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MR. W. LLOYD WOOD.

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THE AFTER EFFECTS OF SURGICAL PROCEDURE ON
THE GENERATIVE ORGANS OF FEMALES
FOR THE RELIEF OF INSANITY.*

BY DR. JAMES RUSSELL,

Medical Superintendent of the Asylum for the Insane, Hamilton, Ontario.

In the domain of psychology no branch of the subject has occupied greater attention in recent years than the inter-relation between mental and physical phenomena. No general law has yet been formulated which conclusively proves the exact relation of mind to matter. From the days of Plato to Descartes, and from Descartes to Spencer, all sorts of speculative theories have been advanced, but no rational basis or theory has been established which explains this mysterious alliance.

* Read at the meeting of the British Medical Association, held in Montreal, August 31st, 1897.

The subject of this paper brings us more within the realm of Physiological Psychology, or the science which investigates the correlations that exist between functional activity of the various organs of the body and the phenomena of mind. Some hold that mind is a distinct entity entirely independent of matter. Others contend that the brain secretes thought as the liver secretes bile and that mind can only express itself through the operation of living brain matter. As psychologists we are pretty generally agreed that the perfect ego is the sum of the combined functional activity of every organ in the body at its best estate, and that any departure therefrom, or loss of function in any organ either by disease or surgical extirpation, must impair the ego in direct ratio to the status of that organ in the human economy.

That the brain is the organ of mind and through its nerve distribution presides over and regulates the whole process of nutrition secretion, excretion and reproduction is a well attested physiological fact. Its anatomico-physiological mechanism is duplex, so that in case of injury or destruction of function on one side, the other side takes on compensatory action. In the case of dual organs, such as the lungs, kidneys and ovaries, if one is diseased or removed the other takes on compensatory action and the physiological process though impaired, goes on. In the case of the ductless glands, which were so long considered as functionless, recent investigation has proven that each one has a distinctive function of its own which is essential to the vital economy. In short, experience proves that, while nature has richly provided for compensation in duplex organs where one is diseased, the removal of both destroys a function which is essential to the integrity of the whole organism. Nature indulges in no superfluities either of structure or function, but, while she possesses ample power of repair in case of disease or partial loss of structure, yet when total destruction of organic function takes place no other organ can assume vicarious substitution to repair the loss, and the whole ego must suffer.

These preliminary remarks on the general law which govern the relation of the mental to the physical prepares the way for the discussion of the subject of my paper, viz.: "The after effects of surgical procedure upon the generative organs of women for the relief of insanity."

The relation of gynæcology to psychiatry has been pretty thoroughly discussed in late years, and the general concensus of opinion gathered from alienists and neurologists alike is that, while it has a place among the insane just as it has among

the sane, for the relief of physical distress, yet to extol it as a great curative method in the treatment of insanity is nothing short of absurdity. There can be little doubt that the extravagant claims made by its enthusiastic advocates have done much to discredit the practice among sober-minded conservative thinkers.

It is the general opinion among the laity, and that opinion is prevalent among the medical profession as well, that pelvic disorders are the chief cause of insanity among women. In fact, diseases and disorders of the generative organs in women occupy far too prominent a place in the mind of both the laity and profession as causative agents in the production of both mental and physical disease. From pubescence to the climacteric and even to old age nearly all the ills that women are subject to are attributed in some way or other to diseases or disorders of the generative tract. Prior to the dawn of aseptic surgery, the uterus was mercilessly treated to all sorts of local applications, including dilatation, curettement, cauterization, douches, and the application of pessaries of all shapes and sizes. Since the introduction of asepsis the abdominal cavity has become the happy hunting ground of the surgeon, and the very impunity with which it may be eviscerated or mutilated is a strong incentive to the specialist in search of surgical glorification to ply his art. The danger of all specialism is to warp the judgment and contract the mental horizon within the range of its own narrow field of operation. The ophthalmologist versed in the science of optics sees in every departure from health errors in refraction and by various tenotomies professes to cure epilepsy, locomotor ataxia and other neuroses.

The specialist in Psychology sees in every criminal a lunatic and would treat them all as irresponsible beings instead of punishing them with the rigors of the law. He would abolish capital punishment as a crime and treat the murderer as a subject for commiseration and humane treatment in an asylum. In the vaunting ambitions of kings and emperors and others high in authority, he sees only evidence of mental degeneration and would have them deposed and confined for treatment. All the vagaries of mankind, moral and social, he treats as evidence of mental alienation, and in even his nearest and dearest friend he notices some mental obliquity for which he is irresponsible.

The specialist in surgical gynaecology believes that insanity in women is largely if not altogether due to pelvic disorders, and he proceeds to restore to reason the unhappy victim by unsheathing his scalpel and removing the offending organ. He never fails in his

diagnosis, for he always finds exactly what he searches for, and if he finds no gross there are at least microscopic lesions to justify the operation. He wages his most relentless surgical fury on the ovaries, for in them he believes reside the chief demoniacal spirits that torture the unhappy lunatic. Other spirits dwell in the uterus and he proceeds to the operation of hysterectomy, ventral fixation and trachelorrhaphy, etc. He calls up other minor spirits from the vasty deep of the abdominal cavity in the form of cystoceles, rectoceles, fibroids and polypi, all of which are removed. Following down the genital tract he performs clitoridectomy and perineorrhaphy, and the last citadel he storms is the rectum for the removal of hemorrhoids. He is a strong believer in the theory of reflex nervous irritation, but all his abnormal reflexes centre in the reproductive organs.

I have nothing but words of praise for the splendid achievements of surgical science in the field of laparotomy, and the relief of physical distress and the prolongation of life, which has resulted from the use of the knife. It is against the wholesale surgical mutilation of helpless lunatics that I raise my voice and the exaggerated claims that are made for it as a remedy for insanity. I am free to admit that there may exist pathological conditions in the pelvic organs of lunatics which tend to intensify the mental disorder, and in that case the lunatic has the same right as the sane person to surgical aid for its relief. It may be said that the operation is never performed without the consent of the friends, provided they have any, but we all know how indifferent the friends often are and how eagerly they grasp at any nostrum or operation which has a hope of relieving the poor unfortunates of their malady or relieving them of existence, which to the friends often means the removal of a burden.

Common sense, as well as statistics, prove that sexual disorders in women cannot be such a prolific cause of mental disease as the psycho-surgical gynecologist would make us believe. Statistics prove that the ratio of insanity between men and women is about equal; if there is a difference, there are more male than female lunatics. Why is it that men do not enjoy greater immunity from insanity than women? His genital organs are not subject to the same disorders as women! Happy, thrice happy, should man be because of the simplicity of his genital outfit and its meagre attraction for the operation of surgical science. Had nature decreed him to wear his genitals within the abdominal cavity, he, too, might have been compelled to suffer surgical martyrdom for the sake of restoring his reason.

If the testicle in man is the analogue of the ovary in woman why should the latter be such a constant and persistent offender in provoking mental disturbance, while the former is comparatively harmless, and why is there not greater disproportion between the sexes in the ratio of insanity?

The erotic tendencies in both sexes have their origin in central brain causes, and all attempts at cutting off branches or treating symptoms to cure the evil will be futile; the axe must be laid at the root of the tree or not at all. The whole blunder lies in mistaking symptoms for causes and vice versa.

In a large proportion of women, especially those who have borne children, it is common to find a variety of lesion, abnormality or displacement in the generative organs, often the result of accident in childbirth, from which they suffer little or no discomfort, and are likely to pass on through life in blissful ignorance of anything wrong, unless they have the misfortune to fall into the hands of some meddling gynecologist who magnifies the danger and usually recommends surgical treatment or some mechanical appliance. I am convinced there are too many charlatans in our profession who educate and develop in women a morbid apprehension of the dangers to which their health is subject through trifling disorders of the generative organs. The mind of the laity is surcharged with this idea, wholly out of proportion to normal discretion and necessary anxiety. Is it any wonder when women become insane that delusions in regard to their sexual organs are so common? Whatever the mind is most strongly focussed upon in mental health is apt to become the predominant subject of delusion in mental alienation.

It is high time for the profession to call a halt in its mad career of pelvic mutilation in order to extol the triumphs of surgery and build up a reputation for surgical skill by imposing on the ignorance and credulity of the public. While we strongly condemn flagrant surgical abuses practised upon sane women who are capable of appreciating all the risks to life incident to such operations, what shall we say of the practice upon those who are incapable of such appreciation? Is it anything short of criminal to impose such a risk upon an irresponsible being, in the enjoyment of average physical health, for the purpose of relieving a mental condition which is entirely problematical and experimental at best.

I am aware that the most flattering statistics can be furnished of successful results, but in order to appraise these results at their proper value all the circumstances and conditions must be con-

sidered. The specialist goes very methodically about his work, for he knows that, unless he can show at least temporary good results, his work will be discredited and his name and fame will suffer. The results are usually published and widely distributed before they get cold, so to speak, and the unwary are apt to be misled by the success with which they are heralded. I consider all such statistics which are published prior to a two years' test of their efficacy comparatively worthless. All who have had experience in the treatment of the insane know that a sudden shock to the system, a change of environment, or an acute attack of some intercurrent disease, will often break up the insane habit in chronic cases, at least temporarily. We have all seen cases of acute mania recover after an attack of erysipelas of the head, or after a carbuncle on the back of the neck. In cases of acute mania, due to a hyperemic condition of the brain, the recovery may be explained on the rational ground of local counter-irritation. In the surgery of the pelvic cavity for the cure of insanity the patient is placed under the best possible hygienic and clinical conditions, and if no operation at all were performed the results in many cases would be at least temporarily good, and it would have the great advantage over operative procedure in that there would be no risk to life. If all our asylums were equipped with a sufficient staff of trained nurses to enable us to treat all our patients on this principle, I am satisfied the percentage of recoveries would be largely increased, and while we denounce the Psycho-gnæcologist in unmeasured terms for his presumptuous and unscientific pretensions to restore brain function by way of the pelvic cavity, yet we are willing to credit him with having impressed us more strongly than ever with the necessity of special and individualized care in the treatment of the insane.

The following clinical records are taken from the case-book notes of three cases at present in the Hamilton asylum, which fairly illustrate the after effects of surgical interference for the relief of insanity.

E. M. P., age at admission twenty-eight, single, school teacher, born in the United States, well educated, had enjoyed good health up to a few months before admission to the asylum. Her father's sister was insane and confined in Toronto asylum for twenty years. While teaching school she became morose and irritable and had to retire from the profession.

An eminent Canadian surgeon was consulted, who recommended the removal of both ovaries in the hope of relieving the nervous

symptoms, which were considered due to reflex influence. No improvement followed, and a few months afterwards she was removed to Hamilton asylum.

The family physician, in making application for her admission, stated that the exciting cause of her insanity was uterine and ovarian trouble, disappointment at the result of the operation, etc. She was admitted to the asylum June 2nd, 1891, and was at the time of her admission dull and listless mentally and very frail physically. Her mother, who accompanied her, stated that the operation instead of relieving her insanity had left her frailer in body and quite unimproved mentally. She has now been six years in the asylum, and her history since admission has been one of gradual mental degeneration. At times she is mentally excited and tears her clothing and breaks windows. When this subsides she again relapses into a condition of quiet imbecility, from which there is no hope of recovery.

