal of a calculus by either method be delayed pending an effort—usually fruitless—to improve any of these conditions."

The damage done to anatomical structures and interference with the functions of the part. The especial superiority of litholapaxy to all other methods lies in the fact that, when carefully performed, it involves no permanent injury to the parts, nor does it disturb any physiological function. Its sequæ are few and rarely serious. Supra-pubic lithotomy causes no permanent trouble, although a fistulous opening sometimes remains, which refuses to heal, and is a constant source of discomfort to the patient. There may be difficulty, in a very fat patient, in reaching the bladder above the pubes, or in obtaining sufficient room to reach that viscus, owing to the close relations of the peritoneum to the pubic bone. Hæmorrhage and urinary infiltration, with consequent sepsis, constitute the chief dangers of the operation. The presence of a wound in the bladder wall may be the cause of adhesions to the abdominal wall, or pubes, and so interfere with the proper contraction of the fibres of the

bladder, or a urinary deposit may take place on the scar and lead to a recurrence of stone.

The lateral operation passes through important structures. Incontinence of urine, fistula, injury to the seminal ducts, sometimes resulting in sterility, are objections urged against this operation. It often involves an extensive incision into the prostate, or serious bruising of the gland, by the necessary dilatation of the neck of the bladder, and the extraction of the calculus through it, a grave danger in old people. Profuse hæmorrhage and injury to the rectum must also be taken into account.

An account of the various operations for the removal of stone would be incomplete without reference to perineal lithotrity, proposed by Dolbeau, in 1862, modified by Reginald Harrison, and described by him in *The Lancet* of Sept. 22, 1888. Mr. Harrison, by a small median incision, opens the membranous urethra on a grooved guide, digitally dilates the prostatic urethra and neck of the bladder, and then by a giant lithotrite, introduced into the bladder, crushes the stone, and removes the fragments by forceps or aspirator.

In the Bradshaw lecture of 1896, Mr Harrison points out the advantages of perineal lithotrity as follows: (1) It enables the operator to crush and evacuate large stones in a short time. (2) Less risk to life than other cutting operations and is well adapted to the old and feeble, where for any reason crushing is inadmissible. (3) It permits of more effectual washing of the bladder and any pouches connected with it, as the route is shorter and larger tubes may be used. (4) The bladder may be more thoroughly explored by forceps or finger to ascertain that the viscus is cleared of debris. (5) It allows of efficient draining of the bladder by rubber tubes, and treatment of cystitis due to retention of urine in pouches in its walls. This method is also well adapted for the cure of stricture in the deep urethra, when complicating stone.

Perineal lithotrity, no doubt, has a great future, and, on account of its safety, may replace both lateral and superapubic lithotomy. Forbes Keith, of Delhi, India, has operated by this method 157 times, with a mortality of 1.9 per cent. (*Lancet*, Sep. 30. 1893.)

In conclusion, the choice of operation may be briefly summarized as follows:—

(1) Litholapaxy is certainly the operation of election in all simple cases of stone in the urinary bladder.

(2) When the stone is too hard or too large to be crushed through the urethra or removed by the lateral method without injury, the supra-pubic method should be adopted, or, perhaps better, by perineal lithotrity.

(3) When the stone is encysted or associated with a tumor of the bladder or prostrate, choose the supra-pubic route and remove both at the same time.

(4) Where there is a tight, deep urethral stricture, especially when fistulae exist, requiring a long operation to overcome, select the supra-pubic or median perineal operation.

(5) In ankylosis of one or both hip joints, which interfere with the use of urethral instruments, and excludes all perineal operations, do supra-pubic lithotomy.

(6) In the presence of foreign bodies in the bladder and which may form the nucleus of a calculus and resist the lithotrite, perform one of the perineal methods.

(7) Although litholapaxy applied to children is very successful in the hands of experts, for the present, lateral lithotomy is the safer operation for the general surgeon.

(8) Litholapaxy should be carried out, whenever possible, when senile degenerations exist, or when there are morbid changes in the genito-urinary apparatus, and the necessary treatment afforded to the complication, either before, or after litholapaxy.

ORATION IN SURGERY BEFORE THE MINNESOTA STATE MEDICAL ASSOCIATION, JUNE 2ND, 1904.

By ALEXANDER HUGH FERGUSON, M.D., Chicago,
Prof. Clinical Surgery University of Illinois.

LADIES and Gentlemen: Standing before this learned body for the first time I am affected by conflicting emotions, by those of pleasure in being with you, and by those of regret at not having been here before. I cannot conceive of a greater honor in the life of any man than that of addressing such a professional body as this Association. To look around this room and behold the smiling faces of distinguished and generous friends would stir to the core a more phlegmatic nature than mine. For the moment I fail to find words that adequately express my appreciation of your compliment. Permit me frankly to say that it was not within the limits of my ambition to resist your kind invitation, not that I had no friends among you, but that I needed more, and also that I might observe the wise injunction that:

“The friends thou hast and their adoption tried,
Grapple them to thy soul with hooks of steel.”

I am fully aware your Association wields a vast influence and power, not alone in its own State, but also throughout the entire union. Its

deliberations and productions are profitably read, studied and digested by members of similar bodies of many and far-distant States. Not a few of your members have gained international reputation, and, judging from the original and practical papers published year by year by you, there is no doubt in my mind of the valuable legacy that is to be handed down to posterity.

Your high professional attainments, I am sure, forestall any necessity for a lengthy oration from me on surgery. I shall not endeavor to eulogize the surgery of the past, nor have I the time to recite that of the present, let alone speculate on that of the future.

As an active worker and teacher it frequently happens that unsettled questions bearing on etiology, diagnosis and treatment confront me, as they do us all, and it occurred to me I might be borne with should I occupy a portion of your valuable time in briefly discussing some surgical problems and practices.

"There are many events in the womb of time that will be delivered."

The evolution of the surgeon in solving surgical problems out of medical mysteries had its dawn with discoveries, and its development with scientific progress. The progress made in all the sciences collateral to medicine has materially contributed to solve surgical problems, and to apply suitable remedies.

Great and fertile conceptions of the sciences are ever unfolding the all-pervading and mysterious buds of hidden truth that we may, according to unchangeable laws, behold things as they are, and often, too, enable us to predict future changes to a certain extent, to counteract or modify these changes and even develop the evolving materials at hand. Complete as our explanations of different phenomena in human nature may appear, they are only partial explanations at best, for the reason that nature works also by unseen elements and invisible forces of natural selection, of which we know little or nothing. The individual man, woman or child, when stricken by disease or accident, is our special ward, and we are proud to say that the decrease of suffering and death was never in the history of man so marked as now.

As carpenters of human kind, our special office on this earth is the intelligent exercise of that scientific knowledge which bears on the divine art of healing, and it is our sacred and imperative duty to seek that knowledge.

With a full realization of the importance of this occasion I feel that I can trust you to credit me with giving evidence of surgical truths as I see them, and whatever I may lack in lucidity let me entertain the hope that my enthusiasm, which I have never been able to control, and for

which I offer no apology, will be emulated by the younger members of the profession.

Instead of elaborately delving into one branch of surgery, it is my object to extract a little sweetness from several subjects, as the busy bee gets nectar from different flowers, and to present it to you in a palatable way.

CLEFT PALATE.

The surgical problem connected with the successful closure of a cleft in the hard and soft palate is a mechanical one, to a large degree.

Other things being equal, the operator who has steady and nimble fingers can speedily, accurately and successfully perform plastic operations within the mouth, that baffle one less endowed by nature. In my opinion, there are few operations performable on the human body that test the skill of the surgeon more than urano-staphylorrhaphy, and, when properly and deftly executed, it is a most beneficial procedure. It is a fact that one grows fond of difficult cases in proportion to his successful management of them.

In my judgment, the points to be borne in mind in these cases are (1) that no tissue be sacrificed; (2) that the raw surfaces be coapted as broadly as possible; (3) the stitches must not bear tension; (4) in young children, too much operative work must not be done at one sitting; (5) the cleft should be entirely closed before the child begins to talk, in order to obtain a perfect physiologic result. It may be wise to complete the work in different sittings, three to six weeks apart. Even though the case is not treated when young, I advise operation, for the reason, that phonation is always more or less improved, and the unpleasant flow of nasal discharges into the mouth is terminated. The crushing of the two superior maxillae together is a formidable major operation on an infant, and I am constrained to say that at no age, or under any conditions, is it necessary.

A careful selection of the methods of flap formation and the coaptation of these to bridge over the deficiency fulfill all reasonable indications. (See *Journal A.M.A.*, May 16, 1900, and *Annals of Surgery* Oct., 1902.)

SUPERIOR MAXILLA.

I shall now call your attention to the extirpation of the superior maxilla through the mouth.

The usual and old-fashioned incisions inflicted upon the face to give, as alleged ample room for the removal of the superior maxilla, are not necessary, and should be discarded. I am convinced by my own experience that a diseased superior maxilla is more quickly extirpated

through the mouth, with practically far less hemorrhage, and with infinitely better results, than by the prevailing methods. It is but the work of a few minutes to tie the external carotid artery and the dangers from active hemorrhage are anticipated and prevented. This vessel may be ligated a day or two before the jaw is removed. Dilating the mouth, often to the extent of cracking the lips in several places, is a valuable preparation for the operation proper, in that considerably more room is obtained through which to manipulate. If the constitution of the patient permits of it, morphine may be administered to the amount of producing marked drowsiness, an hour or two before beginning the operation. It will then be found that less chloroform is required to anaesthetise the patient, as well as a consequent diminution of pain and shock.

This operation has been previously published (*Western Medical Review*, April, 1901). Suffice it to say, that two small incisions are made, each about half an inch long, one over the nasal process and the other over the junction of the maxilla with the malar bone, and through these an osteotome is passed and then forced through the bony attachments respectively, with a few blows of a hammer.

The hard palate and alveolar process are also severed with the osteotome. A few well directed strokes with a strong knife separate the jaw-bone from the cheek and soft palate, after which it is but the work of a minute to dislodge the bone, pack the cavity with iodoform gauze, and the operation is completed. The surgeon who is inexperienced or timid in undertaking this operation should first perform it a few times on the cadaver.

THYROID GLAND.

Another subject that has attracted the special attention of doctors, on account of its enigmatic behavior in health and disease, is the thyroid gland, one of the mysterious ductless glands of the body. Embryologists tell us that it develops from the floor of the pharynx by three anlagen which unite (Minot), and has a thyrolingual duct opening into the foramen caecum, but long before the child is born this duct is closed (closed eighth week, foetal life). In proportion to the body weight, it is larger in the infant (0.16 per cent.) than in the full grown (0.5 per cent.) Its normal weight in adult life is from 25 to 60 grams, which varies in persons of different countries and sections of a country. It has a capsule, etc., but the two structures most noticeable for their abundance, are the blood vessels and lymphatics. The substance produced by the cubic or cylindrical cells lining the glandular follicles, is a colloid material, homogeneous, viscid and albuminous.

It is evident (Piersol) that the blood capillaries come into immediate contact with the gland cells, and the lymphatics, as a rule, contain colloid material. How it gets there is not known, but it is believed by Horsley, Pozzi, Biondi and others, that the follicles open directly into the lymphatic vessels, and thus act as excretory ducts to the thyroid, while others believe that absorption accounts for it.

A prodigious amount of research has been done by Berkley, Wolfier, Sandstrom, Kohn, Edmunds, Hofmeister, Prenant, Pozzi, Horsley, Biondi, and many others, to ascertain an accurate knowledge of its minute anatomy. It was discovered by Schiff, in 1856, that animals could not live without the thyroid gland. A quarter of a century later Reverdin and Kocher demonstrated that operative myxedema resulted from its total extirpation, and death resulted probably, from toxic paralysis of the centers of respiration.

The existence of accessory and parathyroids no doubt accounts for the contradictory results obtained by different operators and dependent, as they are, upon whether they were all removed or not. Its presence is necessary to the enjoyment of good health and development, but beyond this, the function of the thyroid gland is not known.

The ill effects of thyroidectomy on animals are counter-balanced by the injection of the extract of the gland, or by grafting gland tissue (Schiff). It was Murray (*Br. Med. Jour.*, II., 796, 1891) who applied this discovery to man and found that thyroid preparations ingested and absorbed from the alimentary canal removed the symptoms of athyrosis. The valuable researches of Baumann, Hutchinson, Ross and Wells on iodothyryn, found in the colloid material in the normal gland follicles, are in the right direction, and by the time the ingredients of the colloid matter in the follicles of the thyroid of exophthalmic subjects are discovered, then, and not till then, can a chemical cure be expected. In the meantime, the surgeon has to remove the gland, for thyroidectomy results in more amelioration and cures of the disease, than any other treatment yet prescribed.

There is a hidden relationship between Graves' disease and the other ductless glands that furnishes a vast field for research. One may be a complement to or a controller of the other.

EXPLORATION.

I shall not bore you with a description of the different methods employed to explore the brain, chest wall, abdomen, and large joints. But, imbued as I am, with a conviction of the value of two modes of procedure, probably new, one to explore the abdomen and the

other for the purpose of bringing into view the interior structures of a knee joint, I am sure you will excuse me for recommending them.

In our daily round of work we meet cases requiring colpotomy, anterior or posterior, to remove myomata, cysts or what-not, and these same cases often give a history of stomach, gall-bladder, kidney or bowel disturbances. An examination of the abdominal organs would be highly satisfactory, although oftentimes, one feels hardly justified in opening through the abdominal wall, for that purpose. The problem is solved by passing the hand and entire forearm into the abdominal cavity through the vagina. In order to furnish enough space for this purpose, it is imperative to cut through the whole length of the mucous membrane of the vagina, on each side post-laterally. The mucous membrane being severed, the other structures stretch at once. The bare arm being smeared over with sterile vaseline, glides in with ease. I have, within the last three years, both in private practice, and at my public clinics, passed my hand through the vagina to the diaphragm and palpated all the abdominal organs. In one case, detecting gall-stones, I cut down upon the gall-bladder, and pushed it, full of biliary calculi, through the button-hole incision. In another case, a cancer of the rectum was present, and before removing it, it was important to learn the condition of the internal organs. I passed my hand as above mentioned, and detected cancer of the liver and gall-bladder.

In still another case, a maiden lady of mature years, the vaginal outlet was so small that a digital examination could not be made without an anæsthetic. I then found cancer of the posterior lip of the cervix. Through an anterior colpotomy I passed my hand, having of course, split the vagina on each side, and found the anterior surface of the stomach involved with a firm hard tumor, evidently cancerous in character, and the lymphatics were also extensively enlarged, no doubt with the same dreadful disease.

For the purpose of pointing out the value of this method of exploring the abdominal cavity, the three cases referred to are sufficient examples, and I shall not relate others. In the first case, a second operation for gall-stones was avoided, and in the other two instances, a major operation was prevented, which, if performed, would surely have injured the art of surgery.

The knee joint exploration simply consists in a long semi-lunar incision into the joint on its external aspect, nicking the patellar tendon at the one end, and cutting the outer half of the sheath of the quadriceps extensor muscle at the other. It is astonishing the facility with which this flap, containing the patella can be thrown inwards over the internal

condyle, and how beautifully it exposes the entire interior of the joint.

The superior advantages of this exposure of the joint are so self-evident that no comments are required. Every facility is afforded for even a complete excision of the joint.

HERNIA,

The surgical anatomy, the symptoms, the etiology and the treatment of ruptures of the anterior abdominal wall have been thoroughly studied, and are now fairly well understood. The etiology of inguinal hernia is still a problem. While it is correct to say that congenital oblique inguinal hernia is usually due to the non-closure of the funicular process at the internal ring, it does not furnish us with an explanation why this process remains patent in some men and closes in others. When we consider the physiologic process by which the testicle descends from the abdominal cavity to the scrotum, it is not surprising that oblique inguinal hernia is five times more common in the male than in the female, and that over three-quarters of all abdominal hernias are of this kind. In a dissection of five hundred hernial subjects by Cloquet, he found imperfect closure of the internal ring so common, that he deemed it the rule rather than the exception. It is occasionally open, and no hernia protrudes; then it must be that the valvular arrangement of the structures at the internal ring and along the canal is normal, and Cooper's fascia strong and firm. In a perfect anatomic subject the internal ring is so smoothly closed over that an infundibular process of the peritoneum is very insignificant, or not at all perceptible; the valve formation of the internal ring and canal absolutely prevents a giving-away at the internal ring, for the more the intra-abdominal pressure increases, the tighter the valve closes, provided, however, that a normal muscular and aponeurotic support protects it externally to the transversalis fascia.

The two main structures that stand on guard to protect the internal ring are the internal oblique muscle and the aponeurosis of the external oblique, the former being the active agent, ready to contract instantly, the moment the ring is unduly approached by a sudden increase of intra-abdominal pressure, as is done in running, jumping, lifting, etc. The fact is that in oblique inguinal hernia the internal ring receives no substantial protection from the internal oblique muscle for the reason that it is not attached to the internal aspect of Poupart's ligament sufficiently low down, and as it passes downwards and inwards from its deficient origin it passes above the centre of the internal ring.

Indeed, the origin of this muscle may be entirely deficient at Poupart's ligament, and this affords an opportunity for a sausage-shaped

protrusion of a hernial nature in the groin. Is it not probable that this congenital defect of the internal oblique muscle is accountable for the non-closure of the internal ring? If the internal ring is protected during the descent of testicle one should suppose that the muscular tonicity would soon close the course the testicle had taken behind the internal oblique muscle.

The key to the radical cure of oblique inguinal hernia is to suture the internal oblique muscle and its tendon to the inner aspect of Poupart's ligament as low down as possible without undue tension, after first having ablated the sac and strengthened the internal ring with a few stitches above the root of the cord.

Any operation for the cure of hernia that raises the cord out of its natural course is empirical, and empiricism is the very thing that thinking men through all the centuries have been trying to elude. If all our work were done on the plan of expediency the search for truth in the science of surgery would lose its charm, and the art of imitating nature would lose its beauty.

In the anatomic or typic operation the sac is tied off. Why? To restore the rotundity of the peritoneum. The transversalis fascia is sutured nicely around the root of the cord. Why? In order to obliterate a pathologic infundibuliform process, and make a new internal ring. The internal oblique muscle is sutured to Poupart's ligament at least two-thirds of the way down, which is the usual attachment found in the female. Why? That a congenital defect be rectified and the muscle be allowed an opportunity to protect the internal ring, and the aponeurosis of the external muscle is then sutured and the skin coapted so that they may occupy their normal place in this region. It will be noticed that no step is taken without a valid anatomic reason.

(A Typical Operation, etc., *Journal A.M.A.*, April 11, 1899.)

When the hernia is a direct one, or the conjoined tendon deficient, an additional procedure is often required, and that is to split the sheath of the rectus muscle and sew it over to Poupart's ligament, across the weak point. Should, however, the entire inguinal area be deficient, thinned out, atrophied or degenerated, I have not hesitated to transplant a portion of the sartorius muscle to this region.

FISTULAE AND METHYLENE BLUE.

It has been my practice for some time past to stain all fistulae with methylene blue before attempting their removal, and I have found it of the highest practical value. A branchial fistulae is sometimes difficult to follow with a probe or by sight on account of its small and trail

nature. If, however, methylene blue is forced into it, staining of its lining membrane takes place, and there is then no difficulty whatever in following the blue trail, however serpentine it may be in its course. Take, again, a horseshoe anal fistula, with its friable inner surface and crooked course; how often have we been perplexed in trying to differentiate the limitations of the disease. Methylene blue forced into the fistula just before operating stains it perfectly and defines its extent, thereby the operative procedure is simplified and no more tissue is removed than necessary, such tissue being clearly manifested by the stain.

In several cases of fæcal fistulae when I employed the methylene blue, I was able to trace them with accuracy and ease. Over a year ago I was invited to hold a clinic at Michigan University, and of the cases produced, there was one with three fistulae, two fæcal and one biliary; the bile came through one of the fæcal openings, all following operations for suppurative appendicitis. The methylene blue staining converted what would have been a formidable, tedious and difficult task into a comparatively safe and easy one. The stain followed a small fistula among adherent coils of small intestine to the upper portion of the jejunum, from which the bile escaped, and the clearness with which its course was demonstrated was simply great. Another blue streak was followed, and it brought us on to a large and chronically inflamed and perforated appendix, situated far in and behind the cæcum and colon. The other fistulae were in the large bowel and easily detected. Just a short time previous to this, I operated on a similar case, referred by Dr. Gunn, of Clinton, Ont., Canada, in which the bile also escaped through the orifice of a fæcal fistula in the large bowel, following an operation for appendicitis. A separate tortuous fistulous track led to the upper small bowel, which gave a passage-way for the bile, which could not have been readily traced were it not for the methylene blue stain. The appendix was hidden behind the large bowel.

In dealing with the different varieties of rectal, vesical, vaginal and ureteral fistulae, the aid of methylene blue, as above described, is invaluable.