A. M., admitted to asylum April 1st, 1895, age at admission 22, single, born in Canada, was a bright girl at school. Her general health was good except that she occasionally had attacks of hysteria, followed by what was called nervous prostration. She became quite violent at times and was evidently suffering from acute mania. During one of the attacks a gynæcologist made the diagnosis of inflammation of the ovaries and an operation for their removal was suggested. The parents consented in the hope that her insanity might be cured and their only daughter spared the necessity of going to the asylum. The operation was performed at the patient's home and the assurance was given by the surgeon that both ovaries were extensively diseased, and were consequently removed. The patient made a good recovery, but the after effects were very disappointing. Instead of improving mentally she became violent and unbecoming in her actions and speech. She would sit for hours at a time with her eyes closed and refuse to speak. Her mental condition gradually grew worse and she was admitted to the Hamilton asylum nine months after the first symptoms of insanity appeared and three months after the operation. She has now been two and a half years under observation; when first admitted she was in fairly good bodily health, but very excited mentally and hard to manage, refused to eat and had to be fed with a stomach-tube for six weeks. She gradually degenerated into a condition of quiet dementia. Her friends, mistaking this for recovery, insisted on taking her home on probation December 4th, 1896; she was returned to the asylum January 2nd, 1897, having been home one month

and twenty-two days, her friends reporting that she was quite unmanageable while at home.

During her asylum residence she has given no evidence to justify the hope that she will ever recover, and, though she gave early promise of a bright and useful life, she is now doomed to spend the remainder of her days in an asylum with terminal dementia to wind up the scene.

M. C., admitted to the Hamilton asylum December 2nd, 1895, age 20, single, Canadian, a farmer's daughter, habits of life have always been good, had a good common school education. Her physical condition on admission was fairly good, but her mental stupor was most pronounced, did not know her own name. Her mental condition was bright up to the age of eighteen, when she became dull and stupid and had marked delusions of persecution and was a confirmed masturbator. Her father's brother was insane and confined in Toronto asylum. Her life at home had been the quiet, uneventful one incident to the farm.

A surgeon in an adjoining town advised the removal of the ovaries for the relief of masturbation and dysmenorrhœa, with the promise that it would also relieve the mental condition. The confiding parents consented to the operation, but instead of proving beneficial her mental symptoms became more pronounced, and in a melancholy mood she wandered from home and lived in the woods for several days. After this she was brought to the asylum and her life since admission has been that of a quiet but hopeless dement. This young woman without her ovaries and minus her clitoris, which the enthusiastic spayer could not leave, is to all appearance doomed to a life hopeless of recovery. Her face still bears evidence of a bright, happy and intelligent youth, but now marred and saddened by a gloomy outlook of despair.

It is to be noted that all these cases were young, intelligent, well-educated and of good mental inheritance. Under ordinary circumstances they were cases that should recover. The after effects of the operation are very much the same in each case, the acute symptoms abated, followed by a condition of mental stupor, with progressive imbecility.

Their whole appearance and symptoms impress one that they are suffering from a common cause. They are alike dull, listless and unimpressionable and might be classified as of the non-ovarian type; there is no mistaking these cases and the practised eye can at once distinguish them without being told.

OPINIONS OF VARIOUS ALIENISTS.

In order to secure something like a consensus of opinion in regard to the relation of gynæcology to psychiatry I submitted a list of questions to one hundred and twenty of the principal alienists in America with the following result :

Question 1.—What percentage of female cases admitted to your institution is due to disease of the genital organs ?

Answers.—With the exception of three superintendents, the percentage is said by all to be less than five, and several assert that in not more than two per cent. could disease of the uterus or its appendages be considered a factor in the causation of insanity.

Question 2.—Have you any experience of surgical procedure for the relief of this condition as a curative agent in insanity, and what are the results ?

Answers.—The large majority of those having had any experience do not claim that any permanent benefit has resulted from operation as a curative agent. In some cases there was temporary arrest of insanity, but this was followed in nearly every instance by a recurrence of the nervous phenomena, so that the mental condition of patient was unimproved.

Question 3.—In what proportion of cases operated upon could recovery be attributed to the operation ?

Answers.—Only six assert that recovery could be attributed to the operation. Several claim that the mental condition was made worse.

Question 4.—Do you advocate surgical interference in these cases for the relief of insanity ?

Answers.—In nearly every instance the gist of the replies to this inquiry is that surgical interference should be resorted to with the insane as with the sane, only where there is evident physical indication for operation, but seldom or never as an experimental procedure for the relief of insanity.

Question 5.—In cases where temporary or permanent relief is secured, what proportion of the success is due in your judgment to extra nursing and special individual attention ?

Answers.—The answers to this inquiry indicate that the opinion is almost unanimous that more is due to the special nursing, rest, etc., than to the operation.

Dr. P. M. Wise, Chairman of the State Commission in Lunacy for the State of New York, concludes his answers to my inquiries in these words :—"In general I may say that I do not believe that

gynæcology has added to the recovery ratio, except in a very slight degree."

Dr. Charles W. Page, Superintendent of Danvers, Massachusetts, Lunatic Hospital, says: "We have a resident gynæcologist, who makes a special examination of each woman admitted, and yet we fail to find in a total yearly admission of 225 women more than a fraction of 1 per cent. in which surgical interference was justifiable."

Dr. C. P. Bancroft, Concord, N. H., says: "A few cases have come to my notice, but the results were entirely negative."

Dr. H. M. Quinby, Superintendent, Worcester, Mass., Lunatic Hospital, says: "Investigations made in this hospital lead me to the opinion that, of our female patients, there are only exceedingly few whose insanity can be attributed to disease of the genital organs."

Dr. B. F. Sanborn, Superintendent, Maine Insane Hospital, says: "I think that successful results obtained are dependent very largely upon careful nursing and special individual attention."

Dr. F. C. Hoyt, Superintendent of Iowa Hospital for the Insane, says: "Our operations have only been such as were demanded by the physical condition of the patient and were never made on theoretical grounds for the relief of insanity. In my opinion the benefit is derived from the extra and individual care and nursing, rather than the operation itself. I have found that patients are almost invariably better mentally after a severe illness or injury, and attribute it to the above reasons. However, these patients usually resume their former mental condition in a short time."

Dr. William Noyes, Boston, Mass., Insane Hospital, says: "I do not know of any case of insanity due to the disease of the genital organs."

Dr. H. A. Gilman, Superintendent of the Iowa Hospital for Insane at Mount Pleasant, says: "We have operated in a number of cases where the disorder seemed to be attributed to the pelvic organs, and have brought on menopause, but without any apparent good result. The patients have been about as much disordered thereafter as they were before the operation."

Dr. Arthur F. Kilborne, Medical Superintendent State Hospital, Rochester, Minnesota, says: "We would have it understood that we operate for the relief of diseased organs, and not for insanity. We do not consider that uterine disease holds any more important place than diseases of any other organ of the body."

Dr. F. W. Drewry, Superintendent Central State Hospital, Petersburg, Virginia, says: "More of the success claimed is due to the special nursing than to the operation itself."

Dr. J. T. Seavey, Superintendent, Tuscaloosa, Alabama, in regard to surgical interference for the relief of insanity, replies : "Only when there is some evident indication for it, with generally very unfavorable prognosis."

Dr. Charles G. Hill, Medical Superintendent Mt. Hope Retreat, Baltimore, Md., says : "The majority of the females who come to us here have been treated or operated upon without avail. There are at present several in this asylum who became insane after laparotomies."

Dr. George H. Rohe, Sykesville, Md., says : "In between 30 and 35 per cent. of all cases I operated upon mental recovery followed. I advocate surgical interference whenever indicated by the local disease. The relief of the mental disturbance is perhaps incidental."

Dr. M. Campbell, Superintendent, Knoxville, Tennessee, says : "In my cases treated surgically for relief of disease of the organs of generation the result was that the physical condition was cured and the insanity became markedly worse."

Dr. E. H. Howard, Superintendent, Rochester, N.Y., State Hospital, says : "I know of no case where recovery could be attributed directly to an operation."

Dr. Charles G. Wagner, Superintendent, Binghamton, N.Y., State Hospital, says : "I have never had much faith in the theory that mental disturbance was especially closely allied to abnormal uterine conditions in women."

Dr. Frederick Peterson, New York, says : "It must be a very rare and exceptional case in which I should advise such treatment."

Dr. W. W. Godding, Superintendent, Government Hospital for Insane, Washington, D.C., says : "The results are always questionable."

Dr. C. H. Hughes, of St. Louis, says : "I have known both ovaries removed and insanity to continue in several instances and insanity to result from oophorectomy where no mental disease had previously existed. In some instances temporary arrest followed by recurrence of the nervous symptoms was observed after the operation."

Dr. W. A. Gorton, Superintendent, Butler Hospital for Insane, Providence, R.I., says : "Our patients, all coming from the higher rank of society, have passed through the hands of the gynæcologist, neurologist, and every other ologist before we see them."

Dr. H. A. Tomlinson, Superintendent, St. Peter, Minn., State Hospital, says : "Surgical procedure in these cases has always been n effectual and those apparently cured have always relapsed."

Dr. G. H. Hill, Superintendent of the Hospital for Insane, Independence, Iowa, says: "As many, yes more, cases are benefited by vaginal injections given by a trained nurse as by any gynæcological operation."

The opinions of Canadian alienists seem strongly opposed to experimental gynæcological surgery.

Dr. James F. W. Ross, of Toronto, says: "I am very much opposed to the appointment of gynæcologists in connection with insane asylums unless very much restricted in their work by Medical Superintendents. Surgeons supposed to be sane, dealing with sane women, go much too far in dealing surgically with the female sexual organs, and when dealing with insane women they are certainly liable to go much further. I operated on one insane woman only, and did so contrary to my advice. Patient was as bad as ever after operation."

Dr. Daniel Clark, Medical Superintendent Asylum for Insane, Toronto, says: "The mania for removing the ovaries is a crying evil. To unsex a female does harm in a majority of cases. A large number of cases have disease in the great nerve centres which produces abnormality in organs. To expect cure by cutting and carving of such an organ as the uterus and its appendages, when it is evident that the nerve supply is affected, is like to expecting cure of a tree in cutting off a limb when the disease is in the roots or trunk."

Dr. C. K. Clarke, Medical Superintendent Rockwood Hospital for Insane, Kingston, says in regard to gynæcological surgery in mental disease: "There is no room for such a fad. Where uterine disease is suspected a proper examination is invariably made, generally with decided mental harm as a result, to say nothing of negative results as far as uterine troubles are concerned. These examinations, taken in conjunction with very extensive *post-mortem* investigations, convince me that uterine disease is not any more common among the insane than among the sane, and as a factor in the production of mental disease may be considered as trivial and unimportant."

Dr. T. W. Burgess, Superintendent, Protestant Hospital for Insane, Montreal, says: "Four cases sent to hospital for operation; all recovered mentally." "Insane patients should be dealt with the same as those not insane, and, where examination points to the advisability for operation, I would operate in hope of benefiting the mental trouble, failing which the patient's life would be more comfortable."

Dr. S. Vallee, Medical Superintendent, Quebec Lunatic Asylum, says : "The cases we have operated upon show no benefit to the mental trouble."

Dr. G. L. Sinclair, Superintendent Hospital for Insane, Halifax, Nova Scotia, says : "We have no gynæcologist connected with this hospital ; if we did we would certainly have more cases of disease of the female genitals. We endeavor to discover whether such diseases exist and when we find them treat them ; but I am not prone to consider slight derangements affecting those organs in the female any more capable of causing mental disease than would departure from health in the male organs cause insanity in our sex."

Dr. D. Yellowlees, Medical Superintendent Royal Asylum, Glasgow, says : "I have not had great experience in surgical interference in these cases, and think the reckless way in which the ovaries are removed on your side of the Atlantic quite wrong, if the operation be done without any proof of disease in the ovaries. Certainly, if one can trust to testimony from patients, sexual feeling is not destroyed by removal of the ovaries or of the external parts."

Dr. R. C. Stewart, Medical Superintendent County Asylum, Leicester, England, says : "The percentage of female cases admitted to that institution was only about one per cent. We hardly have any serious disease of genital organs. We have had no operation for the last eleven years."

Dr. Charles W. Pilgrim, Medical Superintendent Hudson River State Hospital, Poughkeepsie, N.Y., says : "He handed my questions to Dr. Putnam, the woman physician of that institution. She says the percentage of female cases admitted whose insanity was due to disease of the genital organs was very small, only 42 cases in 3,646 admissions. There was no improvement in the mental condition of four women who were admitted after operation (two pelvic, two abdominal) for the relief and cure of mental disease."

SUPRAPUBIC PROSTATECTOMY.*

A. MACKINNON, M.D.

GUELPH.

FOUR years ago I presented a paper to this association advocating resort to this method in dealing with hypertrophy of the prostate. I pointed out the difficulty in the definite diagnosis of intravesical growth of the prostate, showing that no reliance could be placed upon rectal examination. When the enlargement of the prostate extends downwards it is very easily recognized in this way; but when the growth extends into the cavity of the bladder the most careful rectal examination may entirely fail to distinguish it.

The two principal points on which the diagnosis rests are, first, the presence of residual urine in case the patient is yet able to void his urine naturally. After the patient empties the bladder as completely as he can, if the catheter is used it brings away from half an ounce up to four or six ounces or more. Second, the length of catheter required, seldom less than nine inches, often nine and a half or even ten. In some patients the growth acts like a ball valve at the vesical orifice of the urethra. These are wholly dependent on the use of the catheter. In others it is difficult to pass an instrument, great pain and bloody urine following its use. Some patients cannot be taught to use the catheter at all, and others fail to keep it clean.

Though some patients get on fairly well for years, yet, sooner or later, cystitis develops with its suffering and dangers. For the relief of this condition I claim that the operation of suprapubic prostatectomy is a comparatively safe operation, and that it brings to the suffering patient more real relief than any of the other suggested methods.

The reading surgeon will tell me that I am advocating an operation that has a mortality record of forty-two per cent. So far as my own necessarily limited experience entitles me to speak, I must

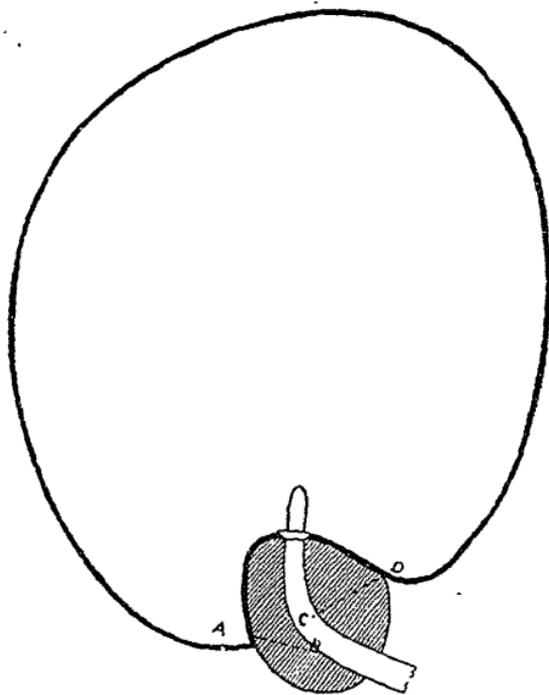
* Read at a meeting of the Ontario Medical Association, 1898.

express my amazement at the published statistics. I cannot believe these figures give anything like a correct idea of the death-rate properly belonging to this operation. I do not doubt that the men who give these figures to the world mean to be fair and impartial. But these records date back to the time when the operation was in its infancy—when it was only performed after failure by the perineal route to remove very large calculi—the operators being chiefly men who did the operation but once. Besides deaths due to advanced kidney disease, deaths due to malignant disease of any portion of the urinary tract were added to the death rate of this operation, in case an attempt had been made by this method to give them some relief. I claim that the operation itself should have no such mortality, if performed by surgeons of even average skill and judgment. When I can produce two men over eighty years of age and one over seventy when operated upon, from each of whom large masses of prostatic growth were removed by this method, who not only survived the operation, but have obtained complete relief from their distressing symptoms, and have regained voluntary control over their bladder functions, being able to dispense wholly with the use of the catheter, I am compelled, either to question the accuracy of the published statistics, or to claim for the old men of my district more than ordinary human endurance.

Possibly on account of the published rate of mortality, the attention of general surgeons has not been given to this operation. To open the bladder above the pubis, in ordinary patients, is one of the simplest and safest operations in surgery; and once the bladder is opened, the whole cavity can be very readily explored both by the finger and by the eye. If there be a calculus in the pouch behind and below the enlarged prostate, or in a sacculated part of the bladder, it is easily found, and the eye can guide any instrument necessary for its removal.

The prostate itself can now be accurately mapped out; its form size and degree of hardness can be determined. By examining with the finger of the left hand in the bladder, and the index of the right in the rectum, further information is gained. By passing a large steel sound into the bladder, the relation of the first portion of the urethra to the enlarged prostate can be correctly known. With the knowledge gained in this way, it is easy to determine the method of operation suitable to the case in order to remove completely all of the gland that projects into the cavity of the bladder, and to lower the first portion of the urethra to the proper level so that no pouch shall remain to hold residual urine.

In removing the protruding part of the prostate I have found it necessary to use long curved scissors with blunt points, a dull-pointed knife and several kinds of forceps : but I do most of the work with the point of the finger. I use the scissors to cut deeply the projecting collar into halves—one blade being in the urethra and the other in the pouch behind the prostate. The knife is used to incise the mucous membrane along the whole margin of the growth on both sides. When it is intensely hard, as it often is, strong forceps are used to crush the growth or to steady it for the finger, but never to tear away the gland by force. Beginning at the median cut, the point of the finger is insinuated into the tissue, and by patience and hard work I enucleate, piece by piece, until I get



The mass protruding into the bladder, as shown, should be removed to the dotted lines AB and CD, and the first inch of the urethra greatly dilated, so that the point of the finger may easily enter it.

away the whole of the gland that projects into the bladder or presses upon the urethra. In this way large masses of gland tissue are removed. Having accomplished this much the position and condition of the first portion of the urethra must now receive consideration. The vesical orifice should be made very free, using a dilator if necessary. Its floor must be made as low of the base of the bladder. No bar of tissue is to be left, otherwise the patient will fail to receive the full measure of benefit that he should obtain. Belfield, of Chicago, in a very able paper published several years ago, called

special attention to this matter. He claims that the success of the operation for the patient depends on bringing the floor of the urethra to the level of the base of the bladder, and in difficult cases he advises, if the obstruction cannot be otherwise removed, to make a perineal incision also, so that by the combined method whatever obstruction there may be can be wholly removed.

In the four years since I read the first paper, attention has been called to castration as a simple, safe and effective method of dealing with prostatic hypertrophy. Since the publication of several articles by Dr. White on the effects of castration in reducing enlargement of the prostate, this operation has become quite the fashion, and almost every operator of any note has furnished a few cases. The reports are rather conflicting; but, fairly considered, I think it is established that in some cases such relief followed castration as to justify the use of the word cure. At the annual meeting of the British Medical Association for 1896 the treatment of hypertrophy of the prostate was discussed by David McEwen, Reginald Harrison, Mansell Moullin, Sandberg, John Chicne Southam, Mortan, Jordan Lloyd, Hadden and Cameron. The views expressed were by no means in favor of any one method.

Dr. McEwen, who introduced the discussion, after referring to the high place as a radical operation given to the suprapubic method since it was first brought to the notice of the profession at the annual meeting of the British Medical Association in 1889, by the late Mr. McGill, of Leeds, and after simply mentioning some modifications suggested by Belñeld, of Chicago, Nicoll, of Glasgow, and Alexander, of New York, confined his own remarks entirely to double orchidectomy. At the close of his excellent paper, he made a summary of his conclusions, which I take the liberty of quoting :

1. "In a considerable proportion of cases castration induces more or less atrophy of the enlarged prostate."

2. "This atrophy occurs most readily in the soft and elastic form."

3. "The best effects occur when there is enlargement of the whole gland. Sessile enlargement of the median lobe may yield to castration, but intravesical growths are, as a rule, more suited for prostatectomy."

4. "Cystitis when not far advanced may be relieved or cured."

5. "High grades of cystitis, associated with septic inflammation of the kidneys, and with distressing bladder symptoms, will be more benefited by drainage of the bladder."

6. "Vesical contractility may be restored even after years of complete catheterism."

7. "Even if voluntary power fails to return, castration may still bring relief to the patient, if catheterism has been frequent, painful and difficult."

8. "With the exceptions mentioned, castration will give as good results as prostatectomy with a smaller death-rate."

9. "Resection of the vasa deferentia acts more slowly than castration in reducing hypertrophy of the prostate."

10. "It is a simple operation, would be more readily assented to by the patient, and could therefore be recommended earlier."

I frankly admit that I have no personal experience of castration in the treatment of prostatic hypertrophy. A careful perusal of the cases on record shows that melancholia and other forms of mental disturbance have occasionally followed castration. This fact should not be overlooked in deciding upon the method of operative relief.

Against the general adoption of castration as the method of treatment for hypertrophy of the prostate, I wish to point out this objection, which I regard as fatal: In three of the patients I operated on I found stone present, as well as great intravesical growth. The hypertrophy was the primary and principal disease, for which the operation was performed. At least in one of the cases the stone was not detected, though the bladder was carefully and repeatedly examined by the sound. In cases of great growth of the gland into the bladder cavity, stones of considerable size may escape detection by the most skilful examination, because they lie in a pouch which is inaccessible to any instrument.

The objection I urge is this: If the operation is commended generally by surgeons of good standing, soon we will hear of men being castrated for stone in the bladder, for chronic cystitis, and for malignant disease, because it is not always easy or possible to make a positive differential diagnosis between simple hypertrophy of the prostate and some of the conditions which simulate it so closely.

There are other objections. Even McEwen admits that, when there is considerable intravesical growth, prostatectomy is a more suitable operation. These are the very cases that cause urgent symptoms, and demand surgical interference. Growth of the prostate downwards upon the rectum may become very large and yet cause no bladder symptoms during life. In my view, when he makes this admission about intravesical growths, and also the admission that severe or septic cystitis is better treated by drainage, he leaves few cases for castration. Besides, amongst my patients I find men more willing, even at the age of eighty, to undergo prostatectomy than to be castrated.

Regarding castration Prof. Chiene, in the discussion previously referred to, expressed himself as strongly "opposed to the removal of the testicles for prostatic hypertrophy, and would rather recommend prostatectomy in cases calling for surgical interference." I venture to predict that in the near future surgical practice will follow this view, and abandon castration as an unsurgical operation.

In *The Brit. Med. Journal*, July, 1894, Mayo. Robson reports twelve cases of McGill's operation with one death. The ages are given 67, 63, 62, 66, 73, 61, 61, 64, 72, 73, 62, 73. The operator thought the one death was due to some injury of the rectum by the use of the rectal bag. But, even if the death were unavoidable, the mortality is only about 8 per cent., and not 20 to 40 per cent., as generally stated.

In my first paper I reported two cases, ages 64, 82. At the close of this paper I shall give notes of three others, ages 81, 65, and 73. I have, so far, no death to record.

In November, 1895, in the report of the Clinical Society of London, Mansell Moullin mentions two cases over 60 years of age. In one he found eighteen separate small-sized calculi, in the pouch behind the enlarged prostate; in the other he found one as large as a penny. He says: "For these patients lithotripsy or lithotomy would be only a temporary expedient." In one of my earlier cases I removed twelve stones by the lateral operation. After the wound healed the patient's bladder symptoms returned. Three months afterward I performed suprapubic prostatectomy—removing a large mass of gland structure about the vesical orifice of the bladder. This man has been restored to health, being now able to void urine naturally without pain or undue frequency.