By staining an impassable stricture of the urethra, by injecting methylene blue into the penis, the small tortuous stricture is colored blue, and then the Wheelous operation is facilitated, the course of the stricture followed by sight from before backwards.

In bone surgery it is equally useful. Cavities in the long bones are more accurately cleaned out when they are thus stained. In performing a mastoid operation, upon making a small opening through the bone,

force methylene blue into the suppurating cavity and the various directions in which the disease extends are made obvious.

NEPHRITIS.

I have written so much about this disease that I shall devote but a few words to it, lest its importance be forgotten.

A great deal of thought and work have been given to the surgical treatment of nephritis, since the appearance of my first article on this subject (March 18, 1899). While decapsulation of the kidney has been performed upwards of two hundred times, by different surgeons, still there are many unsettled questions concerning it. The immediate and remote benefits that are derived from decapsulation and nephrotomy, or from nephrotomy alone, are no longer questioned by those of experience in this line. In cases of decapsulation and nephrotomy, the other kidney frequently improves so as to excrete normal urine, for which I venture no explanation. We make bold now to declare that nephritis, interstitial, parenchymatous or diffuse, is purely a surgical subject, and that in its treatment internal medication is a sad failure. Chronic Bright's disease, once permanently established, is as much a surgical problem as is the inflamed appendix, gall-bladder, or hypertrophied prostate.

It must be remembered, too, that chronic interstitial and parenchymatous changes, or both, have been going on for a long time, before the disease is detected, or makes itself manifest by producing ill-health. It is not consistent with common-sense, reason, or accrued knowledge to say that interstitial nephritis is chronic from the start, as many authors would have us believe.

Although I feel that I am your welcomed and privileged guest to-day, and would be allowed to say a good deal more, I must, however, respect your kindness and endurance, but permit me to point out briefly a few of the many other important branches, not yet mentioned.

We have within a few years seen the operation of prostatectomy generally adopted the world over, for the relief of prostatic hypertrophy, and in that time the Bottini operation has had its initiation, rise and fall.

We enjoy brilliant achievements in ureteral surgery. The artistic hand of the scholar has been successfully laid upon the wounded heart diseased lung and fevered brain.

While much has been done surgically for the liver and biliary tracts, the stomach and the intestinal canal, there are still many unsolved problems connected with them, that are attractive to the inquirer. The vicious circle is not yet cleared away; whether we do a gastro-enterostomy anteriorly or posteriorly, the circle is not always prevented.

In addition to this, we can anastomose the proximal with the distal arm of the loop of bowel, and still it comes. We may then tie off the proximal arm, close to the stomach, as advised by Fowler, and say to ourselves, "Now I have got you," but I am not so sure of that, for I have seen a case that continued to vomit, and died, after Finny's operation, just as they often do with a vicious circle.

A partial explanation may be that the secretions from the stomach, duodenum, liver and pancreas are sometimes so abundant that a shocked and paralyzed bowel cannot evacuate them *per vias naturales*. Diseases of the pancreas are being successfully treated by drainage, and I might go on and on and hint at many other things that may yet be accomplished by surgery, as in certain forms of diabetes, obscure brain lesions, and in pneumonia.

PNEUMONIA.

This last disease is so fearfully fatal, and medication is so futile, that one is impelled to do almost anything that offers even a ray of hope for recovery. I believe that a person should not be allowed to die of pneumonia without removing a rib and draining the lung at the seat of origin of the disease before the person is too much poisoned, on the one hand, or before the opposite lung is put out of commission, on the other. This is food for thought. The idea is not at all new with me, and I have two cases in support of my belief; one a case of inflammation of the right lung with complete consolidation and some pleuritic fluid of a whitish nature, which I then (1888, Winnipeg General Hospital) believed to be pus. Judging empyema to be the condition I removed a portion of the seventh rib in the mid-axillary line, and, finding no empyema, I proceeded and explored the consolidated lung in search of an abscess, but in vain. I used a large trocar and canula, inserted my finger into lung tissue, and finally drained the lung with gauze. My object then was to check any bleeding that might follow. I was abashed at my procedure, but the patient made one of the most rapid recoveries I ever saw. Resolution began to take place immediately, and I received extravagant praise for my work. The other case I refer to was one of tubercular pneumonitis, the middle lobe of the right lung, and published by me about three years ago, in whom a recovery took place after drainage of the lung parenchyma and insertion of iodoform. The consolidation cleared away within a short time, and I considered drainage contributed largely to the gratifying result.

Now I must close, and thank you.

10 Drexel Square, Chicago, Ill.

THE SURGICAL TREATMENT OF ENLARGED PROSTATE.*

By GEO. A. BINGHAM, N. B.,

Associate Professor Clinical Surgery, University of Toronto, Surgeon to Toronto General Hospital, St. Michael's Hospital, Hospital for Sick Children, etc.

THE method employed in any given case will, of course, depend upon the condition of our patient. An elderly gentleman may consult one in reference to a frequency of urination which interferes with his repose. Examination may reveal a decidedly enlarged prostate with no other special symptoms. He may be carefully and scientifically introduced to catheter life and may go on enjoying life comfortably and without curtailment.

On the other hand, in a neglected case you may be called upon to examine a physical wreck, with no ability to urinate, suffering from overflow and showing evidence of cystitis and possibly pyelitis. The sclerosed vessels of the patient and his general condition, may forbid a radical operation, and yet the foul condition of bladder and urine demand drainage. Here a median perineal cystotomy, done quickly under local anaesthesia, and permitting of permanent drainage and local application to the bladder walls, will go far towards relieving our patient's misery and prolonging his life.

To condense into a sentence what I have already said: If seen early enough, the proper use of the catheter will meet the indications; if seen too late, simple drainage is the utmost surgical procedure to be considered.

But between these two extremes there is a considerable number of cases calling for more radical treatment. In these cases the kidneys are not yet involved, but the patient is suffering from cystitis, or a calculus has been found to complicate the case; or haemorrhoids and prolapsus ani and, perhaps, faecal incontinence combine to make life a burden; or, perhaps, the real capacity of the bladder has been so reduced as to make it necessary for him to rise hourly or oftener during the night; or, perhaps, he has had several attacks of retention which could not be relieved by catheter, necessitating supra-pubic puncture.

In all of these cases catheter life has been tried and, for one cause or another, has at last failed to give relief. Clearly such a case, with any one of these complications, demands surgical relief. What shall be the method employed?

Recognizing the prostate as a purely sexual organ, and properly so, shall we do a double *orchidectomy*, trusting in this way by abolition of function, to procure atrophy of the offending organ? Aside from the merely sentimental and aesthetic objections called forth by the sugges-

*Read at the Ontario Medical Association, June, 1901.

tion, the terrible mortality following the operation is likely to limit its field of usefulness. Our patient is probably old and feeble and ill able to withstand the shock consequent upon such an operation. Such an objection cannot be raised to another procedure suggested, namely, vasectomy. But the effect of this operation in producing atrophy of the prostate is slow and quite uncertain, and only very rarely would its advisability be presented to the mind of the surgeon.

I mention Bottini's operation to say that it is a dangerous method in the hands of any but the expert, and its field a limited one.

Considering the question then, in the light of modern surgery, one is forced to the conclusion that the ideal operation would be the removal of the offending structure if this could be done by some open method and without any great amount of shock.

The work of Freyer, followed by that of many other surgeons has, I think, clearly shown that this operation is a practical possibility. The supra-pubic route appears to be the more natural way of attacking the gland. You approach it from its more exposed surface, where it projects into the bladder, and where by simply nicking the mucous membrane, you are at once in contact with the gland in its capsule. It is true that the normal gland has outside of its capsule a sheath derived from the deep layer of the triangular ligament, but as the enlarging mass encroaches upon the cavity of the bladder in the line of least resistance, it seems to have worn away or burst through this sheath. At all events, when the finger is introduced through the small incision in the mucous membrane of the bladder, it comes in direct contact with the gland in its capsule. In approaching the gland by the perineal route, the urethra is more liable to injury, the bladder cannot be so thoroughly exposed, and the operation is lacking in that precision which characterizes it when the supra-pubic route is taken.

THE OPERATION.

The bladder is first distended with water and is opened through an incision in the median line above the pubes. It is then thoroughly examined as to its general conditions, the presence or absence of calculi determined, and finally the condition of the prostate is ascertained. Perhaps the only abnormality is a small pedicled tumor which has been acting as a ball-valve in obstructing the urinary outflow. This is twisted off and removed. Or perhaps one lobe is enlarged and encroaching upon the urethral opening. If so, a small incision is made in the mucous membrane over the tumour, a finger is inserted, and the offending lobe is enucleated from its bed. Or, perhaps, what we are more likely to find

is a collar-like projection of the whole hypertrophoid gland encroaching upon the bladder cavity, with a much dilated bladder, and a retro-prostatic pouch of considerable dimensions. Two small incisions are made through the mucous membrane of the bladder, radiating from the urethral orifice, one in front, the other behind. The finger introduced into the posterior incision comes into direct contact with the gland in its dense capsule. With the finger, one lobe is first separated from the mucous membrane of the bladder behind and laterally, then in the middle line if the mass be large, the lobe is separated from its fellow, and next its base is loosened from the triangular ligament upon which it rests externally. Then with the finger in the anterior incision, the lobe is carefully separated from the urethra in which a sound has been placed for the guidance of the operator. The whole lateral half of the mass may then be delivered into the bladder through one or other of the incisions, and the whole process repeated upon the opposite side.

The presence of the right index finger in the rectum while the left hand is working in the bladder, is of great assistance during the process of the enucleation.

Hæmorrhage is checked by hot water, a large drainage tube is introduced through the supra-pubic opening, and the wounds in bladder and abdominal wall are closed down to the tube. By a simple syphon arrangement the bladder can be kept quite empty and perfectly drained. It is washed out twice daily for perhaps a week, when the supra-pubic tube is removed. After that time the bladder is washed out through the urethra once daily until the supra-pubic wound closes. By this method the urethra is uninjured, the patient is relieved from what is often an agonizing state of affairs, and as a rule he recovers complete sphincteric control, and the tone of the bladder wall is quite restored.

Occasionally one finds it impossible to remove the tumor owing to its density and fixation by inflammatory adhesion. In such a case it is often possible, by removing a wedge of the tumor immediately behind the urethral orifice, to restore the function of urination, reduce the amount of residual urine, and thus materially improve the condition of the bladder.

I have purposely made this paper very brief. A whole chapter, for instance, might be written about proper methods of catheterization in these cases, and of introducing our patients to catheter life.

But, I take it, your Committee rather intended that I should introduce the subject of prostatectomy, and, as much recent work has been done along this line, one naturally looks for an interesting, educative and somewhat prolonged discussion.

ENLARGEMENT OF THE PROSTATE GLAND.*

By FREDERICK W. MARLOW, M.D., F.R.C.S. England,
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SITUATED beneath the posterior part of the bladder is the pyramidal-shaped prostrate gland. Its base is directed upwards, and its apex, which is directed downwards and slightly forward, comes into contact with that part of the parietal pelvic fascia forming the deep layer of the triangular ligament of the pelvis. It presents a posterior, flattened surface, separated from the rectum by the recto-vesical fascia, and two slightly convex antero-lateral surfaces meeting in front in a rounded anterior border, which lies behind the symphysis pubis and the retro-pubic fat. From base to apex the gland measures one inch and a quarter. Its transverse diameter is one inch and a half, and its antero-posterior diameter three-quarters of an inch. Six drams is the average weight of a normal prostrate gland. Traversing it from the approximate centre of its base to that part of the anterior border immediately above the apex is the prostatic urethra, fusiform in shape and nearly vertical in direction, but presenting a slight curve with its concavity directed forwards. That part of the gland on either side of the urethra is designated a lateral lobe, but, ordinarily, there is no outward indication of separation between the right and left lateral lobes. The common ejaculatory ducts enter the base of the gland immediately in front of the postero-superior border, and as they pass downwards and forwards to join the urethra a small portion of the gland is demarcated in front of them and behind the urethra. This is the anatomical middle lobe. It is continuous with and forms a connecting band between the lateral lobes, and is situated immediately behind and below the urethral orifice of the bladder. As a rule it is a mere transverse, wedge-shaped band, but, occasionally, as stated by Freyer,¹ it presents a rounded prominence even in the healthy gland, forming a true middle lobe. Entering into the formation of the gland is a fibro-muscular stroma, the muscular fibres being of the unstripped variety, and glandular tissues, which consists of minute, slightly-branched tubules and follicular pouches, lined by a short columnar epithelium. The tubules lead into the prostatic ducts, which latter are from twelve to twenty in number, and open into the urethra on either side of the verumontanum, that vertical ridge of mucous membrane which appears on its posterior wall. The utriculus, which is the homologue of the uterus and vagina, is a small cul-de sac dipping backwards and upwards from the verumontanum for a distance of a quarter to half an inch behind the middle lobe. The stroma makes

*Head at the Ontario Medical Association, June, 1904.

up the larger portion of the gland and supports in its interstices the proper glandular tissue. It is most marked anterior to the urethra where glandular tissue is practically always absent, posterior to the urethra, from whence it radiates outwards, and at the circumference. The outermost portion is non-glandular, and, in accordance with the description given by Sir Henry Thompson² and adopted by Freyer, is surrounded and definitely limited by a special fascial envelope belonging to the prostate itself. This is the proper capsule, and is not capable of being stripped off except by dissection. ³Surrounding this, but separated from it by some areolar tissue containing the prostatic plexus of veins, some branches of the haemorrhoidal and inferior vesical arteries and of the hypogastric plexus of nerves, is the prostatic sheath which is derived in part from the parietal, and in part from the visceral pelvic fascia. ⁴Passing from the sheath to the capsule are numerous small connecting bands and passing through the capsule, small vessels for the supply of the gland substance. The prostate is a purely sexual organ. ⁵Its muscular substance ejects its glandular secretion to mix with that from the ejaculatory ducts, and it is probably on this account that the spermatozoa retain their nobility ⁶for so long a time.

The prostate gland is subject to the occurrence of enlargement, and it may be taken that if a given specimen reaches a weight of one ounce or more it is abnormally large, but it must be remembered that prostatic enlargement does not of necessity imply prostatic obstruction. From statistics collected by Sir Henry Thompson and others it is estimated that about thirty-three per cent. of men beyond fifty-five years of age have some degree of enlargement of the gland, but that only about five per cent. ever suffer from symptoms. Freyer states⁷ that in a large proportion of men after fifty years of age there is a tendency towards prostatic enlargement, but that such seldom declares itself by any marked symptoms until after fifty-five.

Up to the present time no satisfactory theory has been advanced to explain the occurrence of the various lesions presented, and it is interesting to note Mr. W. Bruce Clark's⁸ quotation from Albarren and Halle⁹, which reads: "We are entirely ignorant of the true nature of these lesions from a pathological point of view, and we find only hypotheses badly supported by facts." The theories in vogue at the present time are mainly two. That of Guyon and the French school presupposes the existence of general arterio sclerosis and the occurrence of prostatic enlargement is regarded as a local result of the disease. The genito-urinary organs are regarded as being markedly liable to this change and it is claimed that symptoms ordinarily due to prostatic

enlargement may occur in the absence of such, as a result of sclerosis of the bladder, and that the changes occurring in that part of the urinary tract above the prostate are coincident with instead of dependent upon the enlargement. This theory is opposed by Freyer¹⁰, Casper¹¹, Mr. W. Bruce Clark¹², McGowan¹³ and others, as it has been definitely shown that enlargement of the prostate may and does occur frequently in the absence of general arterio-sclerosis. Furthermore, such disease is conducive to atrophy rather than to enlargement and it is unlikely that the prostate would prove such a marked exception in this regard. The other theory is that of Velpeau, who claims the existence of analogy between prostatic enlargement and fibro-myomatous disease of the uterus, on account of the similarity of structure in the two organs, the presence of the utriculus in the prostate, the nature of the enlargement as regards structure, growth and position, and the occurrence of the disease at a declining period of sexual activity. But here again discrepancies arise, for as Freyer¹⁴ points out, the utriculus takes no active part in prostatic enlargement, and besides, this seldom if ever, begins as a fibro myoma as in the case of uterine tumors with which the analogy is assumed.

Enlargement of the gland may be uniform and symmetrical, in which case, symptoms of obstruction are most likely to be delayed if they appear at all, and on the other hand a symmetrical enlargement may arise in any one or more of its parts and with a greater aptitude to the production of symptoms. One form of enlargement, in which all the prostatic elements appear to be equally increased is probably the outcome of chronic congestion of an irritative or inflammatory nature, but congestion by itself does not often give rise to obstructive symptoms. To some extent, however, it accompanies all other forms of prostatic enlargement and when super-added to them acquires a greater importance as a causative factor. In another form there is a notable increase in the amount of fibrous tissue. This is the fibrous form of enlargement and if Guyon's causative theory were correct, it ought to be the most common form, which is by no means the case. When such gives rise to symptoms the fundamental cause is a constricting alteration in the normally funnel-shaped, vesical outlet and a decrease in the distensibility of the prostatic urethra. Carcinomatous disease, which is usually of the scirrhous type when occurring in the prostate gland, though not an uncommon cause of prostatic enlargement, does not¹⁵ often give rise to a marked degree of obstruction before its fatal termination. But by far the most common of all is that variety of enlargement where the normal prostatic tissue becomes distorted and displaced and to some

extent replaced by the formation of adenomatous masses as the result of benign proliferation of its glandular elements. Mr. Cuthbert Wallace¹⁶ describes the normal prostatic tissue as becoming displaced to the circumference where it forms a "laminated envelope" for the adenomatous masses. In this form the obstructive change in the urethra due to pressure and encroachment upon it by such overgrowth is the basis for the occurrence of symptoms. One or both of the lateral lobes may be involved and the situation of the anatomical middle lobe may and very frequently does present an adenoma which may be sessile or pedunculated, but which in practically all cases is connected¹⁷ by prostatic tissue with one or other or even both of the lateral lobes. This is the pathological middle lobe and on account of its situation immediately above the vesical outlet is one of the most frequent causes of obstructive symptoms, especially when pedunculated, but it should be carefully distinguished from the anatomical middle lobe from which it seldom appears to take origin. Not uncommonly a collar-like projection with a slight anterior deficiency is formed around the vesical outlet.

In addition to a thinning of its walls by pressure, the effects upon the prostatic urethra are such as produce some amount of mechanical obstruction to the outflow of urine from the bladder. It is elongated and there is an alteration in the shape and a diminution in the size of its lumen. Of the changes occurring in the bladder, besides the irregular projection into its cavity of the adenomatous masses the veins surrounding its outlet are frequently in a varicose condition thus predisposing to haemorrhage and to the occurrence of retention of urine. Its walls at first become hypertrophied in order to overcome the mechanical difficulty of emptying it, but later on as a result of continual overstrain and changes occurring in the urine they become atonic and dilatation ensues, except in those cases in which contraction occurs as the result of prolonged cystitis. On account of the density of the fascial structures below and behind the prostate, enlargement takes place mainly upwards and forwards and the vesical outlet is gradually raised. The base of the bladder remains stationary and so a pouch is formed between it and the enlarging gland. This post-prostatic pouch is incapable of being emptied during micturition, the urine remaining therein being designated "residual urine," and as the capacity of the pouch tends to undergo a gradual increase so does the residual urine increase and the effective capacity of the bladder becomes correspondingly diminished. Sometimes a pre-prostatic pouch is formed as well. If so, it is bounded laterally by the enlarged lateral lobes and behind by the pathological middle lobe, its importance lying in the fact that it may

be mistaken for a contracted, vesical cavity during the introduction of a sound or a catheter. Cystitis is of a very frequent occurrence and although it may sometimes be the result of prolonged congestion, or of infection by way of the kidneys, or from the bowel, or of decomposition occurring in residual urine, yet in almost all cases it supervenes upon the introduction of infective micro-organisms during catheterization. Sacculation of the vesical walls is not uncommon and owing to alteration in the urine, vesical calculi, usually of the phosphatic variety, form a frequent complication of prostatic enlargement.

The ureteral outlets after a time tend to lose their valve-like character and to assume a marked patency, and owing to backward pressure from retained urine the ureters and the renal pelves may become distended and dilated and the kidneys undergo the changes characteristic of chronic interstitial nephritis, and when cystitis is present infection may proceed upward to them. The veins of the prostatic plexus become enlarged and other occasional complications of prostatic enlargement, hæmorrhoids, prolapsus ani, pruritus ani, priapism, urethritis, vesiculitis, epididymitis, testicular tenderness and orchitis.

The first symptom that is usually complained of is an increased frequency of micturition especially during the latter part of the night and in the early morning. In the early stages this is due to the irritation and congestion induced by the enlargement, at the vesical outlet, but later on as the post-prostatic pouch increases in size it is due mainly to diminution of the effective capacity of the bladder. As the enlargement progresses, the act of micturition is attended with increasing difficulty. There is difficulty in starting the stream, and such is increased by straining, and at the end of the act dribbling occurs. Sometimes the flow is intermittent in character and this is probably the result of a pedunculated pathological middle lobe obstructing the vesical outlet after the manner of a ball-valve. The size of the stream undergoes diminution and its normal projection curve is abolished, owing to reduction of the expulsive power of the bladder. Following on excessive exercise, or exposure to cold as from sitting on a cold or damp seat, retention may occur. This is usually regarded as being due to an exaggeration of the congestion accompanying enlargement of the gland and especially affecting those veins surrounding the vesical outlet. In the later stages, distension of a dilated atonic bladder with overflow of urine is sometimes observed. Pain is not a marked symptom except in the later stages when complications arise, as when a calculus lies free within the bladder but as a rule there is an ill-defined aching about the perineum and in the hypogastric region.

The urine remains at first clear and acid. Later on owing to fibroid changes occurring in the kidneys, the quantity is somewhat increased and the specific gravity tends to be lowered. Still later, when decomposition occurs and cystitis is present, the reaction tends to become alkaline, thus favoring the formation of phosphatic calculi, and the urine is found to contain abundant phosphates, mucus, pus, epithelial debris and frequently blood. When the kidneys become seriously involved the excretion of urea is diminished.

The diagnosis of prostatic enlargement is rarely attended with difficulty. When a man over fifty years of age, rarely younger, presents symptoms characteristic of the disease, a physical examination of the urethra, the rectum, and as far as possible, the bladder, should be made. If he can pass his urine the general characters and strength of the stream should be noted, and after passing all he can a catheter should be introduced. Any urine that can be drawn off will represent the amount of residual urine and this will vary from a few drams in the early stages up to two or more pints in advanced cases. The catheter should be of average size, from 7 to 10 English scale, and it is best to use a soft rubber one if such can be passed. Failing to do so a less pliable form may be found in the vulcanized rubber, or the gum elastic catheter, and if a still more rigid instrument is required recourse may be had to the metallic form. Various modifications of these in the form of the *coudée*, the *bicoudée*, or the long catheter with the exaggerated curve may prove useful at times. Any obstruction to its passage should be noticed, as well as the length of catheter required to reach the vesical cavity. Before such catheterization the hypogastric region should be palpated and percussed, and if it is found that the bladder contains a large amount of urine, only a part of it should be withdrawn. Otherwise fainting may ensue and there may be hæmorrhage from the vessels in the vesical walls owing to the withdrawal of their accustomed support. An examination of the urine will give valuable indications as to the condition of the urinary tract as a whole. Following this a rectal examination should be made; first with the patient in the dorsal position when assistance may be given by counter-pressure above the pubes with the disengaged hand, and afterwards in the knee-chest position which renders the prostate slightly more prominent and allows of a farther introduction of the finger. If enlargement is felt to be present it is certain that one or both of the lateral lobes is involved, but it is rarely, if ever, possible to determine by rectal examination the existence of a pathological middle lobe. Notice should be taken of the extent and position of any enlargement; also of its contour and consistency, whether smooth and soft as

in the adenomatous form, or smooth and hard as indicative of fibroid changes or nodulated, and of intense hardness as in carcinomatous disease in which also, the enlarged gland loses the mobility which it ordinarily retains and the rectal wall instead of being movable over it becomes fixed. If it is possible to reach beyond the gland some idea may be obtained as to the condition of the vesical walls.

In a subsequent examination the careful manipulation of a sound introduced into the bladder may give valuable information as to its capacity, the existence of a pathological middle lobe, or the presence of a calculus. The cystoscope is also a valuable aid to diagnosis and when capable of being introduced, the outline of any projection into the bladder, the presence of a calculus or of sacculation of the vesical walls, the existence of cystitis, the condition of the ureteral outlets and the gross character of the urine flowing from them may often be determined.

The presence of an urethral stricture may be excluded by the history and the physical examination, remembering also that in the case of stricture, straining is an aid rather than a hindrance to micturition. Prostatic abscess is productive of fever, much pain and fluctuation, and a prostatic calculus, which may grate on a passing sound, gives rise to a very hard nodule in the gland, substance which may be felt by rectal examination, and is accompanied by tenderness on pressure. After examination the patient should be confined to bed for a day or two in order to minimize the tendency to the occurrence of severe constitutional symptoms.

Enlargement of the prostate gland is thus a progressive disease, and its tendency to bring about dissolution is greatly enhanced by the occurrence of its numerous complications and sequelae.

It is beyond the purpose of this paper to discuss the treatment of this distressing condition except inasmuch as a resume of such may be given. It resolves itself into two forms, namely, palliative and operative. The former consists in the careful employment of the catheter, constantly or otherwise as required, and the treatment of appropriate measures of such complications as hemorrhage, pain, retention, cystitis and calculus as they arise. Some assistance may be derived from the careful regulation of the bowels, the diet and clothing of the patient, and he should be required to avoid excessive work, exercise or use of stimulants, exposure to cold or dampness, and sexual excesses. In the latter form of treatment a great variety of measures have been adopted. Of these castration, vasectomy and ligature of the internal iliac arteries were introduced with the object of inducing atrophy of the gland and so relieving the obstruction, the early improvement noted being regarded

as due to relief of congestion after the former two operations, and to diminution of blood supply following upon the latter, and the subsequent improvement to atrophy. Other operations are directed towards the gland itself. Such an one is the Bottini operation, or any modification of it, which aims at the restoration of a prostatic channel by the employment of a special form of galvano-cautery for the removal of obstructing portions of the enlargement. Prostatectomy is also performed. In the partial form of this operation only the obstructing portions are removed, and in the complete form total removal of the gland, or what practically amounts to such, is accomplished, the choice of routes lying between the suprapubic and the perineal. In far advanced cases, if the use of the catheter becomes inadequate, and the general condition of the patient is such as to contraindicate any operation of a radical nature, it may be necessary to establish an opening from the bladder either through the perineum or above the pubes for the purpose of drainage, thus performing an operation of a palliative nature.

At the present time it is to those forms of operation which aim at the removal of the gland that considerable attention is being given, and it would seem that the one designated "total prostatectomy" is destined to survive as the radical operation of the future. It is now admitted by practically all surgeons that removal of the enlarged prostate gland is not only a possible and scientific operation, but a justifiable and valuable one as well, in suitably selected cases.

A controversy exists as to whether or not outlying portions of the gland are left behind. From careful examination of his specimens removed by operation Freyer¹⁸ believes that entire removal is possible. On the other hand Mr. Cuthbert Wallace¹⁹, from an examination of post-mortem specimens believes that a portion of the laminated envelope which he has described as consisting of displaced and distorted prostatic tissue is always left behind. The support of these views is almost equally divided²⁰, and in the absence of microscopical examination of the parts left behind it is impossible to settle the matter definitely.

Another point which is productive of non-agreement is the fate of the prostatic urethra in such an operation. An examination of Freyer's reports²¹ of his first fifty-one cases tends to show that in many of them it was left behind intact; but the majority of writers²² on this subject entertain the belief that such is of rare occurrence, and that it practically always comes away with the gland entire or in part. The latter view seems to be the more reasonable one when it is remembered that the urethral walls usually undergo marked thinning, and are often only demonstrable²³ by the use of the microscope on the specimens

removed, and that the lateral lobes are attached to them by means of the prostatic ducts. The common ejaculatory ducts must of necessity be torn across when the prostatic urethra is removed.

In the operation of total prostatectomy the enucleation is performed from within the prostatic sheath and the prostatic plexus of veins, and if Mr. Cuthbert Wallace's view is correct within also the outer layers of the so-called laminated envelope. Excessive hæmorrhage is rare, and the operation is practically never followed by extravasation of urine or the occurrence of septicaemia. The cavity left behind undergoes rapid contraction,²¹ but never enough to give rise to subsequent stricture, and in its contracted state it remains as a fistulous communication between the bladder and the membranous urethra where the true sphincter²⁵ is situated, and when the bladder regains its expulsive power, which it does in practically all instances,²⁶ it allows of unobstructed passage of the urine, and normal micturition is once more established.

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Dr. G. H. Burnham, Bloor st., Toronto, has gone for a trip to England and expects to return first September. He will attend the Oxford meeting of the British Medical Association.

TREATMENT OF PROSTATIC HYPERTROPHY.

By DR. T. K. HOLMES, Chatham, Ont.

PROSTATIC Hypertrophy is so common in advanced life and so surely undermines the health and embitters the declining years that its treatment must always appeal to medical men very strongly.

Until quite recently the use of the catheter afforded the chief and almost the only means of relief. This is only palliative and so often leads to infection of the bladder with all its concomitant evils that I have no hesitation in saying that it should never be resorted to by any unskilled person. I have never known a patient to use a catheter himself for any considerable length of time without causing infective cystitis and its resulting train of distressing and dangerous sequelae.

Within the past few years various operative measures have been tried for the cure of this ailment, and the accumulated experience resulting from these have enabled surgeons to estimate pretty accurately the value of each. Castration, vasectomy, prostatectomy and the Bottini operation are the only radical methods of dealing with prostatic hypertrophy advocated at the present time. There are, undoubtedly, cases in which castration or vasectomy has proved beneficial, but there are obvious objections to these operations and the results are so uncertain that they are not likely to be adopted in many cases. I have tried both several times, but probably from lack of skill in the selection of cases none of them were cured, and I soon abandoned these modes of treatment. Prostatectomy was formerly considered an operation of much danger and difficulty, but modern technique has overcome these to a great degree. The mortality in skillful hands is quite low, and the results when recovery takes place are so good that it is likely to be the operation of choice in a large number of cases. Men who have not had their general health injured much by the disease, whose kidneys are sound and in whom general anaesthesia would be safe, bear prostatectomy well. On the other hand the Bottini operation, which can be performed under local anaesthesia, is well suited to men of low vitality to whom general anaesthesia would be dangerous, whose kidneys may have undergone organic changes and whose general condition would render them incapable of prolonged confinement in bed. This operation has also given excellent results in younger prostatics whose general condition is good, so that I feel sure that it has a wide scope of usefulness when skillfully carried out. I have spoken to many surgeons both in Europe and America about the Bottini operation, and have found that it is generally looked upon with disfavor, but I have further observed that

the unfavorable opinions expressed are by men who have had little or no experience with it. The chief objections raised are that the operation is done under circumstances that render the destruction of the tissue uncertain in extent, that drainage which is important when there is a cystitis is not well secured, and that the operation is not entirely free from danger. These objections have been largely overcome by improvement in the Bottini apparatus and by the careful and systematic use of the cystoscope to determine the size and character of the enlarged gland preliminary to treatment. Whatever plan of radical treatment be adopted it is desirable to first endeavor to secure as healthy a condition of the urinary apparatus as possible. This can be done by suitable diet by irrigation of the bladder and by the administration of urotropin in doses of eight or ten grains three times a day.

In prostatectomy the gland may be reached through a suprapubic opening, or by a perineal incision, or by a combination of both. In my own practice I have found the perineal route so satisfactory that I have always adopted it. The operation of suprapubic lithotomy has convinced me that in a man with thick abdominal walls it would be far from easy to reach the gland with the finger to enucleate it, whereas in a similar case the gland can be easily drawn down into the perineal wound and enucleated with great facility. If a patient has passed the age of sexual vigor the plan of operation recommended by Parker Syms I believe to be the most satisfactory. The various steps in the operation are as follows: Place the patient in the lithotomy position with his hips well elevated, introduce a grooved sound, make a median skin incision about two and a half inches long terminating posteriorly near the anus and deep enough to divide the tissue covering the muscles, retract the muscles and divide the recto-urethralis transversely near its anterior attachment and retract this muscle backward towards the rectum. This will expose the membranous urethra which may be opened by cutting down in the grooved sound, and the incision should be continued until the gland is reached and slightly incised through its capsule. Now remove the sound and explore the bladder with the finger and determine the size and shape of the part to be removed. If a stone is present remove it with stone forceps. Syms' rubber bag should now be introduced into the bladder and moderately distended with water and the stem clamped with forceps. Traction on the bag will now bring the gland within easy reach, and while the left hand retains it in this position the right index finger can be insinuated between the gland and its capsule at the point where it has been divided, and by gentle means the whole gland or one lobe of it can be enucleated. During the enuclea-

tion of the deeper part it facilitates the operation to seize the gland with lobe forceps and make moderate traction. Having removed one lobe the other is dealt with in the same way. Instead of cutting backward through the capsule when the urethra is opened I have sometimes found it more convenient to snip the capsule of one lobe with scissors, enucleate it in the usual way, then deal with the opposite lobe in the same way. The bag may now be allowed to collapse by letting the water escape, when it can be easily withdrawn from the bladder and all blood flushed out by hot saline or boracic acid solutions. There is not much hemorrhage if care be taken to avoid the plexus of veins in the capsule. In this operation the only muscle cut is the recto-urethralis,¹ and so very little injury is done to the perineum. The superficial part of the wound may be closed anteriorly by cat gut sutures. At first all the urine passes through the perineal wound, but this gradually closes, generally in from three to seven weeks. When there has been much cystitis the prolonged drainage through the perineum is advantageous. Before enucleation begins a bar can often be felt at the neck of the bladder between the lateral lobes, which disappears when these have been removed, which shows it to have been merely a ridge of normal tissue. Of course if there be a middle lobe of gland tissue it must be taken away also. This operation can be done quickly, generally in ten to fifteen minutes, and there is a little hemorrhage and no shock. In this operation the ejaculatory ducts which open into the urethra just near the apex of the gland are usually injured or destroyed, but if the sexual function has disappeared this is immaterial. In younger men the injury to these ducts may be avoided by adopting a plan devised by Dr. Young, of Baltimore. This consists in making a small opening in the membranous urethra without extending the cut backwards to the gland. A metal tractor which I here exhibit is then introduced into the bladder through the incision in the urethra. One blade is made to revolve 180 degrees and fixed there by the screw. By this means the two blades may be made to engage the lobes of the gland, and by pulling downwards the parts to be removed are brought prominently into the wound and the operation performed under visual control. With the gland drawn prominently into the wound by the tractor held in the left hand an incision on each side of the urethra is made through the extravescical capsule nearly the whole length of the lobe. Between the incisions is a bridge of tissue covering the urethra in that part of its course and containing the ejaculatory ducts, and by enucleating the lobes through these two incisions the ducts are left intact. After the lateral lobes have been removed the median lobe, if one be present, may be pushed into one of the cavities

by pressure with the finger inserted in the opposite cavity, aided by one blade of the tractor, and removed in that way.

I have found rather more difficulty in Dr. Young's method than in the use of the rubber bag, but he has acquired such facility in this branch of surgery that what would be difficult to less experienced surgeons is very easy to him. Dr. Young advises continuous irrigation of the bladder for several days if there has been much cystitis. This is accomplished by a double tube introduced through the wound in the urethra and connected with a reservoir which is kept filled with a warm salt solution and the return flow is conducted into a receptacle on the floor, through the return flow tube.

In three operations recently performed I irrigated the bladder for a few minutes with hot boracic solution until it returned free from blood, and used no further irrigation. Neither of these cases had any trouble from omitting the continuous irrigation and all made excellent recoveries.

In suitable cases the Bottini operation as performed by Dr. Young is one of the most satisfactory in surgery and has some advantages that must always commend it. It can be done under local anaesthesia, it is comparatively painless, a patient can be out of bed in two days, the results are excellent, even a feeble patient bears it well and there is little constitutional disturbance during convalescence. It is in this operation that the skillful use of the cystoscope is all important for by its use the surgeon is guided as to the size of the cautery blade to be used and the length of the cut so be made. I here exhibit both the cystoscope and the cautery apparatus. Having decided by the former and by digital examination per rectum which blade is adapted to the case in hand, the patient is placed in the dorsal position with the knees drawn up and feet supported by stirrups. The bladder is now washed out with warm boracic acid solution and an ounce of a 4 per cent. solution of cocaine injected so as to anaesthetize the whole mucous membrane, especially the part to be incised and also the urethra. From four to eight ounces boracic acid solution is next injected into the bladder, the instrument introduced and the beak turned backwards where its point can be felt by a finger in the rectum. A stream of cold water is kept flowing through the instrument during the time the blade is heated. The instrument having been placed so that the blade when moved from its slot by the screw in the other end of the instrument comes in contact with the part of the gland to be incised and all connections having been previously made and tested, the switch on the transformer is moved far enough to bring the blade to a white heat and

it is gradually forced into the gland by the screw which moves it. The blade is thus moved into the substance of the gland at the rate of one centimetre per minute until sufficient tissue has been destroyed, when the current is turned off and the instrument moved in order to make the second cut. Usually three cuts are made, one posteriorly and one on each side. It is well to keep the current on and the blade hot while moving it back into the slot as it destroys more of the gland and prevents hemorrhage. Dr. Young makes the lateral cuts first. In a case with a pedunculated middle lobe, there is risk of destroying the pedicle and leaving the lobe loose in the bladder, but such a condition seldom exists and can be recognized by the use of the cystoscope. It need scarcely be added that asepsis throughout is essential.

To avoid tedious repetition and to curtail the length of this paper I shall report two cases, one a prostatectomy and the other a Bottini operation as they furnish fair examples of the kind.

Case 1. A man at sixty-three years of age good family and personal history had noticed a growing discomfort in the urinary organs for seven years. At first there was increased frequency in urination and a diminution in expulsive power with dribbling at the end of urination. These symptoms gradually grew worse until at times the urine came only in drops or in a very weak stream. The rest at night was disturbed, there was an unpleasant aching sensation about the bladder and perineum all the time. He had never used a catheter and the urine was normal. There were two ounces of residual urine. Cystoscopic examination showed moderate enlargement of the lateral lobes and a bar joining them. There was no cystitis. The sexual function was uninjured. Pressure on the gland per rectum gave pain and a considerable enlargement could be felt by the examining finger.

The Bottini operation was performed as described above, three cuts being made almost without pain. The patient remained in bed two days, after which he remained up and moved about freely every day. There was considerable pain in urinating at first, but this gradually became less and in three weeks disappeared altogether. There was no acceleration of pulse or rise of temperature at any time during convalescence, but the urine contained blood for several days and small sloughs continued to pass at intervals for nearly three weeks.

Several months have now elapsed and he remains well, not requiring to rise at night and passing urine about from four to six times a day. The stream is normal in size and force and he expresses himself as perfectly well.

Case 2. A man at seventy-six years with good history began to have the usual symptoms of prostatic hypertrophy nine years ago, but was not obliged to use a catheter until four years ago, since which time he has had a most distressing cystitis and has to use a catheter several times a day. In October last he had a severe attack of Orchitis and it was for this that he consulted me. I found the urine ammoniacal and loaded with pus, the testicle swollen and painful and the prostate large and tender. There were eight ounces of residual urine. I administered urotropin and as far as possible aimed at improvement of his general condition, irrigating the bladder night and morning with warm boracic solution. Finding it impossible by this means to get rid of the pus after a trial of three weeks I decided to remove the gland, which I did by the Parker Syms method as already described. The operation occupied fifteen minutes and was followed by no shock whatever. In this case instead of incising the urethra backwards into the gland I merely cut backward far enough to reach it, then with blunt scissors snipped an opening into the capsule of each lobe and enucleated them in succession. There was no median lobe, but merely a collar stretching from one lobe to the other across the neck of the bladder. When the lateral lobes were removed this collar disappeared. The temperature rose to 100 degrees F. the first evening, but remained normal after that. He remained in bed a week and the perineal wound was entirely closed at the end of three weeks. A month after the operation he urinated without difficulty every two or three hours and his general condition was greatly improved. I here exhibit the gland. The large lobe was removed from the left side and the smaller one from the right side. At present six months after the operation there is no residual urine and that passed is normal in appearance and in constituents.

THE SMOKE BY-LAW.

The Toronto Municipal Council has adopted a smoke by-law, which came in force on 1st July. This is a move in the right direction. It is only when one goes on the lake or upon the elevated land to the north of the city that it becomes apparent how much smoke there is in the air over the city, even on a clear day. The abolition of the smoke nuisance will be a great boon to the people's lungs and clothing. To none, however, will the results be more satisfactory than to the manufacturers themselves. Their premises and goods will be spared the constant soiling by soot that now takes place, and their employees will be put under more healthful conditions.

It was shown very clearly by the Smoke Commission of London two years ago that, for a small cost, the production of smoke can be almost entirely overcome.