This certainly goes to show that the suprapubic method of performing lithotomy has the advantage over the lateral or any form of perineal operation. It permits the operator, after he has removed the calculi, to explore the condition of the bladder. Should there be hypertrophy or any other condition requiring operation he could then proceed to do all that was necessary instead of subjecting the patient to a second operation. I present before you almost the whole of the tissue removed from my last case. It serves to give some idea of the amount of gland structure that may require to be removed.

In closing my paper, permit me to say that I am strongly in favor of suprapubic prostatectomy as the method for general adoption in dealing with hypertrophy of the prostate. I look upon it as a safe operation, if performed with fair skill, and it is much more

likely to cure the patient than any other of the suggested methods. I cannot imagine any case that I would treat by castration.

The results obtained in the five operations are: No deaths; four of the five patients may be called "cured"; one is not cured, though benefited by the operation.

CASE 3. D. S., age 80 years: The bladder trouble has been going on for several years. At times the use of the catheter was necessary, not constantly. Except when controlled by opiate suppositories, the frequency was two or three times an hour, accompanied by very severe spasms.

Residual urine: Four to six ounces sometimes, containing blood, and always more or less ropy mucus and pus.

Length of catheter, nearly ten inches.

Rectal examination did not show appreciable enlargement of the prostate, nor did the sound show the presence of stone.

On opening the bladder three small stones were found in a pouch at the base of the bladder, and a large, hard, smooth collar-like growth around the vesical orifice of the urethra, which extended about an inch and a half into the bladder cavity.

The hemorrhage during the operation was profuse, but ceased spontaneously within twelve hours.

Recovery was uneventful, the wound being firmly closed in five weeks.

The patient has regained full control, the use of the catheter not being required.

The frequency is reduced to once in three or four hours by day, and once in five or six by night, without pain. The operation was performed in January, 1897.

CASE 4. J. D., age 65. Operation, May, 1897.

The bladder symptoms began about two years ago, but much worse recently. Before operation the frequency was once an hour, sometimes every half hour, with acute burning pain.

Length of catheter, nine and three-quarter inches.

Residual urine: One ounce to an ounce and a half.

Urine: Sometimes acid, sometimes alkaline, with slight deposit containing pus cells. Spe. Grav., 1010; a trace of albumen.

Daily quantity from fifty to sixty ounces.

A year after operation: The patient is much improved, having gained about twenty pounds. Less frequency and less pain, but the man cannot be said to be cured. The urine still shows a trace of pus. Being acid, it probably comes from some degree of pyelitis,

or possibly a stone in either kidney. The case is still under observation.

CASE 5. P. D., age 73. Wholly dependent on the catheter for ten years; urine alkaline, 1020; 10-15 per cent. albumen; length of catheter, $9\frac{3}{4}$ inches; had hemorrhage usually after exertion; no stone detected. Operation, February, 1898.

On opening the bladder, three large hard calculi were found in the pouch below the enlarged prostate. The same condition of the prostate as in the two other cases, only that it extended further into the bladder cavity. At the base of the bladder a small opening, large enough to admit the point of a finger, was first noticed when the operation was nearly completed. On raising the base of the bladder by a finger in the rectum this opening was found to lead into a sac about an inch and a quarter in diameter.

In this case also the hemorrhage was severe, but ceased spontaneously without any marked ill effect on the patient.

The only untoward event in this patient's recovery was due to the slow closing of the wound. At the end of twelve weeks it still allows a little leakage. His bladder now retains six or seven ounces of urine at a time. He has no pain, and can void the urine without the catheter.

In the past four years this subject has been discussed from various standpoints, and by writers in all parts of the world. Those interested may refer to the following articles and monographs:

British Med. Journal, July 14th, 1894; November 16th, 1895; December 28th, 1895; October 10th, 1896, and February 20th, 1897.

American Journal of Med. Science, 1895, 1st vol., page 465; 1895, 2nd vol., pages 233 and 350; 1896, 1st vol., page 487; 1897, 1st vol., page 115; 1897, 2nd vol., page 601.

Annals of Surgery, September, 1896.

Medical Record, December, 1896.

University Med. Magazine, April, 1897.

Gould's Year Book, 1898.

Treatment and Cure of Enlargement of the Prostate, by Mansell Moullin, issued in 1894.

Selected Articles

THE STETHOSCOPIC AUSCULTATION OF PERCUSSION.

(CONSIDERATIONS UPON THE TECHNIQUE OF THIS METHOD APPLIED TO THE STOMACH.)

By DR. P. VILLARI.

(Continued from September Number.)

The stethoscopic auscultation of percussion finds its proper application on the stomach. This viscus is the only organ that lends itself fully to auscultated percussion, its limits being thus clearly outlined. Federici, Bonfigli and Cantani, considering that the stomach can almost always exercise a notable influence upon acoustic phenomena, had previously contrived methods for its delimitation. Federici, observing that the stomach can give a metallic character to the cardiac sounds, and by means of the resonance markedly increase them so as to render them audible at a distance, taught his method, consisting of auscultation of the heart sounds over the gastric walls, chiefly over the lower left fourth. Cantani in his turn proposed to auscultate the bladder sounds over the gastric walls. These two methods are in reality only a stethoscopic auscultation of percussion, except that in them the sonorous vibrations, transmitted to the stomach, are called forth, not by a blow given externally, but by vibrations arising from the sound phenomena of the cardiac beats and from the bladder murmur, and also from the movement of the heart upon the upper wall of the stomach, through the diaphragm.

The stomach is an organ which, however empty it may be, contains always a given quantity of gas; and it is just by reason of this quantity of gas, and by reason of its position and the special form and character of its walls, that it gives a special sound, which we call tympanic. This quality of sound, given by the stomach, and the extension of the area of sonorousness, varies much according

to the quantity of gas contained, and varies also according to the tension and thickness of the walls. It is for this reason that we can obtain by ordinary percussion the various modifications of the tympanic sound, low tympanic, high tympanic, metallic-tympanic, and metallic. It is thus very difficult in some cases, especially when the stomach contains little and the colon much gas, to fix the line of the greater curvature of the stomach by simple percussion, since the colon can acquire such a resonance as to be in unison with that of the stomach. In these cases, then, if it is difficult for the ear, even when experienced, to differentiate by ordinary percussion the sound of the colon from that of the stomach, it is not so for the ear, when in close relation with the stomach by means of the stethoscope. The ear will thus appreciate distinctly the pitch of the stomach note, and will distinguish it from the pitch of the colon note and that of the surrounding viscera.

(Here follows a description of a small hammer made for the purpose of percussing the stomach.)

With the hammer which I have described we attain the object which Bianchi proposed, namely, to percuss rhythmically, and with equal force.

Wishing to have a positive proof of the limits of the stomach, obtained by percussing with my pleximeter hammer upon the gastric wall and auscultating, I have experimented on the cadavers. Using a binaural stethoscope, to enjoy complete liberty of eyes and hands, I marked a series of points on the abdominal wall of a cadaver. These points showed where the characteristic stomach sound disappeared. Bianchi in his work advises placing the stethoscope 3 c.m. under the xiphoid appendix and then percussing over the gastric area in lines from the centre to the periphery. Heeding the warning of Bianchi, I have been able to mark the different points on the abdomen. I have also tried to prove the contrary by percussing below the xiphoid appendix, placing the stethoscope at different points. I have obtained the same results, with some slight difference along the left border. I have also experimented by percussing and applying the stethoscope at different points. I have obtained nearly always the same boundaries. I have put in pins at the points marked, and then opened the abdomen. The boundaries of the stomach were found to be very exact. (The abdomen of the cadaver was opened in the presence of Professors Petteruti and Guarino.) From other experiments made on the cadavers, I have been always able to get exact results and to convince myself of the reliability of the method. Besides these ex-

periments, those upon the sick have proven the sureness of the method, since there have been found variations of the boundaries, in the same individuals when standing, according as the stomach was empty or contained liquids, artificially ingested, after the first delimitation. Likewise, the individual being stretched out at full length, there have been found variations in the boundaries, according as the stomach was empty or filled with gas from the introduction of seltzer water or effervescent powders.

We can thus formulate the following conclusions: (1) The stethoscopic auscultation of percussion gives good results only for the delimitation of the gastric area, and for such purpose it receives the place of honor among diagnostic methods devised for that end. By means of this method even the anomalies of form and position of the stomach can often be fixed.

(2) In contrast with the other organs, it can be studied and applied to the stomach with little exercise or practice. It must be remembered, however, that the sounds from the dilated colon and intestines are transmitted to the stomach and are heard very clearly through the stethoscope, placed exactly over the stomach region. But these sounds, which come from the other viscera, are not accompanied by the characteristic metallic pitch which marks the sounds that are heard when the percussion falls on the gastric area.

(3) This metallic tone is perceived with the same clearness, while the stethoscope rests on the cardiac extremity and the percussion is made at the pyloric, as throughout the whole transverse length of the stomach. But, percussing in a vertical line, in a direction parallel to the longitudinal axis of the body, the metallic tone disappears at a short distance from the stethoscope, sometimes within two or three c.m. from it.

(4) These results are equally clear, whether the stethoscope remains immovable and the points of percussion vary, or if the percussion is always made at one point and the position of the stethoscope changes.

(5) When fixing the limits of the stomach in patients, by this method, it is useful to mark them first from one position of the stethoscope and then, the latter being changed, to observe whether the limits are the same. We have thus a clear proof that these limits correspond to the gastric region.

(6) To make all these researches with the greatest facility, besides the binaural stethoscope, we find the pleximeter above described very useful.—*Translated from: "Giornale Internazionale delle Scienze Mediche" by Harley Smith.*

Clinical Notes.

NUCLEINS AND TUMORS—CASE: RECOVERY.

BY JOHN STENHOUSE, M.A., B.Sc., EDIN., M.B., TOR.,

Assistant Demonstrator of Pathology, University of Toronto; Physician to the Nursing-at-Home Dispensary, etc.

MISS O., ætat. 35, housekeeper, consulted me on 23rd April, 1895, under peculiar circumstances. Nearly three years before the date mentioned a tumor had been removed from her right breast, and soon after the operation another had developed in the left. When she called on me she had everything prepared to enter the hospital within a few days. In conjunction with her own physician, this had been arranged by one of the leading surgeons of the city, who had also done the previous operation. Just then her physician became ill, the operation had to be indefinitely postponed, and, in the meantime, she came to me for palliative treatment, for she was in great pain.

The breast was much enlarged, the nipple invaginated, and the tumor could be made out in the left lower quadrant. The skin was unbroken, not even discolored, and the axillary glands were not enlarged. I supposed that the tumor was adenomatous in character.

I had just been reading the report of the experiments of Prof. Chittenden, of Yale, on the physiological effects of Protonuclein, viz., leucocytosis. Of the mass of clinical reports, some of which spoke of the disappearance of tumors under its influence, I was rather sceptical. Their hue was too uniformly roseate. Physiological experiments, however, give us a sure and rational basis, and I felt that if anything was to be done, short of operation, it could only be accomplished through the agency of phagocytes. I therefore prescribed Protonuclein, one tablet (3 grains) four times a day; and for the immediate relief of the pain a lotion of:

Tr. Opii,
Ext. Belladonnæ Liq.,
Glycerine, equal parts.

This was to be applied soaked in flannel and covered with oiled silk. The pain and swelling gradually disappeared, the nipple became evaginated, and the breast assumed normal proportions. Within three months there was no sign of the tumor, but, as a precautionary measure, the Protonuclein was continued for five months longer.

It is now almost three years and a half since treatment was begun, and there has been no recurrence.

The result is specially gratifying because of the odds the patient had to fight against. A chronic diarrhœa, from which she also suffered, contributed to keeping her condition below par. It resisted ordinary treatment till I suggested a local examination and found that the uterus was retroflexed. After the introduction of a pessary and the restoration of that viscus to its normal position, the diarrhœa quickly subsided. With occasional attacks of renal colic and the affliction of a cleft palate, it will readily be conceded that she has had her share of human ills. She is, however, very happy in the thought of having escaped the operating table.

I should hesitate to place such a case on record were it not for the combination of circumstances, which render it peculiar: first, that the diagnosis was made and the operation all but done by one of the most cultured surgeons of the city; second, that a similar tumor had been removed from the other breast; third, that in spite of the most adverse conditions the tumor disappeared under the exhibition of Protonuclein, which was the only treatment used; and fourth, that after an interval of three years and a half there has been no recurrence.

553 Sherbourne St., October, 1898.

Progress of Medicine.

MEDICINE

IN CHARGE OF

J. E. GRAHAM, M.D., M.R.C.P. Lond.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the Toronto General Hospital, and St. Michael's Hospital;

AND

THOMAS F. McMAHON, M.D.,

Professor of Medicine, Women's Medical College; Physician, St. Michael's Hospital, and Physician to Toronto General Hospital;

ASSISTED BY

JAMES G. CAVEN, M.B.

BRITISH MEDICAL ASSOCIATION.

The address in medicine was delivered by Dr. Thomas Richard Fraser, of Edinburgh. He first referred to the address in medicine delivered on the last occasion on which the association met in Edinburgh, scarcely a quarter of a century ago, by Dr. Warburton Begbie, who chose for his subject the enquiry, "Has the practice of medicine made a single step since the time of Hippocrates?" His conclusion was that no general doctrine—chemical, humoral, physical, or physiological—had been propounded which satisfactorily explained the nature and production of disease, and that therapeutic advancement had been obtained chiefly by observation of patients and adhesion to the classic methods of rational empiricism. Dr. Fraser proceeded to discuss the progress made in the comparatively brief period since Dr. Begbie's address, especially the remarkable development in our conceptions of the nature and production of many diseases. To-day we are able to formulate a doctrine of disease founded upon the satisfactory basis of experimental demonstration, and sufficient to explain many of its forms, and to already provide us with assured means and principles for its prevention and treatment. The indebtedness to our predecessors is especially conspicuous in the field of diagnosis, for they had already

constructed a nosology sufficient to distinguish the great majority of diseases ; but here also the growth of collateral science has furnished us with physical aids to our senses, and chemical applications and methods which have enabled us to advance in accuracy of diagnosis, and even in the discovery of new diseases. Among the physical aids are the apparatus for blood examination, the sphygmograph and the ophthalmoscope. The capabilities of radiography are, as yet, undeveloped. The application of chemical processes to the examination of stomach contents, and of the urinary and other secretions, has advanced diagnostic precision. The agglutinating effects of the blood serum in certain infective diseases, as typhoid, Malta, and relapsing fevers, and in cholera and anthrax, upon their respective pathogenic organisms ; and the application of chemical pigments to reveal the existence of the germs of such diseases as pulmonary tubercle, pneumonia, and diphtheria, have removed many of the perplexities of diagnosis, and rendered identification almost a mechanical art.

But diagnosis, for the most part, deals only with symptoms, and has no immediate concern with the true nature of the malady, without a knowledge of which treatment can only be tardy and unsatisfactory. Our skill in diagnosis is far in advance of our knowledge of the true nature of the malady in many cases. For example, in the nervous system numerous forms of disease associated with morbid lesions of parts of the spinal cord or brain have been created, and the elaboration is a remarkable triumph of painstaking and skilful observation in symptomatology and in morbid anatomy. But to what extent is the patient a gainer? In most cases the gain is disappointing, except in the few cases in which surgical treatment is indicated. We can foretell, and perhaps modify, the course of the disease, and at times relieve symptoms, but our knowledge seldom enables us to cure it, unless it is possible to advance from diagnosis to the determination of the actual cause.

Gratifying results are to be obtained when there is reason to believe that the disease has been caused by a toxic substance present in the body, and according as this substance is the poison of syphilis, or of rheumatism, or of malaria, is the cure effected by remedies which have been proved capable of annulling the toxic effect of these poisons. It is thereby shown that the disease is not truly a product of the structural alterations which are present, but of a poison capable among other effects of producing these structural alterations. Changes in structure closely simulating changes of disease are produced by many of the more common poisons, such as

lead, phosphorus and alcohol. Such facts strongly suggest that the structural changes found in many diseases may be mere manifestations of a cause which would thus assume the importance of being the essence—the *vera causa*, of the disease, and that this essence is a toxic substance. The body is constantly subjected to the risks of poisons produced within itself as well as those introduced from without. Many of the poisons produced within the body are of the chemical nature of previously known alkaloids, and not a few of them rival the vegetable alkaloids in toxic power and reproduce their leading effects. Even in a state of health the organism is a veritable storehouse of these toxic substances. By such toxic influences the symptoms of cholæmia, gout, rheumatism, uræmia, diabetic coma, stercoræmia, and probably also of chorea, sunstroke, neurasthenia, asthma, and the idiopathic anæmias receive a sufficient explanation even though the toxic substance has not in all cases been identified. The doctrine of the toxic origin of disease has also been applied to mental affections, and auto-intoxication from poisons produced in the intestinal canal is believed to be an important factor in the causation of insanity. The toxæmic theory is destined to clear away much of the present vagueness regarding the pathogenesis of mental disease. It is not improbable that, in cancer, auto-intoxication by a poison generated in the cancer cells equally with, and in some instances to a greater extent than, structural degenerations of invaded tissue accounts for the symptoms and for the fatal termination—and this probability is strengthened by the separation from cancer of a substance possessing a hyper-thermic and powerfully lethal action.

The widely acting pathogenic influence of poisonous substances has, however, received its most definite and convincing support from the remarkable discoveries in bacteriology which have signalized this period. The pathogenic action of the microbes was at first attributed either to mechanical obstruction of the blood vessels, or to a biological action which enabled them to appropriate nutritive materials destined for the tissues of the body, and thus to deprive these tissues of life; but it was subsequently proved that these effects are mainly caused by the poisons which they produce. The poisons are of complex composition; some are alkaloids and others modified proteids, and others, again, have altogether unknown chemical composition. Many are of extreme and almost indefinitely great activity. Like other poisons, they are capable of producing structural changes, *e.g.*, the skin eruptions of many infectious diseases, the nerve changes produced by the diphtheria poison,

the production of nodules in the lung by dead tubercle bacilli, and numerous others. The demonstration of the toxic origin of infectious diseases has thus added greatly to the number of diseases which are caused by poisons, and has thereby been largely instrumental in establishing the doctrine of the toxic origin of disease.

Large numbers of disease-producing poisons are thus ever present in the body. Many substances known to have poisonous properties are intentionally introduced into the body, such as alcohol, tobacco, tea, and opium, while others, such as lead, accidentally find their way into it. The respiratory passages and intestinal canal are crowded with micro-organisms, and they teem in the soil, air, and articles of food. Many of them are producers of virulent poisons, and under suitable conditions proliferate with so great rapidity that a single bacterium may in twenty-four hours have multiplied itself into many millions of separate toxin-creating organisms.

What defence can man and animals oppose to these poisons? Certain animals are by hereditary endowment able to receive with impunity large quantities of poisons which in minute quantities are hurtful to other animals. Man may become so habituated to the action of several toxic substances that after a time he can take enormous doses without serious inconvenience. Such powers of defence are acquired against arsenic, opium, alcohol, and tobacco. These exceptional powers of defence have been variously explained, but the explanations offered do not account for all the observed phenomena, and it must in the meantime be assumed that tissues may gradually become accustomed, possibly by exhaustion, to the perturbations produced by substances which modify their normal condition, so that by-and-by a tolerance is induced. A fundamental difference between both congenital and acquired defence against ordinary poisons and that resulting from the action of disease toxins, venoms, and such like poisons exists in so far that in the former there is not produced in the blood any substance which plays the part of an efficient counter poison or antitoxin.

In the case of many infectious diseases, one attack confers a power of resistance against subsequent attacks of the same disease. And it has been found that the symptoms of the disease, as well as the power of resistance to subsequent attacks, can be reproduced by the filtered microbe-free solution in which the pathogenic microbes have been cultivated. It is thus demonstrated that neither the original disease nor the subsequently acquired protection was actually due to the microbe, but to toxic substances produced by it.

It is further found that the blood serum of protected animals, itself destitute of poisonous properties, when introduced into non-protected animals, confers upon them this power of resistance, at least to a considerable extent. The nature and cause of this protection is now being widely investigated, and, while there is hope of solving the problems, many of the results are as yet difficult to explain. Amongst the disputed points are the nature of the process whereby protection or immunization is obtained, the origin of the protection-producing substances or antitoxins, and the manner in which they act as curative or therapeutic agents. Possibly a portion of the acquired protection is due to the tolerance brought about by the accustoming of the structures of the body to the action of the poison, as in the case of the ordinary mineral and vegetable poisons, but this tolerance could not continue for years, as immunity to an infectious disease often does. The theory that the pathogenic microorganisms use up the constituents suitable for their growth and vitality is also untenable. The doctrine of phagocytosis may, to a limited extent, account for the destruction of living microbes, but phagocytosis can have but little influence upon the soluble toxins, which, since the introduction of this theory, have been proved to be in most cases the true causes of the disease symptoms. The pathogenic organism of an infected disease cultivated outside the body produces a toxin which, when administered to an animal, reproduces the symptoms of the disease, and, if the animal recover, and further quantities of the toxin are successively administered, an immunity may be acquired so great that the animal suffers but little inconvenience when fifty times the minimum lethal dose, or more, of this toxin is now administered. The immunity thus conferred is, however, only of short duration. The duration of this immunity in the case of diphtheria toxin, according to Roux and Klein, does not exceed from five to seven days. The immunity is brief compared with that produced by the microbes from which the toxins had originated. A serum that may be relied on to afford any durable protection is still a desideratum. In the case, also, of the venoms of serpents, the acquired immunity is of but short duration.

On the other hand the protection produced in a patient by an infectious disease may apparently endure for a lifetime, and the immunity from smallpox gained by vaccination for at least seven years. No other explanation is possible than that successive supplies of the antitoxin of the disease, or of smallpox, must be furnished to the body during the time that protection continues. It is impossible that these supplies could emanate from the pathogenic organism it-

self in its condition of original virulence. The microbe of smallpox has become so modified in the calf that, although it can no longer produce a virulent toxin, it still retains the power of elaborating a protective antitoxin and also retains sufficient vitality to reproduce its like through many generations in the human body. Evidence pointing in the same direction has been obtained from other pathogenic microbes, *e. g.*, that of fowl cholera and anthrax. Immunity equally with poisoning is dependent upon a soluble substance produced by the micro organisms, and the duration of even a high degree of immunity resulting from the introduction of the immunizing substance as distinguished from the microbe itself is only of short duration. We can account for the prolonged immunity following upon the recovery from many infective diseases or from inoculation with vaccine lymph, only by assuming that so long as immunity continue, the microbial sources of infective disease continue to exist in an attenuated and otherwise modified form in the protected body.

Unless by education we can so tame and civilize a pathogenic microbe as to subdue its virulent and hostile disposition, while at the same time its beneficial and protective properties are left unimpaired, the hope of obtaining—as for plague, cholera, and tubercle—immunizing vaccines equal in efficiency to the lymph of vaccinia will probably never be realized. Long enduring protection from infective disease cannot—if this theory is correct—be obtained by the introduction into the body of either the poisonous or the immunizing products of microbes—the toxins or anti-toxins—but only by inoculation of such microbes as are capable in the body of assuming a non-virulent form, or of microbes already converted into this form.