CURRENT MEDICAL LITERATURE

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

CONICAL CORNEA

L. Webster Fox, M.D., Philadelphia, in a reprint from the *Ophthalmic Record*, January, 1904, treats very fully the history of conical cornea; and, passing on to the causation, says it may be congenital or post-natal. Wardrop observed it in a boy of 8 years of age, and Ammon encountered it in several sisters who had suffered from it from birth. Cooper attributes it to an enfeebled state of the constitution and a low condition of the nervous system, congestion, ulceration of the cornea, inflammation of the cornea, and excessive weeping. Statistics show that it is most common among the Chinese. It has been suggested that conical cornea, as it occurs in China, is in some way connected with the pyramidal or conical shape of the head, characteristic of the Chinese people. Pickford was the first to associate conical cornea with disturbances of the sympathetic nerves, and in this Kirke and Paget agree with him. The position of persons suffering from conical cornea is a most unfortunate one and many suggestions have been made for its cure and at least one case of spontaneous cure has been recorded. Bell was among the first to perform paracentesis. Gervis applied nitrate of silver to the apex of the protrusion after puncture. Tyrrell displaced the pupil and Adams removed the lens. Desmaress advocated puncture of the cornea and afterwards long continued pressure. Faroi established drainage of the aqueous humor by the removal of small pieces of the cornea and claimed to have made cures by this procedure. Graefe excised a small flap from the apex and treated it with nitrate of silver. The resulting cicatrix caused a flattening of the cornea. Bader reported nine cases in which a more or less flat cornea was produced by carrying a fine silk or silver wire through the affected portion of the cornea horizontally, the needle being left in the cornea until the top of the cone is removed. The flaps made are then drawn together and the suture tied.

The non-operative treatment with atropine, belladonna, etc., have been used for prolonged periods to give rest to the eye, without effect. Of optical devices, the first employed was the pin hole disc, recommended by Travers Wharton Jones, while others adapted concave lenses with

some benefit. Nottingham has done good work in this condition. He recommends various forms of artificial irides, such as the following: 1. A flat disc of blackened metal, with a pupillary opening, so arranged that it may be readily centered with the pupil. 2. A similar disc with a transverse slit instead of a central foramen. 3. A small black cup of ebony, the concavity to be turned to the eye and with a pupillary aperture in the centre. Fox made a series of experiments extending over several years in an effort to produce some form of disc that would permit rays of light to enter the eye through the least refractive portion of the cornea. The investigation began with a pinhole disc and stenopaic slit and included the testing of every form of prism and patch, until a satisfactory result was obtained. The conclusions reached were as follows: 1. That the character of the disc and its angle vary in each case. 2. That the intelligence of the patient is an indispensable adjunct in the selection of the necessary disc, as the method is entirely subjective. 3. That the lenses in which the corneal area is screened by black patches of various sizes and shapes, containing the requisite slits, are better adapted for this purpose and are less noticeable than prism or ground glass. 4. That the refraction of the cornea varies from time to time, requiring frequent examinations with the changing of the discs. 5. That the incorporation of the patches with the correcting lenses gives rise to an additional improvement. 6. That the only disadvantage lies in the fact that the patches do not correspond to the cornea during ocular movement, but is compensated for by the marked improvement and comfort afforded when the eyes and discs are adjusted for some average range. 7. That a fair trial should be made with these discs before resorting to operative procedure.

GYNAECOLOGY

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

ABDOMINAL SURGERY, RETROSPECTIVE AND PROSPECTIVE.

In the April number of the *Glasgow Medical Journal*, Dr. A. Ernest Maylard writes an interesting and instructive article on the above subject, based on fourteen years experience in the wards of the Victoria Infirmary, Glasgow.

If the middle of the last century may be taken as one of the epoch-making periods of surgery, when anaesthetics were introduced, and the sixth decade of that century as another period of great surgical advance, when Lister propounded his life-saving principle of antiseptics, then the

author thinks we must be allowed to add a third at the close of that wonderful century. The field which abdominal surgery has opened out is so vast and, withal, so replete with life-saving and life-prolonging possibilities that it surely deserves to be reckoned with anaesthetics and antiseptic as one of the three great factors in raising surgery to the high position it now holds.

Note the position abdominal surgery held only about 25 years ago. In the early months of 1880, he held the position of senior house surgeon at Guy's Hospital, London. There were between 300 and 400 surgical beds. During a period of almost four months there were 161 operations and only three of those abdominals.

In the early eighties, when on the surgical staff of the Glasgow Western Infirmary, it was also rare to see the abdomen opened. When such an event did take place it was usually with a crowded theatre, and in the presence of as many of the staff as could be there.

In his wards in the Victoria Infirmary in 1893, there were 4 abdominal operations and in 1903 there were 97. These do not include operations for the radical cure of hernia, nor cases where a localized abscess was opened, nor the fixation of a movable kidney. Neither are vaginal hysterectomies included.

In discussing some separate regions he states what has been accomplished, and what we may still hope to achieve in the future.

Oesophagus.—Strictures, either innocent or malignant, are almost exclusively the affections dealt with by abdominal section. Many a bad innocent stenosis, which has proved impermeable to the passage of dilators by the way of the mouth, has been overcome and successfully treated by attacking the constriction through an opening in the stomach. In the case of malignant disease, the performance of gastrostomy is still the only means of affording relief. The operation should be performed as soon as the patient begins to find pain and difficulty in swallowing semi-solid food.

Stomach.—In obstructive disease of the pylorus it is generally recognized that surgical treatment can alone afford the necessary relief. We can, by taking all proper precautions, make a most complete internal and external examination of the stomach, irrespective of the performance of any definite operation upon the organ. These examinations should be advocated in all cases where gastric diseases are protracted or fail to prove amenable within a reasonable time to the ordinary methods of treatment. One advantage of this would be the discovery of malignant disease so early that we might reasonably hope for complete removal and perfect cure. Another advantage would be the

detection, by a direct visual and tactile investigation, of conditions otherwise undiscoverable. Since we have come to deal with the stomach surgically, we have learned how many and harmful are the complications associated with gastric ulcer. We have perforation, hæmorrhage abscess, fistulae, adhesions, displacements, contractions of the body of the organ, as well as of the pyloric orifice. The proper treatment of chronic gastric ulcer is by operation; and, in experienced hands, the mortality of the operation is less than 5 per cent. He believes more lives would be saved, more complications prevented, more suffering spared by the timely performance of a gastro-jejuno-stomy than could ever be accomplished by the conventional methods of purely expectant treatment. By it we know that hyper-chlorhydria, a constant and, possibly, even a causative factor in gastric ulcer, is certainly at once relieved; and we equally know that a dependent opening in the stomach must give that rest to the stomach so necessary in the case of all other lesions of a purely inflammatory nature. A large number of the cases dismissed from the medical wards of our large hospitals, and believed by the physicians in charge to have been cured, are only temporarily relieved.

Intestines.—Possibly what we need here most is an improvement in diagnosis. This is strikingly noticed in acute intestinal obstruction. Over and over again the cry of the operator is, "Too late, too late." Could we but operate within the first twenty-four or forty-eight hours of the onset of the acute symptoms very few lives would be lost. In malignant disease, again, it is largely a question of early diagnosis. If a malignant tumour of the bowel can be felt through the abdominal parietes the chances are greatly in favor of the disease having extended beyond the possibility of entire removal.

In all affections involving the caecum, ascending, transverse, descending colon and sigmoid flexure, where the question is not one of excision, we have the power of relieving this portion of the intestinal tract of practically any part in the role it usually plays of receiving, retaining and expelling the normal faeces. By dividing the ileum near its junction with the caecum, closing the distal end, and implanting the proximal into the lower part of the sigmoid or upper part of the rectum we can throw the whole of this tract—practically the whole of the large bowel—out of action, and so either circumvent any possible obstruction existing in its course, or relieve an inflamed or ulcerated area from irritation and movement. It has, he believes, a part to play in the future, far in advance of anything that has been previously attempted. Thus, the condition of chronic constipation has many causes for its explana-

tion. In some instances he has seen the colon greatly distended and hypertrophied from the obstructive effects of the normal splenic flexure. In others the hepatic flexure seems to have caused troublesome obstructive constipation.

Appendix.—He has not yet been able to bring himself into line with those who advocate operation in all cases of acute appendicitis within the first 48 hours. Experience has taught him that every case should be operated upon where, after the fourth day, the symptoms are not showing unmistakable signs of subsiding. He has also learned how frequently an attack of appendicitis is due to the kinking of some part of the organ.

He is prepared to advise that an attack of appendicitis—no matter how simple in its earliest manifestation, even though it be represented by little more than vague colicky pains in the right iliac region—at once places the patient under the category of those who require sooner or later surgical treatment. Probably no period exists in the whole course of the disease, considered either in the light of a single attack or in repeated recurrences, which is more safe and suitable for operative treatment than about ten days to a fortnight after the onset of the attack. To operate before nature has set up her barriers is, in acute appendicitis, as in any acute inflammatory process elsewhere, a procedure to be avoided if possible.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.L., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal,

A REPORT OF 975 CONSECUTIVE RECORDED CASES OF CHILDBIRTH IN PRIVATE PRACTICE WITHOUT A MATERNAL MORTALITY.

Dr. J. S. Hammond, *The American Journal of Obstetrics*, June, 1904, publishes an interesting record of 975 cases of labor in his practice in Butte, Montana. He considers that the prime essential in the obstetrician is good judgment. In practice, no two cases present analogous conditions, so he must learn to recognize every case as a law unto itself. The author is particularly strong in his remarks regarding the advisability of assistance of labor and is convinced that too many cases are indiscreetly interfered with. He considers that the success of the ignorant old woman who devotes her attention to mid-wifery, is due to the fact that "she doesn't know enough to interfere." He is opposed to the too frequent use of forceps, and to the use of the post partum douche. Respecting asepsis he considers that "the multifarious procedures advo-

cated by so many writers and teachers, greatly overdo the matter. Good hot water with ordinary laundry soap, plenty of it, on hands with clean finger nails, will make a reasonably competent sterilization." All instruments used are dosed in boiling water, and when necessary to introduce a hand into the uterus, the only lubricant and germicide used was a lather of hot soap-suds.

Many of the cases were managed in an environment of filth and poverty. Often clean sheets and clothing for the patient were not obtainable. He modestly considers his record is based perhaps more on good fortune than on skill, for he admits he has seen cases in consultation which, had they occurred in his practice, would have certainly proved fatal.

The nationality of his patients were mostly foreign, as Butte is a large mining community. He found the average duration of labor was 12 1-2 hours; the largest number of births took place between 4 and 5 a.m. and the smallest between 1 and 2 p.m., though on the whole the a.m. births did not greatly exceed the p.m. The 975 labors resulted in the birth of 986 children, there being 11 twin births; of these 500 were females and 486 males. The month of October saw the greatest number of births, December and January ranging next, showing that in this community January, March and April were the periods of greatest sexual activity. 261 cases were primiparous women, and of these 227 had previously suffered from one or more miscarriages.

Presentation and position classify themselves as follows:—Vertex, 938 or 95 percent.; breech, 30 or 3 percent.; irregular, 18 or 2 percent. Of the 938 vertex presentations there were O.L.A. 721, O.R.A. 143, O.L.P. 27, O.R.P. 47. Of the 30 breech presentations there were, S.L.A. 17, S.R.A. 4, S.L.P. 2, S.R.P. 7. Of the irregular presentations there were, footling, 9; face, 4; brow, 2; arm, 2.

The most troublesome condition the author considers to be occipito-posterior cases, the ineffectual character of the pains in the first stage with the slow advance in the second stage makes the patient nervous and hysterical, while her friends get anxious and lose faith in the attendant who begins to think if he had to choose medicine as a profession, why did he not select the eye and ear as a specialty and leave obstetrics alone. He recommends in these cases the genu-pectoral position during the first stage, then as soon as the os is sufficiently dilated, the introduction of the hand under complete anaesthesia and manual rotation of the occiput forward, whether the head was engaged or not. If it is not possible to rectify the presentation and use forceps, then podalic version must be performed, unless the waters have escaped

and the uterus contracted about the child. He succeeded in one case in delivering a face presentation with the chin posterior, by means of forceps, the child surviving the operation for three days.

Chloroform was administered 481 times, and would have been employed more frequently except that many refused it. When hæmorrhage follows its employment he thinks it is a case of post hoc, not propter hoc.

Forceps were used 118 times, or in about 12 per cent. of the cases.

Lacerations occurred in 234 cases, or about 25 per cent.; everything in the nature of a rupture of the mucous lining of the birth canal being reckoned a laceration.

Podalic version was resorted to in twenty-three of the cases always by combined internal and external manipulations.

Thirty-two of the children were still-born.

Hour-glass contraction of the uterus was noted in four cases, imprisoning a portion of the placenta in every case. There were thirteen well marked cases of adherent placenta. There were six cases of placenta previa, three of these being delivered before he reached them, the children being still-born. Three children were born alive, but, were not viable. Five times prolapse of the cord was noted, in two of which the child was still-born. One case was intercurrent with a double pneumonia. Puerperal insanity developed in one case. A large perineal hæmatoma developed in one case twelve hours after delivery, a few days later this was incised, the clot turned out and the cavity packed with iodoform gauze.

In five cases the complete birth of the child took place before rupture of the amniotic sac. In one case the amniotic sac ruptured four weeks before delivery, the patient having a constant discharge of water in the interval. There were two cases of hydrocephalus, in one of which craniotomy was required to deliver.

In only one case was there a mammary abscess. Five cases required catheterization after delivery.

One case passed through a moderately severe attack of variola in the seventh month and was delivered at term of a living child.

The heaviest child at birth weighed fifteen pounds.

One case was accompanied throughout pregnancy by a most intense general pruritus. In two cases the pregnancy was accompanied by the most persistent morning sickness *on the part of the husband*.

Two infants were born with hare-lip and one with cleft palate unassociated with hare-lip; one case of club-foot and one of patulous foramen ovale. One child suffered an intra-uterine amputation of the left arm at the elbow joint. There was one case of myxoma of the neck.

Eclampsia occurred in but one case and was treated by means of morphia and veratrum viride, which the author considers as a specific.

There was one interesting case of spontaneous amputation of the cervix which was found hanging by a thread of tissue from the vulva after spontaneous delivery of the child and placenta. It was not marked by severe pain nor was there any subsequent hæmorrhage.

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Montreal.

The most important event in medical circles this summer, has been the second congress of French-speaking physicians of North America, which was held in the halls of Laval University. Most of the delegates came from towns in the Province of Quebec, but quite a number were representatives from Western Canada and the New England States; in addition, France was represented by Prof. Pozzi, and a large number of English-speaking physicians took advantage of the courteous invitation extended to their societies.

The congress was opened by the president, Dr. Foucher, and after the report of the secretary, the meetings proceeded in the various sections. Among the important papers was one upon Pulmonary Tuberculosis in Canada, by Dr. Alphonse Mercier, of Montreal, which was the basis of an excellent discussion in which Drs. Cavalier, Lamarch, D'Amour, Dubé, Gauthier and Lachapelle took part. Dr. Francois de Martigny read extracts from his paper on the cause and cure of appendicitis. In the discussion the old question of immediate surgical intervention appeared to be the main point taken up, Dr. Laurendeau and a few others opposing the statement made by the speaker, that acute appendicitis was a surgical affection which could not be permanently cured by medical treatment alone.

Dr. Villeneuve read a paper upon Medico-Legal Reforms in the Province of Quebec, and Dr. Valin spoke upon the necessity of medical examinations in all educational institutions.

The evenings were in general devoted to meetings of a social character, including a reception and banquet. The last day of the congress was spent in the election of officers, followed by a trip down the Lachine rapids.

Not the least interesting feature of the gathering was the opportunity given to the medical men of the city, and those attending the congress, to see Dr. Pozzi, of Paris, the official delegate of the Academie de Medicine de Paris, perform two operations, one at the Notre Dame Hospital and one at the Royal Victoria Hospital. The operations were very similar, both being the removal of large fibroids of the uterus with hysterectomy. At Notre Dame Hospital, Dr. Pozzi was assisted by Dr. Harwood and Dr. Ethier, at the Royal Victoria by Dr. Gardner and Dr. Goodall, while Dr. Monod, an old house surgeon of Dr. Pozzi, administered the anaesthetic.

Dr. Pozzi has few mannerisms and delights one with his direct and rapid methods. In the operation at the Royal Victoria which was more difficult than the one at Notre Dame, it was found, after an abdominal incision, that the tumours consisted of two distinct masses one of which filled up the pouch of Douglas, without a moment's hesitation this latter was enucleated in a surprisingly short time thus leaving room for easy manipulation in the rest of the operation. No peculiarity in method was noticed until the abdomen was being closed up. But here, after closing the peritoneum he passed two silver wires, as sutures, deep into the tissues across the incision, these being each double were tightened up by twisting around a small roll of iodiform gauze, the incision being completely closed by a running catgut suture. He contended that this method gave great support and prevented strains upon the walls of the incision itself, thus insuring speedy union with the minimum of pain. During the operation, Prof. Pozzi wore a gauze mask over his mouth and beard, although operating without rubber gloves. Everyone present was impressed by the rapid decision, and speed combined with thoroughness of the operator.

Dr. Starkey's paper upon Epidemic Diarrhœa among infants in Montreal, which was read before the Montreal Medical Society and appeared in the July number of the Montreal Medical Journal is already showing its influence. Even the aldermen in the City Hall are disturbed over the report of more than one hundred deaths among children in a single week. The medical health officer, Dr. Lachapelle, has been publishing report after report upon the subject and it looks as if something might be done at last. The health department has published statistics showing that Montreal has a death rate of 23 per 1000, a proportion due chiefly to infant mortality. As compared with 100 other cities in North America, Three Rivers has the highest death rate (36.01) and Hamilton (13.09) the lowest, the average being 20.1 per thousand in all the cities.

Dr. Lachapelle agrees with Dr. Starkey in saying that the large number of privy pits in the city has a great deal to do with the mortality and where these have been done away with, the death rate has at once diminished. The inspection of milk has also been more carefully examined into and as a result Recorder Weir has been delivering very sensible lectures on hygiene to delinquents brought before him, and what is more to the point giving heavy sentences to those guilty of selling impure milk.

Dr. R. Tait Mackenzie has tendered his resignation from the position of Governor's Fellow, Lecturer in Anatomy and Medical Director of

Physical Training at McGill University. He has been appointed head of the department of Physical Education in the University of Pennsylvania, Philadelphia, which has recently expended over half a million dollars in this department.

In the Montreal art gallery he will also leave a great blank as lecturer in artistic anatomy. His skill with the pencil and in clay is acknowledged beyond Montreal, while he is well known as a writer in *Outing* and other journals devoted to athletics and sports.

Dr. Mackenzie has done his work very quietly and the governors and fellows of the University can hardly realize the loss which his resignation will cause to McGill, those however who entered their Alma Mater when athletics were in chaos and graduated with everything running smoothly, well understand that a long time will pass before a man as able, popular, and conscientious, will occupy the position of physical director of McGill University.

The election of officers of the Montreal Medico-chirurgical society for the year 1904-5 was held at the last regular meeting of the session and resulted as follows:—president, Dr. J. H. Macdonald; vice-president, Dr. F. R. England; secretary, Dr. A. H. Gordon; treasurer, Dr. A. T. Bazin; trustee, Dr. Jas. Bell.

At the same meeting Dr. J. E. Goldthwait, of Boston, read a paper upon The Differential Diagnosis and Treatment of the so called Rheumatoid Diseases, illustrated by stereopticon views. The following is a synopsis of the paper.

1. Chronic Villous Arthritis, a purely local process generally mono-articular.

2. Atrophic, or Rheumatoid Arthritis, a chronic disease characterized by early and progressive atrophy leading to marked crippling with little or no blood change.

3. Hypertrophic or Osteo-arthritis a local or general process, characterized by thickening and ossification of the edges of the articular cartilages.

4. Infectious Arthritis, due to infectious organisms or their toxins—practically a septicaemia and associated with secondary anaemia and enlarged glands.

5. Chronic Gout characterized by deposit of urate of soda in the soft structures about the joints with some bone absorption.

Drs. Garrow, Adami, England, Girdwood and Perrigo took part in the discussion.

MEDICAL SOCIETIES AND GATHERINGS

CANADIAN MEDICAL ASSOCIATION.

The Vancouver meeting, 1904, takes place August 23rd, 24th, 25th and 26th, under the presiding of Simon J. Tunstall, M.D., Vancouver, B.C.

Vancouver and Victoria.—The thirty-seventh annual meeting of the Canadian Medical Association is to be held this year in Vancouver on the above dates. Victoria joins hands with her sister city in extending the hospitality of the Pacific province to all the members of our great national medical organization. In the thirty-seven years of its history this is the first time a meeting of the Canadian Medical Association has been held in British Columbia; and the opportunity to visit Victoria, an outpost of the Empire, and Vancouver, the pride and glory of the West, should not be lightly passed by. Indeed, the entire West is a "panorama of beauty" and a "scene of bustle."

How to Get There and How to Get Home Again.—There will be no special train. No arrangements are in force to return *via* California, Salt Lake City and Colorado, as none could be secured, so far as the Canadian Medical Association is concerned, but below will be found information which will cover that route in returning, same being an open rate not requiring any special certificate for purchasing transportation. Under the arrangements made, tickets will be good going *via* Canadian Pacific Railway direct, *via* Port Arthur, *via* Sault Ste. Marie, St. Paul thence Soo-Pacific route, Great Northern or Northern Pacific, or Grand Trunk *via* Detroit or Port Huron to Chicago, St. Paul, thence Soo-Pacific route, Great Northern or Northern Pacific, or Grand Trunk, returning same route or any other of the above routes. Lake route, Owen Sound to Port Arthur, may be taken one or both ways on payment of \$4.25 additional eachway. Boats leave Owen Sound Tuesdays, Thursdays and Saturdays.