In the case of some diseases it is possible that the modification of the micro-organism from a poison-producing to an antidote-producing agent cannot be accomplished in the body, and this may explain the failure of certain diseases to protect the body from subsequent attacks of the same disease, well recognized in the instances of pneumonia, influenza, diphtheria, rheumatic fever, erysipelas and tubercle.

Such slight causes as a change in temperature, or the addition to or the removal from the fluid in which they are grown by a minute quantity of a chemical substance, may convert a non-virulent form of a pathogenic organism into a virulent form. Similar causes may, outside the body, also render moderately or intensely virulent a previously non-virulent microbe, and thus may be explained variations in the severity of epidemics, as well as the occurrence of

outbreaks of infectious disease not originated by infection from any previously existing case. Further, pathogenic microbes, attenuated as to their virulence, but not as to their protective power, may enter the body and render it immune by a process of accidental vaccination. We may thus explain repeated exposure to infection without the production of disease and the immunity enjoyed by the inhabitants of towns and districts daily subjected to the virus of typhoid, malaria, or yellow fever. Pasteur has established that pathogenic microbes are not morbid entities, but can assume various forms of physiological activity, depending on the media in which they live and multiply. Their virulence can be exalted or enfeebled and each state can be fixed.

Passing to the origin of the protection-producing substances—antitoxins or antivenins—the author refers to the generally accepted theory that a reaction occurs in the tissues of the body after the introduction of virulent microbes or their toxins, whereby either a proliferation of the leucocytes and the production by them of the protecting substance is excited, or the normal cells of the body are stimulated in such a way that they secrete the protective substance. In many instances leucocytosis does not occur when immunity to a high degree is established by venom. And twelve times as much antivenin is required to neutralize the effect of the minimum lethal dose of venom if the antivenin is injected into the animal half an hour before the venom is administered instead of being mixed in a test tube with the venom before administration. The former condition would certainly be more favorable for the production of leucocytosis. No proteolytic or fermentative action has been discovered in the case of any toxin or venom; by subjection to certain external influences, such as elevation of temperature, and the influence of electric currents and of certain chemical reagents, toxins and venoms may have their poisonous action destroyed, while the immunizing or protective action is retained; and toxins have been found actually to contain protective or remedial substances along with their toxic ingredients. These considerations suggest that the protecting substance originates directly from the toxin, or is indeed an ingredient in its complex composition. Venom may be introduced by the stomach in doses hundreds of times greater than those which would prove fatal by subcutaneous injection without any poisonous effect whatever, but such administration by the stomach nevertheless so protects the animal that considerably more than the minimum fatal dose may now be subcutaneously administered without causing death. The venom must have been

split up in the alimentary canal so that its toxic constituents were separated from those that are antitoxic or protective, the former either being destroyed or at least not absorbed, whilst the latter had passed into the blood in sufficient quantity to protect the animal against otherwise lethal administration of venom.

All these facts appear to indicate that the antitoxic or immunizing substances originate, not from vital reactions upon constituents of the body, but from the toxins themselves, being produced by chemical changes in them, or being actually among their normal ingredients.

The doctrine of the toxic origin of disease does not fail to supply general principles as well as specific indications for treatment. It gives a rational explanation for the value of eliminative treatment. It explains also why treatment should also include the adoption of measures for increasing the resistance afforded by the body to toxic and morbid processes. By the demonstration of the production of many diseases by toxins generated by micro-organisms, the opportunities for the application of these principles have been greatly extended. After the administration of a lethal dose of tetanus toxin or cobra venom, even when the symptoms are well marked, and advancing to an otherwise inevitably fatal issue, we can, by giving a sufficient dose of serum from an immunized animal, not only arrest the disease and conquer death, but also prevent the structural changes in the muscle fibre and kidney respectively which characterize the poisonous action of the tetanus toxin and cobra venom.

Antitoxins are destitute of any distinct physiological action, and their curative action cannot therefore depend on physiological antagonism, and it is highly improbable that it has any biological basis whatever.

Experiments with ^vserpent venom and antivenin give results that are difficult of explanation on any other supposition than that a combination, chemical or mechanical, is effected between the venom and the antivenin. When the conditions are the most favorable for ensuring contact between the antitoxin and the toxin, the antidotal action is more powerful than when the conditions are less favorable for this contact. If the antivenin is administered after the venom it requires an enormously larger dose to prevent a fatal issue than if it is mixed with the venom before administration. This experimental result emphasizes the lesson that for the effective treatment of an infectious disease the quantity of antitoxin must be a very large one. The antitoxic serums frequently in use at the present

time must be regarded as too dilute. We cannot as yet produce antitoxic serums sufficiently powerful, in doses which can be administered, to cure a patient suffering from the effects of a large lethal quantity of toxin. But it is possible that chemistry may yet solve the problem of separating the curative from the worthless ingredients, and thus furnish us with powerful doses in small bulk.

Serum-therapy has merely entered the first stage of its development, and already the results are of much value. The mortality of diphtheria has been reduced from 40 per cent. to 8 per cent.; the mortality of hydrophobia has shrunk at least from 16 per cent. to 1 per cent.; the prognosis of tetanus has been deprived of much of its gloomy forebodings; the cure of pneumonia, of tubercle, of erysipelas, and of septicæmia, is on the eve of being realized; a complete demonstration has been obtained of the power of antivenins to prevent the toxic and lethal effects of venoms; and the experimental data are being surely accumulated for completing the greatest triumph of preventive medicine by the discovery of an antitoxic serum for the cure of smallpox. These are to be regarded as the first-fruits—in some cases requiring further maturing by the light of science—of the ample harvest which is ripening.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy ; Lecturer
in Organic Chemistry and Toxicology Woman's Medical College

PERTUSSIS.

R. Bromoform	48 gtt.
Ol. amygdal. dulc.....	15 gm.
Pulv. acaciæ	10 "
Aquæ laurocerasi.....	4 "
Aquæ dest.....	q. s. ad 120 "

M.S.—For children under five years, four drops three times daily. Children from five to ten years, twenty drops daily.—*Marfan, Jour. de Med. de Paris.*

UNCONTROLLABLE VOMITING IN PREGNANCY.

Dr. Geoffroy (*Le Scalpel*, January 1, 1898) indicates a new method of treatment based on the employment of very gentle massage. This author, who has for a long time employed prolonged palpation in the treatment of affections of the digestive tract, has observed in several cases of uncontrollable vomiting that there existed at a point in the digestive tract a localized spasm transferred by reflex irritation from the uterus. This spasm, according to Dr. Geoffroy, was localized at two points ; first, at the junction of the stomach with the duodenum ; second, at the point well down in the left iliac fossa, at the posterior part of this fossa at a point which is never any other than the ileo-pelvic angle of the colon, formed by the union of the fixed iliac part of the colon with the movable pelvic part. This spasm causes a permanent state of contraction, which deep palpation readily discloses. This peculiarity is, for the writer, so characteristic that when he encounters it in a woman who vomits or who has a cessation of menses he diagnoses pregnancy. This contraction is encountered in subjects affected with various gastrointestinal troubles, neurasthenia, the beginning of appendicitis, etc.

It is a pathognomic sign of reflex hyperæsthesia of the intestinal canal, of which the morbid symptoms vary from those produced by mild cardiac disturbances and simple nausea to uncontrollable vomiting. By using precautions to avoid pain in making gentle pressure, both slow and progressive, with the ball and not with the extremity of the finger, one can perceive at the point mentioned a series of nodules, ordinarily very small, which are hard and resisting, but which become softened in proportion as the digital pressure is gentle, slow and progressive. There is a sensation of gas and of liquids under the fingers, with a slight gurgling, generally perceptible to both the physician and the patient. The induration ceases, the nodules disappear, and the discomfort they have excited is replaced by a sensation of well-being and an inclination to rest, which indicate that the time has come to suspend the treatment. In the first case in which the author applied this treatment, five or six séances were requisite to effect a complete cure. In general, two or three séances, sometimes only one, cause the vomiting to cease. It is useless to prolong the treatment in order to avoid a return of the trouble. The method is useful in all cases if properly applied, and is perfectly harmless.—*Medical Record.*

INDICATIONS FOR VENESECTION.

1. In affections of the central nervous system, such as cerebriæ hyperæmia, apoplexia cerebri, inflammation of the cerebral membranes. 2. Kidney diseases in the stages of edema and uræmia (Saccharjin and Hoffman). 2. Cardiac disease of valvular origin. In great disturbances of circulation in which the venous system is overtaxed and the arterial pressure raised (Liebermeister). 4. In pneumonias with an exceptionally severe onset, absolutely in the first stage. 5. In various stages of chlorosis (Dyes, Wilhelmj).—*Dr. Moritz Kacsar, Wiener klinische Rundschau. [Med. Record.]*

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D. Tor. L.R.C.P. Lond.,

Surgeon to St. Michael's Hospital ; Physician to House of Providence and Home for Incurables ; Assistant Surgeon, Toronto General Hospital ; Surgeon to the Emergency Hospital.

MEDICO-LEGAL ASPECTS OF GONORRHOEA.

The following case was reported by Dr. A. Neisser, of Breslau, Germany (*Jour. de Méd. de Paris*, vol. ix., No. 39): A man was charged with having communicated gonorrhœa to a young girl with whom he copulated. She prosecuted him under the German code, which punishes all injuries to the health of another. The defendant admitted that he had had gonorrhœa several years previously, but claimed that he was healthy at the time of his relations with the young girl. The charge against him was based chiefly on the affidavit of the family physician of the young girl. The attorney for the defence moved the rejection of this affidavit on the ground that it was not based upon a microscopic examination. The court chose Dr. Neisser as expert and submitted to him the following questions: First, Can gonorrhœa be established with certainty other than by a microscopic examination? Second, How long may gonorrhœa manifest itself after infection in women? What is the extreme period when an affected person can fail to be fully acquainted with his state? Third, Was the disease of the complainant (gonorrhœa) due to an infection? Fourth, Had the accused still gonorrhœa when he last copulated with the complainant? Neisser rendered the following replies: A skilful physician may diagnose gonorrhœa from the clinical symptoms, but the procedure is subject to grave error. The microscope procedure is alone of forensic value. The second question cannot be answered for lack of data except in a general way. The symptoms and progress of the disease vary according to the seat of infection and method of propagation. Neisser, however, expressed the opinion that he could not accept the prevalent view of the lesser virulence of old gonorrhœa. The third question he did not have sufficient data to answer. As to the fourth question, he was led to believe by examination that the accused was still infected at

the time when he last slept with the complainant. There had been found the remains of a gonorrhœa and gonococci. The accused had not contracted any new infection since the relations with the complainant. Nothing, however, showed that the defendant had a knowledge of his morbid state, and he appeared to have acted in good faith.

[Many a man carries gonorrhœa latent for years. The seminal vesicles may become specifically inflamed and be a source of re-infection or of innocently infecting others. The microscope should be used to verify the case and the examination made after stripping the vesicles.]

URETHRAL FEVER.

Tying a catheter into the urethra is one of the most effectual methods of preventing the occurrence of rigors, a fact that is quite inexplicable if rigors are caused by reflex irritation of the deep part of the urethra.—*Moullin*.

THE TREATMENT OF HEMORRHOIDS.