It is also proposed to allow variation to St. Louis *via* St. Paul and Chicago on return trip, when tickets are routed on return trip *via* those points, on payment of \$10.00 additional. Secure return tickets if return is to be made other than Canadian Pacific Railway, *via* the Northern Pacific Railway to St. Paul; Chicago and Northwestern, from St. Paul to Chicago; Wabash, Chicago to St. Louis or Chicago to Detroit, either Wabash or Grand Trunk; Illinois Central, Chicago to St. Louis and return. Through sleeping car accommodations from St. Louis *via* Chi-

cago to all points in Canada on Grand Trunk Railway; or from St Louis *via* Wabash to Detroit direct, or to Chicago and thence to Detroit.

Maritime Provinces.—The Intercolonial Railway joins in the arrangements in force for the Maritime Provinces and also in Quebec.

Manitoba, Northwest Territories and British Columbia.—Transportation arrangements are as follows: To Vancouver and Victoria, from Port Arthur, Fort William, Rat Portage, \$50.00; from Winnipeg, Emerson, Gretna, Portage La Prairie, Brandon, Indian Head, Winnipeg to Boissevain, Winnipeg to Carrol, Brandon to Hartney and Weyburn to North Portal, \$45.00; Rapid City Junction, \$45.85; Gladstone, \$46.05; Neepawa and Minnedosa, \$46.85.

The above blankets pretty nearly all of the important points in Manitoba, but to make rates from points not shown above the one way first-class rate to the nearest point shown is to be added, but not to exceed the rate from a point more distant on the direct line. From points in the Northwest Territories and British Columbia, Qu'Appelle and West, round trip tickets to Vancouver and Victoria will be issued at single fare. Passengers ticketed at stations Medicine Hat and east, have the option of going *via* the main line, and returning Crow's Nest, or *vice versa*, as they may decide when purchasing their tickets. Tickets will be issued to either Vancouver or Victoria, where the same rate applies to either places; but if, as is the case from some far western points, the rates are higher to Victoria than to Vancouver, then tickets to Victoria will be issued only at the Victoria rate.

Rates from—	
Sault Ste. Marie, Sudbury, North Bay	\$62 40
Orillia, Allandale, Beeton, Tor- onto Junc., Parkdale, Streets- ville Junc., Cardwell Junc., Inglewood, Brampton, Brant- ford, Caledonia, Jarvis, Sim- coe, Tillsonburg, Guelph, Galt, Georgetown, Hamilton, Mil- ton, Drumbo, Berlin, Strat- ford, Woodstock, Beachville, Ingersoll, St. Thomas, St. Marys, London, Harrisburg, Sarnia, Chatham, Windsor, Ont	62 40
Toronto	Ont. 62 40
Listowel and Palmerston..	" 63 25
Harriston and Mt. Forest .	" 63 45
Clinton	" 63 35
Kincardine	" 64 90

Rates from—	
Teeswater	Ont. \$64 25
Southampton	" 65 05
Warton	" 65 35
Wingham ..	" 64 05
Goderich	" 63 75
Elora and Fergus ..	" 62 80
Orangeville..	" 62 85
Owen Sound	" 65 05
Stouffville Junc., <i>via</i> Tor- onto	" 63 25
Blackwater Junc., <i>via</i> Tor- onto and Orillia.....	" 63 80
Manilla Junc. and Lindsay, <i>via</i> Toronto and Orillia..	" 63 65
Peterboro' and Port Hope.	" 64 40
Central Ontario Junc. and Trenton ..	" 65 70
Tweed ..	" 66 25
Napanee	" 66 80
Eganville..	" 68 00

Rates from—		Rates from—	
Renfrew	Ont. \$68 00	Sherbrooke, Lennoxville..	Que. \$60 20
Sharbot Lake	" 67 60	McAdam Junc., St. John	
Kingston	" 67 70	and Moncton	N. B. 76 50
Carleton Junc.	" 68 00	St. Andrews and St. Step-	
Brockville, Smith's Falls,		hen	" 76 50
Perth	" 68 00	Woodstock	" 77 00
Prescott, Kemptville Junc.	" 68 00	Edmundston	" 78 70
Ottawa	" 68 00	Fredericton, Doaktown,	
Rockland	Que. 68 00	Boiestown and Black-	
Vankleek Hill	Ont. 68 00	ville, via Fredericton . . .	" 77 20
Cornwall	" 68 00	Digby and Yarmouth, via	
Montreal, Montreal Jct.,		St. John	N. S. 77 50
St. Martin Jct.	Que. 68 00	Halifax, via D. A. Ry. . . .	" 79 50
St. Johns	" 68 00	Halifax, via I. C. Ry . . .	" 81 00
Huntingdon, via Montreal	" 68 00	Oxford Junc.	" 78 95
St. Hyacinthe	" 68 85	Truro	" 80 00
Farnham	" 68 00	New Glasgow, via Truro . .	" 80 75
Acton	" 69 20	Pictou, via Truro.	" 80 50
Waterloo	" 68 40	Pictou, via Oxford Junc. . .	" 80 45
Foster	" 68 25	Antigonish	" 81 45
Richmond	" 69 20	Mulgrave	" 82 10
Three Rivers	" 69 75	North Sydney	" 83 55
Quebec, Levis, Point Levi	" 71 00	Sydney	" 83 70

Fare East of Fort William.—From points not mentioned add \$50.00 to first-class one way fare to Chicago.

Dates of Sale of Tickets.—From all points in Ontario and Quebec tickets will be on sale from the 15th to the 21st of August, inclusive, and from points east of Vanceboro', Me., August 14th to the 20th. The final return limit is October the 23rd, which means that all must be home on that date.

Stop-Overs.—Stop-overs will be granted west of Port Arthur on going and returning journey, and west of St. Paul when tickets are routed on return journey by that point.

Entertainment at Calgary on Way Out.—The Calgary Medical Association is desirous of extending an entertainment during the course of one day on the way out to Vancouver. This entertainment will be a typical western one, and will take the form of an Indian gathering in costume, Indian races and games, roping and cowboy feats. Those who would like to stop over at Calgary for this entertainment so kindly offered through the Calgary Medical Association, should notify the General Secretary without any delay, so that if there would be sufficient number, same could be forwarded in time for proper preparation of the entertainment.

The Social Side at Vancouver and Victoria.—In Vancouver arrangements have been made for various excursions, yachting trips

steamer, rail and tram to surrounding points of interest: receptions, private and public; a dinner or a ball. On one of the days of the meeting the delegates will be taken by train to New Westminster, visit the asylum there and other points of interest, then take the boat down the mighty Fraser to Steveston, visit some of the canneries, so that visitors will have the opportunity of verifying the stories of the salmon industry; then take the train back to Vancouver—a trip of great interest from start to finish.

In Victoria a committee is arranging a series of entertainments there, viz., reception at Government House, conversazione at the Parliament Buildings, a visit to Esquimalt and William Head Quarantine Station, besides other excursions to points of interest in and about Victoria.

For those who would like to extend their visit special rates are arranged for to Nanaimo, for stop-overs at Kaslo and Golden. Other side trips have been arranged for to Skagway, Atlin, *via* Yukon and White Pass Railway to Dawson City. Hunting parties can be made up at Vancouver, and reliable guides furnished. Guides can also be supplied for those who would want to do mountain climbing.

Hotel Accommodation.—Vancouver Hotel, \$3 to \$5 per day; Badminton, \$2 to \$3 per day; Leland, \$2 to \$3 per day; Commercial, \$2 to \$3 per day; Metropole, \$2 to \$4 per day; Dominion, \$1 to \$2 per day. Board and rooms can also be arranged for at private houses, a complete list of which can be obtained from the local secretary.

Pullmans and Dining.—The Pullman rate from Toronto to Vancouver is \$17.00 each way; from Montreal \$18.00 each way. Meals for five days about \$12.50.

Yellowstone Park.—Yellowstone National Park is situated mostly in the State of Wyoming, in its north-western corner. Those contemplating visiting this "Wonderland" after the meeting in Vancouver, should see that their tickets are routed on return journey *via* the Northern Pacific Railway. From Vancouver the return trip is made over the C.P.R. to the boundary where the Northern Pacific is taken at Sumas. Thence through Auburn and Spokane to Livingston, where change is made for Gardiner, at the entrance to the Park. A six day's trip by stage-coach through the Park, including meals and lodgings at the hotels, which are all first-class, will cost \$49.50. The Park is sixty-two miles from north to south and fifty-four miles wide. The General Secretary will be glad to hear from all those intending to take in this trip on return journey, having been assured that a party of from twenty-five to fifty will receive better attention than smaller ones.

Return through California, Salt Lake City and Colorado.—As announced above, the Canadian Medical Association has no arrangements in force for return *via* California. For the benefit of those, however, who wish to return that way to St. Louis, the information may be tendered that there will be in force at the same time as our own convention an open rate of \$70 25 from Toronto to San Francisco, good going *via* Canadian Pacific Railway to Vancouver, allowing liberal stop-over in each direction; final return limit 23rd of October. No certificates are required for this trip, as it is an open rate to all. In taking this trip, members of the Canadian Medical Association going to Vancouver should be routed on return *via* Southern Pacific, Portland to San Francisco or Los Angeles; Southern Pacific, San Francisco to Los Angeles to Ogden; Union Pacific to Kansas City and St. Louis. Mr. H. F. Carter, T.P.A., Union Pacific Railway, 14 Janes Building, Toronto, will supply any further information regarding this route.

Membership.—The fee for membership is \$2.00, and may be paid to the Treasurer, Dr. H. Beaumont Small, Ottawa, when registering at the meeting. For the information of those who have not been elected to membership, the same rates apply to them as well, and they are instructed to ask for application forms when registering.

Special Certificates.—All delegates must have for themselves, their wives and daughters, if going, a special certificate from the General Secretary, in order to secure reduced transportation rates.

Further Information.—Should any one require any further information as to accommodation at Vancouver or Victoria, side trips, hunting, etc., they will kindly address the Local Secretary, Dr. W. D. Bryden Jack, Vancouver, B.C. For certificates and general information address the General Secretary, Dr. Elliott, 129 John St., Toronto.

Provisional List of Papers.—President's address, Simon J. Tunstall, Vancouver; Address in Surgery, Mr. Mayo Robson, England; Address in Medicine, Dr. ———; Address in Gynecology, Dr. E. C. Dudley, Chicago; Paper, title to be announced, Dr. A. McPhedran, Toronto; Paper, title to be announced, Dr. J. H. Elliott, Gravenhurst, Ont.; Surgical Treatment of Trachoma, Dr. G. Sterling Ryerson, Toronto; Paper, title to be announced, Dr. A. Armstrong, Arnprior, Ont.; Paper, title to be announced, Dr. A. E. Garrow, Montreal; The Operative Treatment of Spina Bifida, Dr. E. R. Secord, Brantford, Ont.; The Business Aspect of the Medical Profession, Dr. James E. Hanna, Ottawa, Ont.; Paper, title to be announced, Dr. D. J. Gibb Wishart, Toronto; Paper, title to be announced, Dr. J. W. Stirling, Montreal; Paper, title to be announced, Dr. B. E. McKenzie, Toronto; Hernia of Bladder Complicating Inguinal

Hernia, Dr. Francis J. Shepherd, Montreal; Gastric Ulcer and its Treatment, Dr. J. B. McConnell, Montreal; La Syphilis Canadienne et Différents Facteurs et Gravité, Dr. D. E. LeCavelier, Montreal; Case Reports, Dr. Robert H. Craig, Montreal; Paper, title to be announced, Dr. James S. Edwards, Grand Rapids, Mich.; Paper, title to be announced, Dr. Henry Howitt, Guelph, Ont.; Chronic Cystitis, Dr. J. O. Camirand, Sherbrooke, Que.; Intencephaly, with a Report of Three Cases, Dr. Maud E. Abbott, and Dr. F. A. L. Lockhart, Montreal; Actinomycosis, Dr. James Bell, Montreal; Paper, title to be announced, Dr. Ingersoll Olmsted, Hamilton, Ont.; Prostatectomy Under Local Anesthesia, Dr. H. H. Sinclair, Walkerton, Ont.; High Frequency Currents in Functional Disease, more particularly Functional Neuroses, Dr. S. F. Wilson, Montreal; Therapeutic Hints from Bacteriology, Dr. G. R. Cruickshank, Windsor, Ontario; Paper, title to be announced, Dr. C. H. Mayo, Rochester, Minn.; In addition there will be a number of papers from Western men, whose names have not yet been received.

ASSOCIATION OF EXECUTIVE HEALTH OFFICERS.

The dominant note of the nineteenth annual meeting of the Association of Executive Health Officers of Ontario, which was held in Sarnia, July 13th and 14th, was struck in a paper by Dr. Hodgets of Toronto, Secretary of the Provincial Board of Health, when he called attention to the possibility of better hygienic measures for the treatment of consumption and the advisability of clothing the local health officers with power to see that these conditions were complied with. His paper on the subject evoked considerable discussion, and some remarkable instances were given of the restoration to health of tuberculosis patients by living in the open air, etc., without going into institutions. The paper called attention to the impossibility of providing sanitarium for ninety and nine cases out of every hundred, and gave the mortality figures from this disease for the Province at 200 a month, or 2,500 last year, in support of the plea for activity on the part of local health officers. The report of the Phipps Institute in Philadelphia was a revelation of the benefits of pure air, regularity of life and nutrition in restoring patients to health. He urged the adoption of a system of registration of consumptives to secure complete protection of the healthy from contagion.

The Chairman of the Association, Dr. Hall of Mallorytown, was absent, and the chair was filled by Dr. Lane of Chatham. The new health regulations were explained in a paper by Dr. Charters of Chat-

ham, with special reference to the power of health officers to compel the erection of isolation hospitals.

Factory Inspector Burke read a paper composed by his colleague, Thomas Keilty, Factory Inspector of Brockville, calling attention to the need for some arrangement which would free local health officers from financial loss when their duty compelled them to antagonize large firms by a close enforcement of the Health Act. In his duty he had met many cases where the medical men did not enforce the Act stringently through fear of loss of practice, in many cases well grounded. Recommendation was made for a system of district health officers, who would be amply paid for the work, and could act for a large territory.

In the discussion which followed cases were brought to light where local health officers desired to enforce the sanitation of barber shops, etc., but were restrained by the certainty of being visited with a serious loss of popularity through being considered too officious.

A paper upon lateral deformity of the spine by Dr. Oliver, of Sarnia and a paper upon diphtheria treatment, by Dr. Logie, of Sarnia, were also presented.

Two papers of much importance were read: "The Interpretation of Water Analysis," by Dr. Amyot, of Toronto, and "Medical Inspection of immigrants," by Dr. P. H. Bryce, of Ottawa.

The arrangements by the Town Council for the entertainment of the members of the Association were most complete. A train was placed at the disposal of the committee by the Grand Trunk, which took the visitors through the tunnel and past the saw milling industries. In the afternoon a steamer was chartered, and an excursion was given on the lake and river, and in the evening a complimentary banquet was given at the Belchamber Hotel by the Council and Lambton Medical Association, at which over 100 were present. Mayor Cook presided.

PROVINCIAL BOARD OF HEALTH.

The quarterly meeting of the Provincial Board of Health, which is usually held in Toronto, was held in Sarnia, July 13th and 14th, in connection with the meeting of the Association of Executive Health Officers of Ontario. Those present were: D. Kitchener, St. George; Dr. W. Oldright, Toronto; Dr. R. P. Boucher, Peterborough; Dr. A. Thompson, St. Catherines, and Secretary C. A. Hodgetts, M.D., Toronto.

A resolution was passed recommending that an Order in Council be passed making it obligatory upon physicians to report all cases of tuberculosis to the local health officer, in order that without resorting to placarding of the houses a general supervision could be exercised over

this class of patients to reduce the danger of infection and secure better hygienic conditions for the patients themselves.

The quarterly report of Secretary Hodgetts showed a diminution of the number of cases of contagious disease throughout the province except measles and tuberculosis. The number of cases of scarlet fever had fallen from 983 to 408, largely, it was claimed, on account of the Health Act of 1903. Great stress was laid upon the necessity of enforcing the clause requiring the vaccination of children of school age. Municipalities which did not comply risked an epidemic, with its consequent expense and loss of life, while there were invariably few cases, if any, where the clause was lived up to. He defended the seven weeks' quarantine for scarlet fever, stating cases of infection even later than seven weeks. The smallpox epidemic in Temiskaming district had decreased, and there are now only 30 cases.

The expected action regarding the sewage system of Toronto was discussed in an interim report, stating that arrangements had been made for a bacteriological examination of the sewage at different points to determine the exact character. Attention was called to City Engineer Rust's statement that each day there is a waste of sixteen million gallons of water. The admission of this water into the sewers, it was stated would mean a great additional expense if any dry sewage plan had to be adopted.

A delegation was received from Collingwood consisting of the Mayor, Chairman of the Board of Health and health officers, regarding the proposed sewerage plan for that town. The board was unable to approve of the plan until fuller information could be obtained, but promised a special meeting when the full facts were laid before them.

The sewer plans of Bridgeburg were conditionally approved, and the waterworks plan of Grimsby and Creemore were reported on.

THE MEDICAL DEPARTMENT OF THE CONGRESS OF ARTS AND SCIENCE AT ST. LOUIS.

The Department of Medicine is divided into twelve sections, embracing the principal fields covered by the subject. The order of proceedings will be most easily understood if set forth in detail.

The Department of Medicine will be opened on Tuesday, September 20, under the chairmanship of Dr. William Osler, with two general addresses by Dr. W. T. Councilman and Dr. Frank Billings. There will be sections of Public Health, Otology, Preventive Medicine, Pediatrics, Pathology, Psychiatry, Neurology, Therapeutics, Internal Medicine, Surgery, Gynæcology and Ophthalmology. Many papers and

addresses are promised by eminent members of the profession from the United States, Great Britain, France and Germany.

ASSOCIATION FOR THE TREATMENT OF INEBRIATES.

The following resolutions were adopted at a meeting held at the residence of Dr. Wm. Oldright, Toronto, April 10th, 1904:—

1. That it is much to be deplored that up to the present time no provision has been made in this Province, either by the Government or the Municipalities, for promoting the treatment of indigent inebriates; that the general custom of committing these unfortunates to jail is neither deterrent nor reformatory; it is degrading and bad economy, and in cases where the inebriety is a disease it is inhuman.

2. That we deplore the fact that the members of the Ontario Government have not been able to see their way clear either for the introduction of the proposed bill for the economic treatment of indigent inebriates or for the adoption in this Province of the probation system for first offenders, either as delinquents or as drunkards—a system that is both reformatory and economical and which saves from jail stigma and contamination.

3. That realizing as we do that some action should be taken in this important matter without further delay, we recommend that the necessary steps be taken for the formation of a society for prosecuting the reformation of inebriates; but that before an appeal is made to the public for financial help, it is recommended that an effort be made to secure to the movement the commendation of prominent citizens.

The undersigned have considered the above resolutions regarding "The Treatment of Inebriates" and are in hearty sympathy with them. They are willing to co-operate in the movement therein outlined and would commend it to the earnest consideration of others. James Massie, Dr. Wm. Oldright, Dr. A. M. Rosebrugh, Dr. E. J. Barrick, Ald. John Noble, Dr. B. E. McKenzie, Dr. W. Harley Smith, Mr. I. H. Cameron, Dr. Price Brown, Dr. E. H. Adams, Thomas Crawford, M.P.P., Justice J. R. Teetzel, W. J. Gage, B. E. Walker, Ald. E. Coatsworth, Hon. S. C. Biggs, Prof. Wm. Clark, Prof. G. M. Wrong, Rev. Joseph Hamilton, Rev. A. B. Winchester, A. B. Brown, Board of Education, Dr. J. A. Temple, Dr. N. A. Powell, Dr. John Ferguson, Principal N. W. Hoyles, Rev. Wm. Frizzell, Rev. Canon E. A. Welch, Rev. Canon J. D. Cayley, Edward Taylor, City Relief Officer.

UNIVERSITIES AND COLLEGES

THE ONTARIO MEDICAL COUNCIL CONVENTION.

The members of the council of the College of Physicians and Surgeons of Ontario assembled, 28th June in their board-room in the Medical Council Buildings, Toronto, for the first session of their annual five days' convention. There was a full attendance of members and the proceedings of the afternoon were marked by expedition and harmony. The prosperous year which the college had enjoyed was indicated by the treasurer's statement, which showed receipts of \$36,200.19 and a cash balance of \$5,127.91. after disbursements had been made.