Dr. Coston (*Medical and Surgical Reporter*) gives these points in favor of the clamp and cautery : 1. In the operation with the ligature you tie up the most sensitive of all nerve ends, and there is intense pain, which will be kept up until the stump sloughs and the ligature comes off. In the cautery operation the nerve end is simply cut away and cauterized, and there is nothing left for it to do but cicatrize, and it is left in the very best possible condition for this. 2. The ligature may slip off and the secondary hemorrhage occur ; after the clamp-and-cautery operation there is no danger of secondary hemorrhage. If hemorrhage occurs, it does so immediately, and the operator can blame only himself for it. 3. There is no danger of a recurrence. Kelsey, of New York, and Smith, of London, who have a large experience with operations, support this statement. It will be admitted that recurrences do follow the ligature operation. 4. Convalescence is much more quickly completed, for the reason that it begins at once under the eschar produced by the cautery, and would be completed by the time the ligature came away should the two operations be used on separate tumors in the same case. 5. The mortality following the clamp-and-cautery operation is practically *nil*. 6. The clamp-and-cautery operation requires less after-care from the operation. 7. There are no unpleasant sequelæ.

[We can corroborate the above in its entirety, and add that the procedure is best in ninety per cent. of all cases of hemorrhoids.]

ARGONIN AND PROTARGOL IN TREATMENT OF GONORRHOEA.

Prof. E. Finger, in *Die Heil Kunde*, after relating his former teaching of the treatment of gonorrhœa, by omitting local applications, says :

This standpoint, taken up by me, as I mentioned already in the last edition of my "Blennorrhœa" is not justified in the face of a purely antiseptic treatment which corresponds entirely with the requirements in so far as it combats, in the first instance and solely, the gonococcus, and tries to reduce the inflammatory symptoms only by way of removing the cause of the latter.

The drugs recommended up to the present time, viz.: ammonium sulfo-ichthyolas and Argonin come very near this ideal standpoint, as I do not hesitate to state, in view of my own experience, extending over several years.

In the face of these drugs, I and numerous colleagues, who had entertained the same opinion, were induced to modify our standpoint with regard to the commencement of local treatment.

Although originally we had adhered to the principle that the local treatment of acute gonorrhœa by astringents and antiseptic astringents is contrary to indication in the beginning and in the acute stage of recent blennorrhœa, and that it must be referred to the second sub-acute stage of the process, we have no reason to maintain this principle as against pure antiseptics ; on the contrary, if we have to deal with such, the maxim will be "the earlier, the better." I have already adopted this latter standpoint during the last few years with regard to ammonium sulfo-ichthyolas and Argonin, mostly with a satisfactory result. There are failures, no doubt, but they only go to show what individually different diseases gonorrhœa represents in the different organisms, how different are the degrees of virulence, and in consequence, resistance against antiseptics, which the gonococcus exercises upon the different mucous membranes. These failures may certainly also be ascribed to the fact that, notwithstanding a very early use of antiseptics, the gonococcus succeeds in some cases in speedily reaching hiding places or refuges (connective tissues, glands, etc.) from which the antiseptic, on account of the therapeutical inaccessibility of the locality, is not able to expel it.

In Argonin we have gained a new important factor in the treatment in so far as for the first time an organic combination of silver, soluble silver albumen, was thereby introduced into the local treatment of gonorrhœa, which, in fact, in addition to its antiseptic qualities, appears to possess also a greater capacity for penetrating into the

tissues. Argonin, however, seems to carry with it the disadvantage of a difficulty and unreliability in the manufacture. It is for this reason that I met with some striking failures in treating with Argonin in the early stages, which, when examined more closely, could be traced to the fact that the preparation used for injection contained only very small quantities of silver, certainly less than the four per cent. which it was supposed to contain, and could not therefore exercise its antiseptic effect.

Protargol introduced into therapeutics by Neisser brings us a step nearer to the above-mentioned ideal. Previous to its introduction, viz., in August of last year, I was favored with a communication from my respected friend, Prof. Neisser, informing me of the efficacy of this preparation and placing at my disposal ample material in order to begin the experiments in question.

[We have used Argonin for the past two years with most gratifying results, but for some time past have used Protargol with better results. Protargol in solutions is very slightly alkaline and very bland to the urethral mucous membrane.—E.E.K.]

PÆDIATRICS.

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P., Lond.,

Lecturer on Clinical Medicine and Diseases of Children, University of Toronto; Physician to Victoria Hospital for Sick Children; Clinical Lecturer on Diseases of Children in the Woman's Medical College

AND

W. J. GREIG, B.A., M.D.

CASES OF DIPHTHERIA TREATED BY ANTITOXIN AT UNIVERSITY COLLEGE HOSPITAL, LONDON.

In *The British Medical Journal* (Sept. 3rd, 1898) Drs. Sidney Martin and Bertram Hunt publish a report of the treatment of diphtheria in University College Hospital for the years 1896 and 1897. This supplements a previous report on the same subject for 1895, which was the first antitoxic year.

An exhaustive analysis brings out many interesting features.

During the two years there were 178 cases treated with injections of antitoxic serum. These cases were of more than average severity because only severe cases were admitted to the hospital owing to the limited number of beds. Bacteriological examination showed the diphtheritic bacillus in pure culture or mixed with cocci in 149 cases; in 18 cases the bacillus was not found, and in 11 cases there was no record found.

It has been suggested that the lessened mortality during the past few years has been due not so much to the serum treatment as to the introduction of the bacteriological diagnosis of diphtheria into practical work, so that mild cases which formerly would not have been diagnosed as diphtheria are now admitted as such, chiefly on the bacteriological diagnosis, that their inclusion in the total number of cases would account for the lowered mortality. This factor can have no effect in the reduction of mortality in this instance, for almost all the cases were admitted into the hospital on clinical grounds alone, the bacteriological examination being made afterwards.

TREATMENT EMPLOYED.

In all these cases a subcutaneous injection of antitoxin was given within twelve or twenty-four hours after admission, the dose varying somewhat from time to time. In 1896 the dose was between 2,000 and 20,000 normal units, the average being about 7,200; one-third of the cases receiving 2,000 to 4,000 normal units, and two-thirds receiving 5,000 to 20,000. In 1897 the number of units given was between 4,000 and 12,000, the average being 7,000 to 8,000; one-seventh of the cases receiving 4,000, and six-sevenths between 6,000 and 12,000 normal units.

In addition local treatment by sprays and swabs was employed. The effect on mortality is shown in the appended table.

In all there are seven years; four prior to antitoxin, and the three antitoxic years.

The mortality in the published 178 cases was 17 per cent.

TABLE I.—*Mortality of All Cases.*

Year.	Age.	Laryngeal Cases.			Pharyngeal, Nasal, etc.			Total		
		No. of Cases.	Deaths.	Percentage Mortality.	No. of Cases.	Deaths.	Percentage Mortality.	No. of Cases.	Deaths.	Percentage Mortality.
1891	5 years and under	25	7	28.0	14	4	28.6	62	27	43.5
	Over 5 years	5	1	20.0	18	2	11.1	62	27	43.5
1892	5 years and under	21	14	67.0	12	1	8.3	60	20	33.3
	Over 5 years	4	1	25.0	23	4	17.4	60	20	33.3
1893	5 years and under	32	24	75.0	26	6	23.1	105	39	37.0
	Over 5 years	9	8	88.9	38	1	2.6	105	39	37.0
1894	5 years and under	26	3	11.5	8	5	62.5	64	25	39.0
	Over 5 years	8	3	37.5	22	4	18.2	64	25	39.0
1895 (1st antitoxin year).	5 years and under	23	7	30.4	25	10	40.0	75	21	28.0
	Over 5 years	7	3	42.9	20	1	5.0	75	21	28.0
1896	5 years and under	18	7	38.9	30	6	20.0	98	16	17.7
	Over 5 years	4	2	50.0	38	1	2.6	98	16	17.7
1897	5 years and under	24	6	25.0	29	7	24.1	88	15	17.0
	Over 5 years	10	2	20.0	25	—	0.0	88	15	17.0

ON NEISSER'S DIAGNOSTIC STAIN FOR THE DIPHTHERITIC BACILLUS.

The following abstract of a paper on this subject by R. T. Hewlett, M.D., appears in the *British Medical Journal* (Sept. 3, 1898). The formula is :

(1) One gramme of methylene blue (Grubler's) is dissolved in 20 c.cm. of alcohol (96 per cent.) and mixed with 950 c.cm. of distilled water and 50 c.cm. of glacial acetic acid.

(2) Two grammes of benzoin are dissolved in 1,000 c.cm. of boiling distilled water, and the solution is filtered.

Cover-glass specimens prepared from fresh serum cultures are stained in No. I for 1 to 3 seconds, rinsed in water, counter-stained in No. II- for 3 to 5 seconds, washed in water, dried and mounted in Canada balsam.

So treated, the diphtheria bacillus appears as a slender, longish rod, stained brown, and generally containing granules of a deep blue or inky tint. There are generally two granules, situated at the poles, occasionally a third at the middle of the rod. The method has been tested on about 50 cultures from diphtherial throats, and the characteristic appearances have been obtained in every case. The pseudo-diphtheria bacillus of Hoffmann does not give the granulation. A slightly longer treatment than that recommended by Neisser has seemed to yield better results—namely, five seconds in the blue and ten seconds in the brown.

An attempt has been made to extend the method to swabbings or membrane from the throat. With swabbings the results were not very successful, an error of about 14 per cent. occurring in 30 cases.

With fresh membrane, care being taken to avoid fallacy from the presence of fragments of leptothrix and diplococci, which may simulate the diphtheria bacillus, Neisser's method often affords a rapid means of positive diagnosis. If a negative result be obtained recourse must be had to culture methods.

CREASOTE IN THE GASTRO-ENTERITIS OF NURSLINGS.

Zangger (*Rev. Internat. de-Med. et de Chirurgie*) asserts that in recent cases of gastro-enteritis three or four doses of creasote given in water and alcohol will be sufficient to arrest the vomiting and diarrhoea. Cure results as a rule in two or three days. Chronic cases require longer treatment. The anti-fermentative action of the creasote explains the good result.

THE CONNECTION BETWEEN ADENOID VEGETATIONS AND
ENURESIS.

In an article on this subject (*Zahrbuch für Kinderheilkunde*) Groenbeck asserts that a close connection exists between nocturnal incontinence and the existence of post-adenoid vegetations.

One hundred and ninety-two cases of adenoid vegetation came under the author's observation. Thirty suffered from enuresis. A removal of the adenoids in twelve of these cases was followed by a cessation of the incontinence. In two of these the adenoids reappeared, followed by a return of the incontinence. Fifteen were considerably improved. Two slightly improved. In three the operation was without any appreciable effect. One case was lost sight of, and seven refused operation.

DOUBLE HARELIP OF THE LOWER LIP.

W. O. Roberts, M.D., Professor of Surgery in the University of Louisville, reports a case of double cleft in the lower lip occurring in a child aged three months. The clefts resembled in every respect a harelip of the upper lip.

There was a little cleft in the lower jaw which did not extend entirely through the bone. The author had never seen nor heard of such a case before. Reasoning from embryology it is difficult to understand how such a defect should occur.—*Archives of Pediatrics*, April, 1898.

INFLUENCE OF ANTITOXIN IN LARYNGEAL DIPHTHERIA WITH
AND WITHOUT ANTITOXIN.

Rosenthal (*Maryland Medical Journal*, July 30, 1898) gives his experience in sixty cases which occurred in his private practice, many of the cases being treated in consultation with fellow-practitioners. A most interesting feature of the paper is a chart giving in tabulated form full clinical data, including notes on diagnosis, prognosis, and the general characteristics of each case.

Rosenthal is a warm advocate of large initial doses, and when repetition is necessary, as it is frequently in laryngeal diphtheria, of repeating twice or three times in the first twenty-four hours and always using a larger number of units than was contained in the preceding dose.