Dr. Thorburn's resignation. On the meeting being called to order, the resignation of Dr. Thorburn was laid before the members. Dr. Thorburn said that as Toronto School of Medicine had surrendered its charter, he did not consider that its representative had any longer a right to a place on the council. In accepting the resignation, the members of council expressed regret at losing such a useful and esteemed colleague as Dr. Thorburn.

The President's address. Dr. J. A. Robertson, of Stratford, the retiring president, in delivering his annual address, welcomed the members of council to the labors of another session. He referred feelingly to the death of two valued members, Dr. W. H. Moore, of Brockville, and Dr. Sangster, of Port Perry, and extended a welcome to their successors, Dr. Herald, of Kingston, and Dr. Bascom, of Uxbridge. He spoke also of the retirement from active life of Dr. W. B. Geikie, dean of Trinity Medical School, and expressed the hope that he would long continue to enjoy health and prosperity. He congratulated the members on the satisfactory showing of the treasurer's report, and on the fact that the council's building had increased in value as an asset. Dr. Robertson said that he had personally attended the examinations, and he was convinced that the methods in vogue were quite on a par with those of the profession of the Mother Country. In concluding, he thanked the members for the assistance and consideration, and called on them to name his successor.

Dr. M. Sullivan elected president. Hon. Dr. Sullivan, of Kingston, was the only name placed in nomination for the office of president, and his election was therefore unanimous. In taking the chair he thanked the council for conferring such an honor upon him. He said he had

spent nearly 50 years in the profession, and the longer he remained in it the more impressed he was by the nobility and usefulness of the calling. He feared that doctors did not fully recognize the possibilities for good which their work gave them. He said he was averse to the discussion of the physicians' "tariff," as he believed that the doctor's services could never be measured by any money value. The doctor should regard his fee as an honorarium. He expressed the hope that the college would continue to maintain the high standing of the profession, not by increasing fees, but by keeping up a rigid standard of qualification.

Officers: The other officers were elected as follows: Vice-President, Dr. A. A. Macdonald, Toronto; Registrar, Dr. R. A. Pyne, M.P.P., Toronto; Treasurer, Dr. H. Wilberforce Aikens; Solicitor, Christopher Robinson, K.C.; Auditor, Dr. J. C. Paton; Stenographer, Alex. Downey; Prosecutor, Chas. Rose.

Committees: The following committees were then appointed:—

Registration—Drs. Campbell, Lane, Johnson, Stuart, Thornton, Klotz, MacArthur.

Rules and Regulations—Drs. Lane, Bascom, Adams, Hillier, Spankie.

Finance—Drs. Henderson, King, Griffin, Brock, Bray.

Printing—Drs. Temple, Stuart, King, Hardy, Hillier.

Education—Drs. Moorhouse, Henery, Luton, Gibson, Spankie Temple, Robertson, Herald, Britton.

Property—Drs. Johnson, Campbell, Glasgow, Britton, Thornton.

Complaints—Drs. Griffin, Hardy, Mearns, Glasgow, Johnson.

Inter-Imperial Registration.—A communication was received which had been forwarded to Lord Minto by Hon. Alfred Lyttleton-Colonial Secretary, stating that a private member's bill had been introduced in the British House of Commons providing that when any part of a British possession was under both a central and a Local Legislature, the King might, by Order-in-Council, declare any such part under a Local Legislature to be a separate British possession. The object of this measure was to enable reciprocal arrangements to be entered into under the Medical Act of 1886, with such provinces of Canada as desired to do so. The Colonial Secretary wished to have the views of Canadian Ministers on the measure. The Government had in turn forwarded it to the Provincial Secretary, who had transmitted it to the Council.

After a short informal discussion the matter was referred to a special committee, composed of the following members: Drs. Bray, Brock, Campbell, Hillier, Johnson, Macdonald and Spankie.

Inter-Provincial Registration.—Communications regarding Inter-Provincial Registration from Dr. Lindsay of the Nova Scotia and Dr. J. A. Macdonald of the Quebec Colleges, and one from Johns Hopkins University, regarding reciprocity in medical degrees, were referred to the same special committee.

Cancer Research.—A lengthy report on cancer research was received from the Imperial Government. It was forwarded to the Dominion Medical Association.

Examinations in London.—The following notice of motion was given: That annual examinations be held at London similar to those held at Toronto and Kingston. This was referred to the solicitor for his opinion.

The Matriculation Examination.—The special committee consisting of Drs. Spankie, A. A. Macdonald, and Britton, appointed by the Ontario Medical Council to secure all the information possible in relation to matriculation, presented their report. According to their recommendation the requirements for passing the examination will differ little from those at present in vogue. Two changes are made. Formerly a minimum of 33 1-3 per cent. sufficed for those candidates who had passed the joint university examinations for junior matriculation in arts as conducted by the Ontario Education Department. It is now decided to raise the minimum to 40 per cent. Formerly this joint matriculation with honors in two subjects, entitled the candidate to be passed by the council. The committee advised that one honor subject suffice in future.

The following credentials will in the future be accepted:—

“1 A certificate of having graduated in arts in any university in his Majesty’s dominions, or any other university approved of by the council.

“2 A certificate from the registrar of any chartered university conducting a full art course in Canada that the holder thereof has passed the examination conducted at the end of the first year in arts by such university.

“3 A certificate of having passed the joint university senior matriculation examination in arts as conducted by the Education Department of Ontario.

“4 A certificate of having passed the senior arts matriculation conducted by any chartered university of Canada.

“5 A certificate of having passed the joint University examination for junior matriculation in arts, as conducted by the Education Department of Ontario, with an advanced percentage, as follows: 40 per cent. minimum on each subject, and 50 per cent. on the aggregate.

"6 A certificate of having passed the joint university examination for junior matriculation in arts, as conducted by the Education Department of Ontario, with honors in any two departments.

"The matriculation fee will be \$20."

Among the criticisms levelled at the report were that it did not go far enough, that experimental science was not made compulsory, that senior matriculation should have been recommended.

The report was adopted on a division of 20 to 4.

The Case of Dr. Van Epp.—The Executive Committee reported the case of Owen B. Van Epp, a qualified practitioner of Ohio, who resides on Pelee Island, in the County of Essex, and who had a Bill passed by the Legislature admitting him to practise medicine in that township only, on petition of 700 of the residents thereof. He is the only practitioner on the island. He passed the final examination of the Medical Council.

Prosecutions—The matter of a complaint received of fifth-year students practising was brought up in the report of the Prosecution Committee, but no action was taken. Two cases of unprofessional conduct was referred to the Discipline Committee for consideration.

The report, after referring to these and several minor cases, went on to say:—

"Besides the above cases, I have had a large number of complaints against osteopaths, Christian Science healers, magnetic healers, and others of that kind, but owing to the fact that they prescribe no medicines, I have been unable to do anything further than giving their cases as much publicity as possible, and, until the Legislature in their wisdom see fit to amend the Ontario Medical Act so as to cover this class of 'healers,' I am unable to protect the public against them."

Examinations.—The Examination Committee reported that at the Spring examination in the final year 142 candidates had presented themselves, 93 of whom passed and 49 failed.

Jurisprudence and Sanitary Science.—It was resolved that the subjects medical jurisprudence and sanitary science should for the purposes of examination be considered separate and distinct subjects.

Proprietary Medicines.—Dr. L. Bray, Chatham, introduced the following resolution, which was seconded by Dr. Moorehouse, of London: Resolved that a committee be appointed to take into consideration, as far as possible, the composition of the various patent medicines now on the market, and report to the council at the present session, with the view of laying before the Legislature the necessity, in the interests of the public, of having the formula of all such remedies printed on each package."

Dr. Bray said there was a general agitation for temperance, which was right. But if people were not to be allowed to drink lager beer, which contained only 2 1-2 per cent of alcohol, it was a great wrong to permit the sale of medicines containing alcohol running from 15 to 40 per cent. Worse than alcohol were the opium and morphine found in some patent medicines, which were the cause of forming the opium habit in the cases of many women in Ontario. If the formulae were printed on every package the public would know what they were buying.

Disposal of the Building.—Considerable time was spent in considering the question of disposing of the college's building at the corner of Bay and Richmond Streets. The members were practically unanimous as to the wisdom of selling the property, but there was a diversity of opinion as to the value of the property the estimates placed on it running as high as \$150,000. The land and building cost originally about \$88,000, but owing to the increased value of the land and the rise in cost of building operations, there has been a decided advance in the value of the building.

The matter was brought before the council by a resolution moved by Dr. Henry, and seconded by Dr. Griffin, that the Property Committee sell the property at as early a date as possible, the resolution fixing a minimum price.

This motion was vigorously discussed. Dr. A. Macdonald, the vice-president, objected to the fixing of a minimum price on the building. He thought that the property was worth fully \$150,000. In this he was supported by Dr. E. E. King, who pointed out however, that at present the income from the building was only \$4,743 per annum, while the maintenance charges, taxes, and interest amounted to \$7,733. He favored selling the property, and erecting a suitable building which would be devoted solely to the purposes of the college and the profession. He then moved in amendment that tenders for the purchase of the property be invited by advertisement. After further discussion, the motion was withdrawn, and the amendment was carried unanimously.

Censors or Assessors.—Dr. C. T. Campbell's motion that certain members of the council be appointed to attend every examination to act as censors or assessors, was referred to the Education Committee for consideration and report at a future meeting.

Salaries.—Dr. Campbell also moved that the Finance Committee consider the fixing of salaries and allowances for the members and officers of the council. This was carried.

Tariff for Fees.—Dr. A. J. Johnson, chairman of the special committee appointed last year to consider a general tariff for professional services, brought in a report setting forth minimum and maximum fees. As the council has no legal right to fix a tariff, it simply approved of the report, which contained also a recommendation that the practitioners of each division form separate associations and adopt a general tariff.

Provincial License Department on Orders of Stimulants.—Mr Saunders, chief officer of the Provincial License Department, sent the following letter to Dr. R. A. Pyne, M.P.P., registrar of the Ontario Medical Council:—

“The Provincial License Department has recently received a number of complaints from various parts of the province that medical practitioners in the districts in question are in the habit of giving prescriptions or orders to hotelkeepers and shop licensees to supply liquor to the holders of the orders, sometimes for indefinite periods, and often in absurdly large quantities, and it was thought probable that the Medical Council might see fit, if attention were called to the matter, to make an effort to minimize this evil.

“The department would prefer not to give any names for publication lest it should be prejudicial to the practitioners without being correspondingly beneficial to the public. I may, however, say that within the last few days three complaints have been received of this character. In one instance 30 orders had been given within ten days in a small place, mostly to persons whose maladies appear to have reached an acute stage on two successive Sundays. In another locality 17 orders were given for alcohol, chiefly by the quart, and, what is worse, many of these orders were to bearer. Recently a curious order was presented to a hotelkeeper authorizing him to supply the bearer with three or four glasses a day. This particular order was not subject to any limitation in point of time, and the hotelkeeper appears to have thought that it would hold good for several months. It should be stated in this connection that a notice had previously been served upon the hotelkeeper under section 125 of the Liquor License Act, forbidding him to supply the person in question with any liquor whatever.

“If you think it would be of any benefit to bring this matter before the council will you kindly do so?”

Mr. Eudo Saunder's letter, complaining that medical practitioners issued orders for liquors in large quantities for patients, was laid on the table.

Luncheon.—At 1 o'clock, 30th June, the members of the council sat down as guests to a luncheon tendered them at the new medical

building by Dean Reeve and the faculty of the school. The dean, in proposing the health of President Sullivan and the council expressed his conviction that that body would deal fairly by both the public and the medical institutions in the matter of medical education. The faculty of the school has been increased, but this was made necessary by the larger number of students in attendance since the amalgamation.

Senator Sullivan, in replying, referred to the advance of the profession, which was largely due to the improved facilities for acquiring knowledge. He proposed the health of Dr. J. H. Richardson, emeritus professor of anatomy, and the veteran teacher was honoured with an outburst of hearty cheers when he rose to make a brief but sincere reply. He said he had always tried to retain the friendship of his students and fellow-professors, by treating them like gentlemen, and if he had succeeded in doing so he felt amply repaid.

Proprietary Medicines.—The use, or rather the abuse, of patent medicines was one of the chief matters considered. The report of the special committee, appointed to consider the best methods of dealing with the injurious results from the public's excessive use of proprietary medicines, declared that, in view of the large and rapidly increasing sale of patent medicines, including snuffs and cosmetics, and the unwarranted statements contained in advertisements of the same, steps should be taken to memorialize the Dominion Government asking that a law be passed making it compulsory to have displayed on each and every bottle a complete and correct formula of ingredients. It should also be made a misdemeanor to state in any advertisement that an article was a cure of any specific ailment which statement the formula did not warrant.

The report further went on to state that the excessive amount of alcohol contained in the greater proportion of proprietary medicines made them injurious to the health of the public and conducive to the alcoholic habit. Of some 91 separate tonics and bitters recently analysed by the Massachusetts State Board of Health, 7 contained an average of 22.5 per cent. of alcohol, and 27 contained over 30 per cent of alcohol. Whiskey contained but 25 per cent alcohol.

The council unanimously endorsed the report.

The Finances.—The report of the Committee on Finance was satisfactory, showing a balance of \$5,127 after paying off \$7,500 on the mortgage. The registrar's salary was placed at \$2,500 per annum and the treasurer's at \$600. The estimates for 1904-5 were: Receipts, \$29,627; expenditure, \$22,009; balance, \$7,528. The assets were Building and site, \$125,000; assessment dues uncollected, \$1,500; assess-

ment dues, 1903, \$5,000; furniture, \$800; cash in bank, \$5,127, total \$137,427. The liabilities were: Mortgage, \$47,500; costs of session, \$3,000; accounts, \$51; total, \$50,551. Balance to credit of college, \$86,876.

Annual Tax.—It was decided that each member of the college should pay towards the general expenses an annual fee of \$2.

Complaints.—The Committee on Complaints reported that of 49 students unsuccessful at the recent examinations 24 had appealed. Only one appeal was allowed, that of F. A. Aylesworth.

Date of Examinations.—The date of the annual spring examinations at Toronto and Kingston was made the third Tuesday in May instead of the second Tuesday as heretofore.

Discipline.—The Committee on Discipline reported that Dr. H. B. Lemon's application for reinstatement had been granted, while that of Dr. H. E. Shepard had been refused. The charges of unprofessional conduct against Dr. J. E. Hett, of Berlin, and Dr. A. Crighton, of Castleton, were referred to the committee to investigate and report at the next session.

British Registration.—The special committee appointed to consider the communication from the Provincial Secretary respecting reciprocity in registration with Great Britain reported that they had not sufficient information on the subject at present to bring in an intelligent report. For the same reason the request from Quebec, Nova Scotia and Johns Hopkins for reciprocity in registration was laid over.

Executive Committee.—An executive committee of the Council was appointed, consisting of Drs. Sullivan, Macdonald and Henderson.

A motion was made by Dr. Klotz, seconded by Dr. Mearns, that the attention of the Dominion Medical Association and the various councils be called to the action of the Ontario Medical Council in relation to the desired restrictions on the sale of patent medicine. The motion was carried.

Fifth Year Students.—The report of the Education Committee was received. A change was made in the regulations by which fifth year students will be allowed to practise under physicians for information and clinical experience.

An amendment was moved to allow fifth year students to receive a certificate for having been one year in a hospital of over 50 beds; or for six months in such hospital and six months with a doctor, instead of taking the fifth year lectures. After some warm discussions this was carried by a vote of 18 to 9.

Clinical work in Gynaecology.—Four months of clinical work was added to the four months course in gynaecology.

Examiners.—The Board of Examiners appointed for the coming year was as follows:—Descriptive anatomy, Dr. McKay, of Oshawa; theory and practice of medicine, Dr. Ryan, of Kingston; midwifery, etc., Dr. McCabe, Strathroy; physiology and histology, Dr. A. Primrose, Toronto; surgery, Dr. W. T. Parkes; medical anatomy, etc., Dr. Middlebrough; chemistry, etc., Dr. A. R. Pyne; materia medica, Dr. J. A. Sprague; medical jurisprudence, Dr. A. J. Sinclair; assistant examiner surgery and diseases of women, Dr. R. Ferguson, London; assistant examiner, clinical surgery, Dr. O'Reilly, Toronto; 1st assistant medicine, diseases of children, Dr. A. Haig, Kingston; 2nd assistant examiner in medicine, Dr. G. H. Field, Cobourg; homoeopathic examiner, Dr. W. McFall, Peterboro.

Letter of Explanation.—It was decided to write to Mr. Eudo Saunders and to the newspapers, explaining the action of the council upon Mr. Saunders' letter respecting the prescription of liquors to habitual drunkards.

QUEBEC MEDICAL COUNCIL.

At a meeting of the College of Physicians and Surgeons, fifty physicians were granted the right to practice in the Province of Quebec and twenty-one candidates admitted to the study of medicine. The treasurer's report showed that there was a balance of \$4,510.00 on the right side. The following gentlemen having fulfilled the requirements were granted licenses: George E. Beauregard; John George Browne; Raoul Philippe Bonin; Arthur Bergeron; Isaac E. Crack; Thomas Fred Connelly; Omer Etienne Desjardins; Edgar David; James Robert Goodall; Richard H. M. Hardisay; John Johnson; Watts Grey; Havelock Lippiatt; Philippe Quesnel; George Marcotte; Louis Pierre Marleau; Narcisse Henri Touchette; Thomas Lankin Wilson; John A. Nutter; Jos. A. B. Godbout; Jos. Elie Belanger; Jos. Alf. Drouin; P. A. Gastonguay; Emile Fortier; Adrien Bonin; Leonidas Blais; Arthur Gagnon; Zephirin Vezina; Chas. Edouard Eaton; Hig. A. Sims; Jean-Marie Pellerin; Frederick P. Yorston; James Joseph McGovern; Arthur De Grandpré; Moise Veronneau; George Tanner; Arthur Gould; Theophile Laurin; William Allen Cumming; Walter Alphonse Dorion; John James Andrews; Harry Lorne; John Alexander Johnston; William Ernest McKee; Walter Flood; W. William Francis; Misses Esther, Kristal and Mary Rowland.

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EDITORIAL

THE GROWTH OF QUACKERY

It is high time that the medical profession took active steps to repress the growing evil of proprietary medicines, fake cures, the sale of poisons and alcohol in patent medicines, fraudulent medical advertisements, the use of the mails for indecent literature, and the deception of the public by all sorts of humbug healers.

With the growth of modern civilization there has also been the growth in the desire and in the numbers wishing to profit by this desire to deceive and defraud the public through the medium of offered cures for all and sundry diseases and ailments. Against fraud the public must be protected as far as possible. That the law at present is woefully defective so far as patent medicines and irregular practitioners are concerned must at once be admitted.

This should not be so. It would be a very easy matter to put a stop to the whole business. With regard to patent medicines all that is required is to compel the makers to publish the exact formulæ, and to refrain from guaranteeing cures and making statements that the medicines would not justify. No advertisement should be allowed to go further than giving the composition of the medicine and stating that it is good for so-and-so. To guarantee cures, and particularly of organic and incurable diseases, should be made *prima facie* evidence of fraud.

In the matter of irregular practitioners the law should be made stringent. It should be made an offence to advertise any form or system of treatment by any person or persons who are registered practitioners. That one person will render assistance to another will always be the case. The act of the good Samaritan will be repeated so long as the world lasts. But this is quite another thing from the organized efforts put forth in some quarters to treat disease by all sorts of systems and under all sorts of fanciful names. This can be stopped, should be stopped, and must be stopped.

These people make bold to denounce the entire medical profession. They advance to the public the wildest views upon disease, and lay claim

to the most extravagant powers of curing them—these powers generally being some divine gift. Preternatural Healing, Christian Science, Osteopathy, Holy Ghosts, Holy Rollers, Vital Friends, Peculiar People, Magnetic Healers, Sun Curists, Esoteric Vibrationists, Physic Scientists, etc., would be put out of business if they were debarred the right to advertise a system of diseases and offer cures. No one wishes to interfere with their private opinions, but simply to prohibit them putting their opinions in operation in the treatment of disease and the making of money thereby.

In the United States it is estimated that the annual sale of patent medicines must reach the sum of \$60,000,000, and much of this does positive harm. An alcohol cure was found to contain nearly 40 per cent. of alcohol.

The literature that goes with some of the so-called cures is absolutely disgusting and immoral. Much of what is circulated for the benefit of young men is of the lowdest character which words are capable of expressing.

The medical profession owes it as a duty to itself and to the public to unite in downing this great evil. Narcotics, stimulants and abortifacients are sold by the millions of dollars' worth, and obscene literature is scattered broadcast by the tons.

THE RECENT MEDICAL COUNCIL MEETING.

The meeting of the Medical Council for 1904 was in some respects an important one. We give a full report in another part of this issue. A few features, however, merit some special consideration.

Many will be pleased to note that such a veteran teacher and practitioner as Hon. Dr. M. Sullivan, of Kingston, was the unanimous choice of the members for the position of President. We wish him every success in his exalted office.

A matter of much importance came up in the question of reciprocity of registration between Ontario and Great Britain, Quebec, Nova Scotia and Johns Hopkins. This was referred to a committee consisting of Drs. Bray, Brock, Campbell, Hillier, Johnson, Macdonald and Spankie. This committee will report at the next session of the Council. In the case of Great Britain, Quebec and Nova Scotia, we would like to see some equitable way by which the qualifications of these portions of the British Empire could be accepted by each other: There would have to be a condition of perfect equality of standard and privileges. It is to be profoundly regretted that the Province of Quebec has not seen its way

clear to accept the Roiddick Bill and thereby bring into operation a common Dominion system of registration. The Province of Quebec, as has been pointed out in THE CANADA LANCET, would have been the largest gainer by the change. We hope that Quebec may yet accept the terms of the Bill.

Dr. W. H. Moorehouse, of London, introduced a motion to the effect that examinations should be held in London as well as in Toronto and Kingston. If the Act creating the College of Physicians and Surgeons does not permit of this, an amendment should be sought to allow of the change being made. No good reason can be advanced why examinations should not be held in London, where there is a prosperous medical college.

Another change in the right direction was that of raising the standard of matriculation. Although the same examination is accepted, a higher percentage is demanded. It is to be hoped that the council will keep on advancing the standard of entrance into the profession. It is better to do the sifting at the beginning of the course than later on.

The sale of the building on the corner of Bay and Richmond streets was up for consideration. It would undoubtedly meet with the wish of the profession to have the property sold. The present building is not suited for the requirements of the council. For the money that is invested in it, very poor returns are secured. Much better accommodation can be obtained for the same outlay.

Proprietary or patent medicines came in for their share of criticism. The Medical Council decided to ask for such legislation as will compel the vendors of such medicines to have their composition printed on the wrappers. This is a step in the right direction. The purchaser has a right to know what he is buying. This is the law in France, and it is very rigidly enforced. The further recommendation of the council to the effect that advertising curative powers for any proprietary medicine, in excess of what it can accomplish, should be treated as fraudulent will meet with the approval of all. These positions THE CANADA LANCET has urged on many occasions. It should be made a criminal offence to advertise a remedy as a positive cure for incurable diseases. The greatest duty of legislators is to protect the people in all their interests.

But the Council should make a determined effort to secure such change in the statutes as will enable it to deal with such classes as Christian Scientists, Osteopaths, Magnetists, etc. There is absolutely no reason why they should be allowed to practise. No one objects to them holding any views they please on the order of things, but they ought to be debarred the privilege of treating disease under these methods. One

reason why legislation is not secured putting a stop to these methods of practice is the lack of union, or better, the indifference among the doctors.

The Council also took up the matter of a scale of fees. It will be remembered that some years ago, at the instigation of the Patrons, the Act was amended, taking from the Medical Council the power to fix a tariff of fees. All that the Council can now do is to recommend a suitable scale. Such scale of fees would have no legal standing in court, but would have an influence in any suit by weight of authority. The Council should make a strenuous effort to secure its lost powers in this matter. If four thousand physicians ask this through the Council there is every reason to expect that the request would be granted.

Upon the whole, the Council is to be congratulated on the results of this year's session.

SOME RECENT WORK ON TUBERCULOSIS.

Dr. M. P. Ravenel, bacteriologist of the State Live Stock Sanitary Board of Pennsylvania, who has devoted much time to the study of the relationship of human and bovine tuberculosis, has again announced his opinion in favor of the view that both are identical. In 1814, Laennec maintained the unity of tuberculosis in all animals. His views were opposed by Virchow, but Villemin showed, in 1865, that the disease was transmissible by inoculation. In 1901, Koch made the statement at the London Conference on tuberculosis, that the disease in man is quite different from that in animals. He held that it was practically impossible to communicate the disease from man to bovine animals, and that production of the disease in man by the germs obtained from cattle was so rare that it could be neglected. Dr. Ravenel dissents from Koch's teaching, and holds that the disease in man and cattle is identical. He has practical proof that animals can be infected by cultures of human origin, and also gives instances where human subjects have been inoculated by the bacilli from cattle. He points out that the bacilli in meat or milk may enter the human body through the tonsils, or at any point in the digestive canal. Infection has also taken place through wounds. Such instances are not infrequent.

Dr. E. Salmon, of Washington, comes forward with a strong array of facts to prove that the human and bovine disease is the same, and that man may infect cattle and cattle man. Pure cultures of the bacilli from man when injected into cattle produce the disease in a most characteristic manner. In some of the tests made with cultures obtained from children, the bacilli were so virulent for calves that there is very conclusive proof that these children must have contracted the disease from

a bovine source. This form of combined biologic and clinical evidence is now yielding almost irresistible proof that the disease is the same in man and cattle and transmissible from the one to the other. By experiment, the disease can be conveyed from man to cattle. On the other hand, there is abundant evidence that it can be contracted by man through the medium of tuberculous meat and milk, or by wounds, and that, when so contracted, it is as virulent in turn for cattle as cultures directly of bovine origin.

But this is not all. Some time ago, at Koch's suggestion, a German commission was appointed to study the question of human and bovine tuberculosis. Dr. Kossel has issued an advanced statement of the findings of this commission. The proof of the identity of the disease is very complete; indeed it is absolutely convincing. These investigations reverse Koch's statement that the disease is not transmissible from man to cattle; and show that such transmission is not only possible, but is, at times, quite virulent. The commission also brings forward proof that the disease can be acquired by man from a bovine source.

The British Commission having the same matter in hand is also reporting against Koch's teachings.

Another aspect of tuberculosis is dealt with by Dr. Abbott, Secretary of the Massachusetts State Board of Health. By careful examinations of the death rate from tuberculosis in New England, he concludes that it is steadily declining, and is now only 37 per cent. of what it was in 1853. This is most encouraging. Drs. Hillier and Newsholme, of England, claim that tuberculosis is the most preventible of all the infectious diseases, and that it should be practically exterminated in another generation. These sanguine views are shared in by Von Behring, of Germany.

THE CANADA LANCET has not once, but many times urged the vast importance of prevention. This far outweighs in importance any attempts at treatment, however good these may be. An ounce of prevention is worth a pound of cure. It would amply repay the Provincial and Federal Governments to have suitable literature prepared and distributed in the freest manner among the people. In a recent issue of this Journal attention was directed to the heavy mortality caused in this country by tuberculosis, and the enormous loss to the state in the loss of so many lives and the amount of sickness and the expenses caused by the prevalence of the disease. And yet it is preventable!

ARTERIO-SCLEROSIS.

This subject is growing in importance, because it is now receiving the attention that its frequency and injurious effects merit. Some years

ago but little was said upon this subject, but this has changed. At the recent meeting of the American Medical Association, the section on the practice of medicine devoted an entire session to the study of this condition.

Dr. W. H. Welch took up the pathology of arterio-sclerosis. He referred particularly to the cicatricial form which was confined mainly to the ascending aorta. Syphilis, he said, played an important part in the etiology of the disease. The hypertrophy might be compensatory in arterio-sclerosis as in some forms of heart-disease. There might be extensive arterio-sclerosis without clinical manifestations or injury to any of the organs. One of the most important features of the disease for study was the cause for the rise of arterial pressure and the cardiac hypertrophy.

Dr. William S. Thayer discussed the disease in its relationship to acute infectious diseases and some other asserted causes. He had gone over 3,894 cases and histories, and found that no cause could be found in 18.9 per cent. of cases of arterio-sclerosis; that diphtheria had preceded in the history of the persons in 28.7 per centage of the cases; pneumonia in 19.6; malaria in 22.6; syphilis in 23; scarlet fever in 24; rheumatism in 41; alcoholism in 53.3; and heavy work in 62.2. In many instances several of these diseases or conditions were found in the life of the patients. It will thus be seen that rheumatism, alcoholism and heavy work were found in the histories of a very large per centage of cases of arterio-sclerosis.

Dr. C. Travis Drennan took the question of syphilis and arterio-sclerosis. He contended that syphilis had a tendency to produce the disease in various organs. He claimed that faulty methods of treatment by means of mercurials and iodides was responsible for much of the arterial change following syphilis.

Dr. George Dock thought that the causative influence of nephritis was very considerable. The kidney lesions might be latent and suddenly develop symptoms. In acute nephritis the hyperdistention of the vessels might lead to disease of the intima, followed by compensatory, and later on by degenerative changes.

Dr. Frank Billings discussed the effects of lead on the arteries. He thought that lead acted directly on the vessel walls, causing an endarteritis. Along with this there was a degenerative and thickening process in the media, and, also, a degeneration in the muscular coating, with proliferation and thickening. There was an interstitial thickening of the outer covering. There was a chronic degeneration in the kidneys, resulting in cirrhosis and fibroid changes in their arteries, tubules and glomeruli.

Dr. Richard C. Cabot read a paper on the influence of alcohol in the causation of arterio-sclerosis. He contended that in persons under 40 years the effect of alcohol was very slight. About 6 per cent. of his cases gave a history of alcoholic excesses.

Dr. William Osler spoke on the connection between angina pectoris and arterio-sclerosis. He thought that these attacks of pain were associated with arterial disease in a large number of instances. In the same way in arterio-sclerosis of the vessels of the head there were often attacks of pain. In some instances of sclerosis of the abdominal vessels there was severe pain. There were several types of angina pectoris : (1) those occurring in young persons of neurotic temperament and without arterio-sclerosis ; (2) those cases associated with syphilitic arterio-sclerosis ; (3) a group at about the ages of 40 to 60, or in the pre-senile period ; and (4) an important old age group in persons over 60 years.

Dr. James M. Anders laid down the etiological categories as follows : (1) those due to toxic agencies, as alcohol, lead, gout, diabetes, syphilis, rheumatism and infectious diseases ; (2) from over ingestion of foods, as nitrogenous and carbo-hydrate diets ; (3) cases due to hypertension, as over-exertion. Prevention was the main thing to be considered. Causes should be sought out and removed. Diabetic treatment was of the utmost importance. Warm baths reduced the arterial tension. The iodides were useful, but specially so in syphilitic cases. It was doubtful if medicines could cure any case. There were many instances of the disease with very little increase of tension.

Dr. Stengel stated that to do much for these cases, treatment must be commenced early. He was strongly of the opinion that alcohol was an important cause.

Dr. F. C. Shattuck claimed that the modern conditions of business life, where men carried such mental strain, was a cause for the disease. Alcohol was also a factor. The causes were quite numerous.

Dr. Kraus said that the great etiological factor was the circulation of toxins in the system. These permeated the coats of the vessels and induced changes in them.

Dr. Chas. G. Stockton referred to the occurrence of abdominal pain in some of these cases. The nitrites and nitroglycerine were of much value in high tension cases, but our best drug was iodine in some form.

THE CAUSES OF DEATH IN ONTARIO.

A study of the vital statistics of the Province of Ontario reveals some very instructive points for careful consideration.

The report on births, marriages, and deaths for the year 1903 shows

that there were 27,864 deaths in the Province. The number of deaths due to some form of micro-organism was 11,136, almost 40 per cent. made up as follows: typhoid fever, 532; smallpox, 9; measles, 170; scarlet fever, 518; whooping cough, 249; diphtheria, 939; influenza, 179; other epidemics, 26; pyaemia and septicaemia, 316; malaria, 18; tuberculosis, 3,590; syphilis, 10; epidemic cerebro-spinal meningitis, 139; pneumonia, 2,375; cholera infantum and infantile diarrhoea, 1,128; dysentery, 47; peritonitis, appendicitis, and typhlitis, 711; puerperal septicaemia, 54; puerperal breast trouble, 2; erysipelas, 107; tetanus, 15; anthrax, 2. In addition to the above there were 163 deaths from pleurisy, and 59 from chronic bone and joint diseases. It is only fair to assume that many of these, indeed most of them, were due to tubercular trouble.

It will be noticed from the above that some diseases stand out very prominently. These are typhoid fever, scarlet fever, diphtheria, tuberculosis, pneumonia, cholera infantum and infantile diarrhoea, and peritonitis, appendicitis and typhlitis. These diseases total 9,693 out of the 11,136 caused by some kind of germ infection. Three of these diseases, tuberculosis, pneumonia and infantile diarrhoea caused 6,993 of the deaths in the Province.

Some other causes of death bulk large in the report. One of these is cancer with 1,405 deaths to its credit, or a little over 5 per cent. of the total number. Organic heart diseases caused 2,215 deaths or 8 per cent. There were 1,633 deaths due to still-births, and 3,154 to congenital debility and malformations, or to these two causes a total of 4,787 making 17 per cent. of all the deaths.

The total number of births for the year was 47,796. These two causes of death would be respectively, a little over 3 and 6 per cent. of the birth-rate, or over 10 per cent. of the children born were lost by these two causes. Senility accounted for 4,014 deaths, or 14½ per cent.

AUTO-INFECTION.

Many diseases are due to the entry into the system of an organism or microbe of some kind, but there are also many other conditions of ill health that are brought about by the existence in the system of poison generated within it. Errors in diet, such as the excessive use of meats and over indulgence in alcoholic beverages are common causes of auto-intoxication. The ravages of gout on the various organs of the body are well known, and gout is the outcome of civilization, lack of exercise, and the excessive consumption of meat and drink. The uric acid, formed under these conditions, gives rise to insoluble compounds or act

directly as a poison on many parts of the body, notably the vascular system.

The imperfect elimination of carbon dioxide from the blood, through some fault in the lungs or circulation, the retention of impurities in the system, from derangements of the liver or kidneys, or the result of the absorption of poisons from the intestinal canal, are familiar forms by which the health is impaired, leading to various kinds of nervous, respiratory, circulatory, renal and digestive disturbances.

BOOK REVIEWS.

MUIR'S MATERIA MEDICA AND PHARMACY.

A Manual of Materia Medica and Pharmacy specially designed for the use of practitioners and Medical, Pharmaceutical, Dental and Veterinary Students, by E. Stanton Muir, Ph. I., V. M. D., Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third edition, revised and enlarged. Philadelphia: F. A. Davis Company, Publishers, 1904.

The popularity of this manual is indicated by the demand for a third edition, Part I gives a synopsis of the terms used in the Botany of Materia Medica, Part II the essential points with regard to individual drugs are given in alphabetical arrangement, the dosage for various animals being given. Part III is devoted to Pharmacy.

The metrical system is used primarily and the pages are interleaved for convenience in adding notes.

INTERNATIONAL CLINICS.

A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedies, Pathology, Dermatology, Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, S. M., M. D., Philadelphia, U. S. A., with a collaboration of Wm. Osler, M. D., Baltimore; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., Montreal; J. B. Murphy, M. D., Chicago; A. McPheehan, M. D., Toronto; Thos. M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; Jas. J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landholt, M. D., Paris; Richard Kretz, M. D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I, Fourteenth series, 1904. Philadelphia: J. B. Lippincott Company, 1904. Cloth, \$2.25.

Volume I of the fourteenth series of International Clinics just issued has about 300 pages, with three colored plates and a large number of illustrations and figures. It contains a number of articles of very great interest and value, marking as they do the very latest authoritative

opinion on the subject discussed. We may mention the article on "The Chlorid Reduction Treatment of Parenchymatous Nephritis," by Widal and Javal, of Paris, in which, after a prolonged study of a case of Bright's disease, they conclude that the amount of salt in a diet is one of the determining factors as to its value in this disease, and the success attained by the use of a milk diet is largely due to the small amount of sodium chloride contained. Wilcox, of New York, contributes a study of adonin, a glucoside derived from *adonis vernalis*, which has similar properties to digitalis. Cattell describes "The Practical Application of Cryoscopy to Medicine." In the department of surgery Beck has an illustrated article on angioma and its treatment, in which he claims that extirpation is the only radical treatment and the best, but should be preceded by the growing of healthy skin by continuous subcutaneous ligature. Intestinal anastomosis by the Connell suture is discussed by Clark and Luther of the University of Pennsylvania with a report of five cases. There are seventeen original articles besides the study of the year's progress in medicine, surgery and treatment.

LECTURES ON CLINICAL PSYCHIATRY

By Dr. Emil Kraepelin, Professor of Psychiatry in the University of Munich. Authorized translation from the German. Revised and edited by Thomas Johnstone, M.D., Edin., M.R.C.P., Lond, Member of the Medico-Psychological Association of Great Britain and Ireland. London: Bailliere, Tindall and Cox, 8 Henrietta Street, Covent Garden, 1904. 10s. 6d.

Kraepelin has caused a revival of interest in Psychiatry through his bold attitude taken in the fifth edition of his text-book, where he believes that conditions seem ripe for considering a number of types of mental derangement as definite pathological and nosological entities. Consequently the appearance of a collection of clinical lectures translated into English will have a hearty reception alike from alienists and general practitioners. The material of the book is carefully arranged in graded cases following a course of clinical lectures through a whole term, beginning with melancholia and proceeding through the varieties of insanity and imbecility due to various causes, and closing with cretinism. The patients are brought before the audience and described in clear cut sentences, the history is then related, with a discussion on the diagnosis, prognosis and treatment. Prognosis is most faithfully dealt with, and the condition of the patient is stated up to the moment of going to press. A feature of the lectures is the general review of the life history of the patient; no mere history of a week or a year, but a bird's eye view of the condition from the beginning to the end. Throughout the

whole series of cases the diagnosis of the condition is the point most emphasized, and it is evident that the aim of the book is to provide a guide to the clinical investigation of the insane, nevertheless treatment is by no means omitted, and some most useful hints can be gathered from the lectures. The use of saline solutions and transfusions in acute asthenic cases are recommended as being of particular value. The translation is excellent, and the clinics are conducted in such a way that reading is a pleasure. The nomenclature of the diseases is one which is becoming better known to English-speaking people, but which, as yet, is not found in any English text-book. It is, however, very simple, as the words explain the conditions they indicate. The first chapter is introductory, and also deals with melancholia; three chapters treat of each of the following: maniacal depressive conditions, dementia praecox, general paralysis; two on katatonia; one on paranoia; delirium after acute diseases, after head injuries, epileptic, hysterical, puerperal; two on alcoholic insanity; and one on morphinism and cocaineism. In addition five lectures are devoted to the varieties of imbecility and the remaining five to varieties of delirium and delusions, irrepressible ideas and fears, morbid personalities and cretinism.

One is impressed with the fact that certain well defined types of mental disease can be isolated, diagnosed, and a diagnosis given with fair accuracy, and that there is a hope that sooner or later the whole field will be covered in a similar manner. No book of a similar nature has been published in recent years, and it will prove of great value to the general practitioner who, as a rule, is the first in contact with cases of mental disease, the early recognition of which is of such grave importance.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE.

Tuberculosis and Acute General Miliary Tuberculosis. By. Dr. G. Cornet, of Berlin. Edited, with additions, by Walter B. James, M. D., Professor of the Practice of Medicine in the College of Physicians and Surgeons (Columbia University), New York. Handsome octavo volume of 806 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$5.00 net; Half Morocco, \$6.00 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This is the seventh volume to be issued in Saunders' American edition of Nothnagel's Practice, and the remaining four volumes are in active preparation for early publication.

The American edition of Professor Cornet's exhaustive work appears at a time when the subject of tuberculosis has a peculiar claim upon the attention of mankind. Within a few years both professional and general public interest in the disease has taken enormous strides. In

almost every civilized community societies for the prevention of tuberculosis are being organized, and these are composed not only of physicians but of laymen, while governments themselves are taking an active part in the movement. Under these circumstances, and at this time, the work is of interest to practitioners, for there is no other treatise which gives an equally clear and comprehensive view of this subject.

The article on Acute General Miliary Tuberculosis has been admirably written and gives a thoroughly clear understanding of this disease.

The importance of the Chemistry of the Tubercle Bacillus and its bearing upon Immunity have warranted a thorough treatment of this subject.

The work is complete and logically arranged, and the editor has made additions where necessary to bring it down to date.

OUR BABY.

For Mothers and Nurses by Mrs. J. Langton Hewer. Eighth edition, Revised. Bristol: John Wright & Co.; London: Simpkin, Marshall & Co.; Toronto: J. A. Carveth & Co. Price, cloth 2s. 6d., paper 1s. 6d.

The authoress of this little book is an obstetrician and hospital nurse of much experience. She knows what to say and says it. The book is full of excellent advice and mothers and nurses would do well to consult its pages. Everything that concerns the welfare of the baby—its clothing, feeding, bathing, ailments, etc.—here find a place. We recommend this book with much confidence.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE.

Diseases of the Intestines and Peritoneum. By Dr. Hermann Nothnagel, of Vienna. The entire volume edited, with additions, by Humphrey D. Rolleston, M. D., F. R. C. P., Physician to St. George's Hospital, London, England. Octavo volume of 1032 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$5.00 net; Half Morocco, \$6.00 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This new volume in Saunders' American edition of Nothnagel's Practice is the eighth to be issued, and appearing within two months after the publication of the volume on Tuberculosis, gives evidence that the publishers intend completing the series at an early date. This, one of the most valuable volumes in the series, is by the famous clinician Dr. Hermann Nothnagel himself, and is as exhaustive as it is practical. The distinguished editor, Dr. Humphrey D. Rolleston, of London, England, has used his pen most profusely, almost every page giving generous evidence of his careful editing. The editorial additions include sections on Intestinal Sand, Sprue, Ulcerative Colitis, and Idiopathic Dilatation of

the Colon. Appendicitis and Peritonitis have been given unusual space, treatment and diagnosis receiving exhaustive consideration. The section on Intussusception has been greatly enlarged by the invaluable addition of D'Arcy Power, of England, who has made this subject his own. There are twenty inserts of great merit.

EPILEPSY AND ITS TREATMENT.

By William P. Spratling, M. D., Superintendent of the Craig Colony for Epileptics at Sonyea, N. Y. Handsome octavo volume of 522 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$4.00 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This work by Dr. Spratling is of unusual interest for many reasons: It is the first complete treatise on Epilepsy since the appearance of Echeverria's work published over 33 years ago, and represents the practical experience of Dr. Spratling as Superintendent of the Craig Colony for Epileptics at Sonyea, N. Y., during a period of ten years. The great progress made in the knowledge of Epilepsy and its treatment during the past fifteen years certainly demanded an accurate and careful work which would include these latest advancements. Dr. Spratling has given us all that could be desired. Of particular interest are the chapters on the Psychologic and Medico-legal aspects. An entire section is devoted to the all-important seizure type—Status Epilepticus; and treatment, general, educational, medical and surgical, is discussed with wisdom, thought and conservatism. The subject is bountifully illuminated by the citation of illustrative cases; and, indeed, for the entire work we have nothing but praise. General practitioners, as well as those especially interested in Epilepsy, will find the book of great value.

OBSTETRIC AND GYNECOLOGIC NURSING.

By Edward P. Davis, A. M., M. D., Professor of Obstetrics in the Jefferson Medical College and in the Philadelphia Polyclinic. 12 mo. volume of 402 pages, fully illustrated. Second edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Polished buckram, \$1.75 net. Second edition, thoroughly revised. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

The usefulness of this book to the nursing profession is manifest by the fact that a second edition has been called for. It is necessary for an obstetric nurse to possess some knowledge of natural pregnancy and of its consequent diseases; and as gynecologic nursing is really a branch of surgical nursing, special training and instruction are required to meet the conditions arising. This book just fills the need, everything that the obstetric and gynecologic nurse should know being included. The

second edition shows evidence of having been carefully revised throughout, and considerable new matter has been added. It would be well if every trained nurse possessed a copy of this book, for it certainly is of inestimable value.

AILMENTS OF WOMEN AND GIRLS.

By Florence Stacpoole, Certificate Obstetrical Society, London; Lecturer for the National Health Society, and for the Councils of Technical Education. Author of "Advice to Women on the Care of their Health before, during, and after Confinement." "Our Sick: and how to take care of them." Etc., etc. Crown 8vo, Cloth, bevelled boards, 3/- net; or stiff paper boards, 2/- net. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1904.

This little volume has been written for Women by a Woman. The talented authoress is thoroughly trained in the subjects she writes about, which are most important for all women to know, and about which much ignorance is common, which in many cases leads to needless, and sometimes to life-long, suffering. No other book occupies quite the same ground. The language is as simple and untechnical as may be, in order to convey a clear understanding of the meaning. The proofs have been carefully prepared, and have had the great advantage of being revised by two competent English physicians; so that no question of the information conveyed, or the safety of any of the home treatment mentioned, can arise.

CLINICAL METHODS.

A Pocket Book of Clinical Methods by Chas. H. Molland, M.D., Lond., M.R.C.P., Physician to Ancoats Hospital, Manchester. Bristol: John Wright & Co, London: Simpkin, Marshall & Co.; Toronto: J. A. Carveth & Co. Price 1s. 6d.

This little pocket manual deals with the clinical examination of the sputum, gastric contents, the faeces, the urine, pus and other fluids, and the blood. The methods described are the usual ones, and given in are clear language. It will prove to its possessors a useful manual on the above topics.

SUTHERLAND'S DISPENSING.

Dispensing made easy by W. G. Sutherland, M.B., Aberd., formerly House Surgeon Queen's Jubilee Hospital, Earl's Court, London, W.C.; Civil Surgeon in charge Orange River Military Hospital, Boer War, 1900, etc., etc. Bristol: John Wright & Co.; London: Simpkin, Marshall & Co.; Toronto: J. A. Carveth & Co. Price 3s. 6d., 1904.

This is a handy little book of useful information on dispensing. It contains many formulæ and their mode of preparation. It is specially intended for the physician who does his own dispensing. For this purpose it will prove of much utility. There are many blank leaves for memoranda.

MEMBRANOUS CATARRH OF THE INTESTINES.

Part III of *Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutritism*. By Dr. Carl Von Noorden, Physician in Chief to the City Hospital, Frankfort-on-Maine. Translated by Boardman Reed, M.D., New York: E. B. Neat & Co. 1904. Price, 50 cents.

This little book is a good exposition of colica mucosa, or membranous intestinal catarrh. Under the head of pathology, he passes under review the various theories of the disease. He regards the disease as the result of chronic constipation setting up gastro-intestinal disturbance, inducing the person to live on a rigid diet. Following this comes on the condition of nervous diarrhoea or secretory neurosis. The treatment of the condition symptomatic, causal, and dietetic is given. During the attacks the author recommends hot applications, the administration of narcotics and water injections. The causal treatment consists of giving careful attention to the condition of the nervous system and the digestive organs. With regard to the latter, a coarse diet is strongly advocated. The author thinks that a carefully selected diet of light foods increases the trouble. This little book will afford much information to those who consult its pages.

URIC ACID.

An epitome of the subject by Alexander Haig, M. A., M. D. Oxon., F. R. C. P., Lon., Physician to the Metropolitan Hospital, and the Royal Hospital for Children and Women. London: Messrs. J. & A. Churchill, 7 Great Marlborough Street. 1904. Cloth 2s. 6d.

Dr. Haig, in a neat volume of 152 pages, gives an epitome of the subject of uric acid to which he has devoted so much attention. The book contains six chapters and deals with the history of the subject, the physical properties and peculiarities of uric acid, the collaemic or circulation group of food poisons, the local irritation or arthritic group of food poisons, uric acid and the clinical worker, and the prevention and treatment of food poisoning. Dr. Haig has an interesting manner of presenting his views, and for this reason his writings are always very readable. This little book will prove instructive to all who read it. The question of uric acid in the system is a very important one, and this becomes very clear after reading such a book as this. He condemns the consumption of meat and contends that bread, bread stuffs, milk, cheese, dried fruits, fresh fruits, vegetables and nuts yield all the nutrition required and, at the same time, constitute a uric acid free diet. The injection of uric acid, its presence in the blood, and accumulation in certain parts of the body are questions that should interest every physician, and we know of no book that gives a clearer account of the subject, in brief space, than this one of Dr. Haig's.

DR. HALL'S LIFE ASSURANCE EXAMINATIONS

The medical examination for Life Assurance with remarks on the selection of an office. By F. De Havilland Hall, M. D., F. R. C. P., President of the Medical Society of London; Physician to the Westminster Hospital; Physician to the Rock Life Assurance Company. Third edition, greatly enlarged. Bristol: J. W. Wright & Co.; London: Simpkin, Marshall & Co.; Toronto: J. A. Carveth & Co. 1903. Price. 4s. net.

This book has long been known in Britain. It should also be well known in this country, as it is brief and useful. The subject of making examinations for assurance companies is discussed under the four headings: Family History, Personal History, Present condition and Environment. Some useful suggestions are made on the various forms of policies, and the selection of female risks. Any physician who has any examinations to make for assurance companies, will be well repaid by carefully reading this book. Judging from our own experience in the selection of lives we can recommend this book to our readers.

THE PHYSIOLOGICAL FEEDING OF INFANTS.

By Eric Pritchard, M.D. Second Edition. Pub. by Henry Kimpton, London, Eng. Pages 197. Price 3/6.

In his preface the author states that in writing this book he has endeavoured to "avoid as far as possible technical terms and expressions which would not be understood by a nurse of average intelligence;" and he insists "that there is no royal road to success in the feeding of infants, but that every case must be judged on its own merits and the food adopted to the physiological requirements of the individual body."

"The success or failure of any system of feeding depends on the manner in which it is applied rather than on the method itself."

These important truths must be appreciated fully by any one conversant with the difficulties of adopting food to individual infants. To these, and to anxious mothers this book, should prove a veritable gold mine for it is a clear, practical common sense work on this important subject.

The work is divided into two parts.

Part I consists of an introduction dealing with the evolution of percentage feeding, and of four chapters on breast feeding and percentage feeding.

Part II. is devoted to the Developments and Physiology of Infancy. The work concludes with an Appendix dealing with various food recipes; percentage composition of various foods and subsidiary methods of feeding: E. J. Savage, by the bowel; and the feeding of premature infants.

The book deals entirely with the subject of home modification of food, for while laboratory feeding is good, in the opinion of the author it has many disadvantages.

The directions are clearly given and every detail is carefully explained so that any woman of average intelligence should have no difficulty in carrying out the author's instructions.

It is replete with tables dealing with amounts of food for infants of various ages. Weight tables, other matters which are important and which can be arranged in this form.

The chapter dealing with the modification of food in difficult cases is most satisfactory. Various forms of food mixtures which can be administered to delicate infants are given, with illustrative cases. The dietetic treatment of malnutrition of Rickets, Scurvy, Infantile Atrophy and Gastro-ent-eritis is fully given, with illustrative cases.

Part II. is full of valuable advice to the expectant mother, and besides dealing with the physiology of infancy, describes many of the abnormal conditions commonly met with, and gives appropriate treatment when indicated.

The work cannot be too highly commended and we are sure it will prove of value not only to physicians but to mothers and nurses.

It is to be regretted that the author has omitted mention of whey mixtures and it is to be hoped that this will be remedied in future editions.

A MANUAL OF SURGICAL DIAGNOSIS.

By James Berry, B.S., F.R.C.S. Surgeon, etc., and Lecturer on Surgery at the Royal Free Hospital: formerly Surgical Registrar and Demonstrator of Anatomy, Operative Surgery, and Practical Surgery at St. Bartholomew's Hospital, London. J. & A. Churchill, 7 Great Marlborough Street, 1904. Price, 6 shillings.

This is an excellent little book of 322 pages, with first-class type, paper and binding. The author covers a wide range and although in such a manual the space allotted to each subject is necessarily brief, the book will be found full of interest and help. The matter is carefully arranged and the author is to be complimented upon giving medical readers a little volume which is sure to be much appreciated.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences, Edited by H. A. Hare, M.D., assisted by H. A. M. Landis M.D. Vol. 11, June, 1904. Lea Brothers & Co., Philadelphia and New York. Price \$2.25 per volume, cloth; \$1.50, heavy paper.

The present volume contains articles by William B. Coley, on Abnormal Surgery; by John G. Clark on Gynaecology; by Alfred Stengel,

on Diseases of the Blood; and by Edward Jackson, on Ophthalmology. The volume is well illustrated, and thoroughly up-to-date in every respect. We can cordially recommend this publication to every one who wishes a carefully prepared review of medical and surgical progress during the quarter. The complete series forms an excellent reference library.

CORRESPONDENCE.

WALTER REED, IN MEMORIUM.

Editor Canada Lancet.

Dear Sir:—Peace has its heroes as well as war and the profession to which we have the honour to belong has produced many of them.

The incalculable benefits conferred upon humanity by the work of our great sanitarians and bacteriologists cannot be expressed in figures and hardly in words; yet, in the eyes of the laity, the man who, like Napoleon, causes the death of a million men or, like Kitchener, who slew 16,000 men in a single battle, is held in the greatest honour. Statues are erected to his honor, the book shelves groan beneath the weight of biographies and his name is handed down to posterity as the greatest hero of the age. But the man who like Pasteur discloses the cause of disease and is the means of preventing the death of millions of human beings is soon forgotten or, like Walter Reed, is unknown to the general public. Ninety times has yellow fever invaded the United States, carrying death and destruction and leaving poverty and grief behind it. New Orleans, Memphis, Charlestown, Baltimore, New York and other cities have been swept by the disease. The epidemic of 1853 cost New Orleans eight thousand lives. The financial loss to the people of the United States in the epidemic of 1878 was estimated as amounting to \$15,335,000 yet to-day as a direct result of Reed's labours, an epidemic is hardly feared.

Walter Reed was born in Virginia, September 15th 1851, and graduated in 1868, when only 17 years old, he received a second degree later from Bellevue Medical College, New York, and became a house surgeon at the Brooklyn City Hospital and the City Hospital, Blackwell's Island. Before the age of twenty-one, he was a district physician in New York City and at twenty-two an inspector of the health board of Brooklyn. He entered the United States Army as assistant surgeon in 1875 and served in the various frontier posts of the West and in the Eastern and Southern States. In 1890 he was assigned to duty at Baltimore and had the great advantage of working in the laboratories at Johns Hopkins.

University for over a year. In 1893 he was promoted to the rank of Major and detailed to Washington as curator of the Army Medical Museum and professor of Bacteriology in the Army Medical School. During the Spanish-American war the troops in the American camps were decimated by typhoid fever and Major Reed was appointed head of a commission to ascertain the cause. The most valuable and original work of the board is the proof that the infection of typhoid fever is spread in camps by the common fly and by contact with patients and infected articles as well as by contaminated water, surely a very valuable series of etiological facts.

In June, 1900, Reed was sent to Cuba to study the infectious diseases of the country, more especially yellow fever. At this time the American authorities in Cuba had for a year and a half endeavoured to diminish the disease and mortality of Cuban towns by sanitation, with some degree of success but the yellow fever was apparently undiminished by these sanitary measures. Reed was convinced that the disease was conveyed by an insect. Up to this time the most generally accepted theory of the causation of yellow fever was that of Sanarelli, who claimed that the *Bacillus icteroides*, discovered by him, was the cause of the disease. Major Reed, associated with Dr. Carroll, had, however, already demonstrated that this bacillus was widely disseminated in the United States and bore no special reference to yellow fever. Extensive experiments were carried on near Havana, beside careful study of the blood of infected persons, upon volunteers who bravely offered themselves as subjects for experiment. The details are very interesting but too long for this article. The conclusions were as follows: 1. The specific agent in the causation of yellow fever exists in the blood of a patient for the first three days of his attack, after which he ceases to be a menace to the health of others. 2. A mosquito of a single species, *Stegomyia fasciata*, ingesting the blood of a patient during this infective period is powerless to convey the disease to another person by its bite until about twelve days have elapsed, but can do so thereafter for an indefinite period. 3. The disease cannot be spread in any other way than by the bite of the previously infected *Stegomyia*. Articles used and sold by the patient do not carry infection,

The effect of these discoveries upon quarantine is enormous, and in Havana the war upon mosquitoes has resulted in the extirmination of yellow fever, for since September 1901, the city has been entirely exempt from the disease. It is now proposed to erect a public monument to the discoverer of these facts: for, unfortunately for science, Major Reed died of appendicitis in November 1902 in Washington. Major W. D. McCaw

has issued a circular letter from which I derived my facts and General Calvin DeWitt U.S.A. 1707 21st Washington D.C. will be glad to receive subscriptions for this worthy end.

Yours &c.

G. STERLING RYERSON.

Toronto, July, 1904.

DR. ROSWELL PARK'S, POSITION *RE* CANCER.

We have received from Dr. Park the following letter with request for its publication. Editor CANADA LANCET.

SIR JAMES GRANT. M.D., K.C.M.G.,
Ottawa, Canada.

My Dear Sir James; My attention has been called to a synopsis of your address recently given in Ottawa, in the course of which you did me the honour to allude to the Cancer Research work being done here in Buffalo under my direction. In the course of your remarks as printed in the CANADA LANCET, I note the following sentence; "Dr. Park makes the broad statement that there is not a practising physician in the United States who has more than a rudimentary knowledge of the subject." Inasmuch as I do not recall ever having written anything to this effect, or even said it, I have been wondering how you were lead to quote me to such effect. It certainly would be a broad statement if I had made it, and one at which many in the profession might take umbrage. I have too much respect for my colleagues and know their abilities too well to criticise them in any such fashion, and do not like to have them see in print a statement of this kind which I would have to repudiate in private: therefore, I am going to ask that you permit me to send a copy of this letter to the editor of the LANCET in Toronto, disavowing any such sweeping and rather caustic expression as the one quoted. I believe you will not object if I do this, since I know that your friendship is too warm to permit of any unintentional error on your part in presenting my own position or statements.

Assuring you of my deep respect and regard, I am, with very best wishes,

Very sincerely yours.

22nd July, 1904.

ROSWELL PARK.

MISCELLANEOUS.

A CASE OF IDIOPATHIC ANEMIA.

Chas. L. Lang, M. D., Weedsport, N. Y. in the *St. Louis Medical Era*, March, 1904, writes: Idiopathic anemia presents some very difficult conditions to relieve. During May, 1903, Mr. B. H., aged forty-eight years, gave up his work as mail carrier on a R. F. D. route, and took to his house and shortly after to his bed. He received good medical treatment from several competent physicians, but steadily failed till he seemed almost bloodless. During the autumn he was taken to Clifton Springs Sanatorium, where a blood count showed 1,500,000 red corpuscles to a c. m. m. and he was sent home as a case not suited to treatment. Less than three weeks ago I first saw him. He was confined to bed, dropsical, nearly bloodless, not greatly emaciated, hardly able to express an idea, brain being almost inactive. He had always chewed tobacco excessively; this I stopped abruptly and completely. I put him on pepto-mangan (Gude), in place of which he was taking, and gave him 1-10 gr. of arsenious acid in tablet form once daily.

For five days he lay partly comatose, then began to revive, and from that time on has improved very rapidly. The dropsy is all gone, and the mucous membranes of lips and eyelids are red. He sits at the table and eats several pounds of red meat daily, sleeps quietly, and his brain works easily and actively. I am not puffing any particular medicine; indeed, I hardly know which to give the credit to—the pepto-mangan or the breaking of the tobacco habit. He has never asked for tobacco since he “came to.” He seems so amazed to find himself improving that he is willing to give it up.

ENTEROCOLITIS AND CHOLERA INFANTUM.

Cleanse the intestinal tract with calomel and a saline or with castor oil. Prescribe a suitable diet, easily digested and non-irritating. Irrigate the rectum and colon at suitable intervals with normal salt solution or some mild antiseptic, using for the purpose a soft rubber catheter or colon tube.

Instead of opiates, which lock up the secretions and thereby favor auto-intoxication, relieve the muscular rigidity and the excruciating pain which is such a drain upon the vital forces, by the use of Antiphlogistine as hot as can be borne to the entire abdominal walls and covered with absorbent cotton and a compress. If the patient is not too far gone; the effect will be astonishing. The little sufferer, who

until now has been tossing in agony and restlessness, with drawn features, will in most cases quickly become quiet; the drawn look will leave the face and a restful slumber will often supervene and start him upon the road to recovery.

The explanation of this, in part, is not far to seek. The heat and moisture combined with Antiphlogistine's well known hygroscopic properties, directly soothe the inflamed parts, reflexly contracting the visceral blood-vessels and relieving their engorgement. The tension of the muscular and nervous systems is further relieved by the action of Antiphlogistine through the solar plexus thus adding to and emphasizing its local effects upon the inflamed intestines.

GOOD AND SEASONABLE

A word about some remedial preparations which the busy practitioner will find always useful, particularly at this season of the year, will no doubt be of interest. First, we will mention the old time-tried antikamnia and salol tablet, so useful during the hot weather, when even the "grown folks" load up their stomachs with the first offerings of the season. Hare says: "Salol renders the intestinal canal antiseptic and is the most valued drug in intestinal affections." The anodyne properties of antikamnia in connection with salol render this tablet very useful in dysentery, indigestion, cholera morbus, diarrhoea, colic, and all conditions due to intestinal fermentation. Then the "triple alliance" remedy so well and favorably known by its self-explanatory title namely: "Laxative Antikamnia and Quinine Tablets." To reduce fever, quiet pain, and at the same time administer a gentle tonic-laxative, is to accomplish a great deal with a single table. Among the many diseases and affections which call for such a combination, we might mention coryza, coughs and summer colds, chills and fever, biliousness, dengue and malaria with their general discomfort and great debility.

We cannot overlook our old friend the antikamnia and codeine tablet. The efficacy of this tablet in neuroses of the larynx is well known, but do all of our doctor friends know that it is especially useful in dysmenorrhoea, utero-ovarian pain and pain in general caused by suppressed or irregular menses? This tablet controls the pain of these disorders in the shortest time and by the most natural and economic method. The synergetic action of these drug is ideal, for not only are their sedative and analgesic properties unsurpassed, but they are followed by no unpleasant after-effects.