The claims made for the superiority of this method are well sustained by a high rate of recoveries, as will be observed by the

following, taken in substance from the report: "I wish to record sixty cases treated with antitoxin, taken from my case-book in the order in which they were seen. They are such cases as every general practitioner meets, the only difference being that cases not showing marked laryngeal involvement have been excluded from the report. Twenty-eight required intubation, and of these eight died. Of the cases which did not require intubation but one died. This death I think could have been prevented had intubation been performed, as death was due to suffocation from rapid exfoliation of the membrane. In a former paper I made the assertion that all cases not requiring intubation should recover, and still hold to this opinion."

The mortality rate of the entire series is $13\frac{1}{3}$ per cent., which is most gratifying, especially when it is remembered that many of the cases were what was formerly known as membranous croup and yielded a frightful death-rate under the best recognized old-time treatment.

In all the cases except four, concentrated antitoxin was employed, and doses from 2,000 to 4,000 units were used in the severest cases. In one case, which relapsed three times, a total of 16,500 units was employed. The child wore a tube seventy-two hours and the case was extended over twenty days. The issue was favorable.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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

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

ASSISTED BY

J. W. SMUCK, M.D.

SANITARY SCIENCE AS APPLIED TO CITIES.

The continual growth of cities, with the increase of the various conveniences therewith involved, means that the science of sanitation must be more carefully looked into than heretofore. New questions are continually coming to the front, and not the least of these is the locking up in the soil of the various poisons, or, by means of the permanent roadways now laid, forced to escape either into the dwellings or in the immediate vicinity thereof. One of the most beneficent agents known to man is pure air, and when we almost entirely exclude the air from permeating the soil many noxious substances are there formed and must escape in the direction of least resistance. Every time the roadway is torn up for purposes of repair or renewal of the various underground conduits lying along the streets of a large city, a vent hole is created, thereby polluting the air in the immediate vicinity. These openings are being made continually, and, to a large extent, unnecessarily so. Were means provided whereby all of the underground conduits could be placed in a tunnel easily accessible a great advance would be made in sanitation. The tunnel could be constructed almost as cheaply as a first-class sewer, and might easily accommodate water, gas and sewer pipes, electric light, telephone, telegraph and fire alarm wires, so arranged as to admit of the repair or renewal of any part without expensive excavations and obstructions of traffic. It would seem that these would be of economic as well as sanitary benefit.

PROPHYLAXIS OF TUBERCULOSIS.

M. Graucher reported the findings of the committee composed of Mm. Reoussel, Bergeron, Bernier, Brouardel, Colin, Magnau,

Monod, Motel, Napias, Nocard, Proust, Roux and Vallin in *La Progrès Médical*, May 7, as follows :

(1) The academy confirms the spirit of these conclusions and of its vote in 1890, which designated three prophylactic measures :

(a) All the sputa should be collected in a handkerchief or a vessel used for that purpose.

(b) In order to avoid the danger from infected dust, washing or wiping the floor with a damp cloth should be used instead of a broom.

(c) All milk used, no matter from what source obtained, should be boiled.

(2) As regards the family, the academy recommends to all physicians a continued use of measures of protection against the spread of the disease from the moment that tuberculosis makes its appearance ; physicians are also advised to maintain, as far as possible, the tuberculous patient removed from all outside influence, in order to adopt an early diagnosis and an appropriate treatment.

(3) For the army, the academy demands special reform suitable to cases of tuberculosis in the first stage of the disease, before expectoration of bacilli begins, and a stringent reform from the moment the sputa is found to contain the bacilli of Koch. The commission also appeals specially to commanders and to the directors of the sanitary service to permit the enforcement, in all barracks and hospitals, of the three measures mentioned above.

(4) The school, the workshop, the store, etc., under the authority of the teacher, the director, the chief of the department, etc., are reminded earnestly of the importance of the question of hygiene, and of the simplicity, the facility of the means sufficient to realize the efficiency of combating the extension of tuberculosis, which menaces the health of families.

(5) The academy approves the conclusions formulated in the report of the Hospital Commission in so far as it refers to patients and the hygiene of hospitals, viz.:

(a) The separation of tuberculous patients in pavilions or in separate departments while awaiting the erection of new sanatoria.

(b) Antiseptic measures are to be employed in all tubercular wards and in rooms used in common, particularly in the cleansing of the floors and the prevention of dust caused by sweeping.

(c) Improving the condition of the nurses by increasing their remuneration and gaining a better class of service, and by securing a retreat for those who have filled a term as competent sanitary infirmarians.

(6) The academy approves the restrictions imposed by the law and the new measures enacted against the use of muscular flesh of tuberculous animals; the seizure of all such diseased meat and its destruction ought to be allowed, with some restrictions to the cases in which the disease is evident. It further recommends to those who raise cattle the use of tuberculin for diagnosis, and the elimination, by the slaughtering of all their animals when found to be slightly tubercular, and still comparatively free from danger of spreading the disease.

(7) Finally the academy, wishing to emphasize the unusual interest which attaches to the continuance of its work in favor of the prophylaxis of tuberculosis, approves the formation of a new and permanent commission to be called: "Commission de Prophylaxe de la Tuberculose," the object of which will be to encourage and to harmonize the efforts employed to prevent the spread of the tubercular bacillus.—*Sanitarian*.

Editorials.

ELECTIONS FOR THE SENATE OF THE UNIVERSITY OF TORONTO.

WE publish in this issue the results of the recent elections for the Senate of the University of Toronto. While we are pleased with the returns in medicine, we have to regret that the unfortunate split in the medical faculty should again have been exposed to public view. Extreme partyism in a medical faculty is generally conceded to be bad. The question naturally arises—who are responsible for this deplorable family fight? We can answer the question somewhat briefly. The friends of Drs. Reeve, Cameron, and A. B. Macallum, who framed a ticket in 1892 for the purpose of defeating Drs. McFarlane and Wright in the Senate election at that time, and with the expressed intention of injuring in divers ways others of their colleagues, are directly responsible for the most lamentable contest that has ever occurred in connection with this faculty.

We had hoped that the extreme bitterness was dying out, and that the expressions of "loyalty to colleagues" and "harmony in the faculty," which have greeted us in recent years, were not a hollow mockery. We had supposed that there was a general feeling that our bickering in public should cease, and had expected that the old members, Drs. Graham, Cameron, Aikins and Wright, would be unopposed. Such, in fact, appeared to be the general opinion. Some of the extremists of a certain party, however, were determined not to allow this, and secretly organized with the result that the nomination of Dr. Jas. M. MacCallum was put in at the last moment, and at the same time letters were sent broadcast among the graduates asking them to "plump" for Drs. Cameron and MacCallum. The friends of Drs. Graham and Wright promptly accepted this challenge, and at the same time worked for Dr. Aikins, who has always been a steadfast supporter of their party in the Senate.

We do not propose, now, to offer any opinions as to the merits

of the two parties ; we wish simply to state facts. In the two wretched contests of '92 and '98 one party was aggressive, while the other acted in self-defence, having at the same time a fixed conviction that its views in relation to University matters were correct. We are very glad to learn that many men belonging to both parties—probably a large majority—are heartily tired of this internecine warfare ; and we sincerely hope that, in the near future, peace and harmony will exist in a faculty which should show no divisions in connection with the general policy which should prevail among the governors of our Provincial University.

CANVASSING AT SENATE ELECTIONS.

THE ideal method of conducting all elections, whether academic or political, is to have absolutely no canvassing. Each member of the electorate should vote in the way he thinks right, without being influenced by the solicitations of the candidates or their friends. We give this dear old platitude for what it is worth, from a sense of duty, and not because of its practical importance. We may theorize as we like, we may quote the old truisms, we may occasionally find a brilliant genius who will give them new clothing ; but we are not going to stop canvassing for some time to come.

After all, canvassing is no crime. If it were the parties who "ran" the last medical election would really be a pretty bad lot on both sides. What is most important in connection with the subject is the question of methods. There have been many discussions about the matter during the last twenty years or more. Some have contended that none but the official papers, sent out by the registrar, should be used. During the last fifteen years names of candidates have been printed on unofficial papers at all or nearly all the elections. This method was first adopted by the Arts' men. Some object to this also. As a matter of fact, if unofficial papers are accepted, it matters but little whether the names are written or printed. We are inclined to accept the view that the official papers are the ones that should be used ; but, after all, it is a matter of no great importance whether a man votes on a blue paper sent out by the registrar, or a white one not coming from official sources.

When the question came up many years ago at a "count" the late Chief Justice Moss ruled that any paper which clearly indicated the way a graduate wished to vote should be accepted. In one particular instance a graduate had written a letter on ordinary

note paper, stating that he wished to vote for A.B. This vote was accepted. The scrutineers, in counting the vote, have to act in accordance with the statutes governing senate elections. The following extract from its statutes referring to this phase is as follows :

“The votes at an election, by convocation for chancellor and for members of the senate respectively, shall be given by closed voting papers, in the form of the Schedule of this Act, *or to the like effect.*”

A HOSPITAL FOR CONSUMPTIVES IN TORONTO.

IT is well that both the profession and the public fully appreciate the fact that phthisis, which cripples and kills so many people, is a contagious disease. It kills more of our citizens than all other infectious diseases together, and yet in the past no attempt has been made by municipalities to make proper arrangements for the isolation and treatment of consumptive patients. An excellent sanitarium exists at Gravenhurst, but it has done nothing for the sick poor.

A meeting was held in Toronto, October 14, to consider the advisability of establishing a sanitarium in the vicinity of the city with a view of looking after the sick poor suffering from phthisis. His Worship the Mayor, who presided, said that such an institution was as much a necessity to the municipality as an isolation hospital or a smallpox hospital. Dr. Peter H. Bryce expressed a decided opinion that all municipalities in the Province should care for their consumptive patients. Dr. Playter outlined a scheme for the establishment of a hospital for consumptives.

Dr. E. J. Barrick, who has given the subject much consideration, proposed, seconded by the Hon. G. W. Allan, the following resolution, which was carried unanimously: “That in the opinion of this meeting it is not only desirable, but highly necessary, in the public interest, that a sanitarium or hospital for the treatment of consumptives should be established in the vicinity of this city under the control of a citizen’s committee and the Medical Health Department, believing that such an institution, under such management, would not only be a boon to our afflicted poor, but also a means of protection from infection to the rest of the community.” A strong committee, composed of leading laymen and physicians, was then appointed to carry out the terms of the resolution, with His Worship the Mayor, chairman, and Dr. Edward Playter, secretary.

THE ONTARIO MEDICAL REGISTER.

THE Ontario Medical Register, which contains the names of all physicians who are entitled to practise in Ontario, has just been published. In addition to the names of members of the College of Physicians and Surgeons it contains much information about the Medical Act, the territorial divisions, etc. Since the publication of the former register in 1892 there have been 265 deaths of members. There are 3,510 names on the Register; and of these 649 practise outside of Ontario. The addresses of 361 physicians are unknown; but, probably, all these live outside of the province. Out of the total number registered there are, therefore, 1,010 not practising in Ontario. This will leave the large (too large) number of 2,500 registered practitioners in the province. The whole population, according to the last census, is 2,235,000. The Registrar, therefore, estimates that the proportion of physicians to the whole population is 1 to 890 inhabitants. The proportion according to the Register of 1892 was 1 to 906. The list of members has evidently been very carefully revised, the "residence" column being the only one that is incomplete. Upon the whole, however, this Register is the best that ever was published, and for this the Registrar deserves the thanks of the profession.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER:

SIR,—A few days ago I received the following letter and book mentioned therein :

190 Yonge Street, Toronto, Sept. 15th, 1898.

DEAR SIR,—Early in June we obtained an advance copy of the new B.P. and, having thoroughly perused it, we thought it would be nice to hand a copy to the busy medical practitioner for an office reference. We accordingly secured a number of copies which have just arrived, and beg that you will accept one for your office with our compliments.

You will find on perusal that there are very many changes from the '85 edition, and that there is a very marked advance in Pharmacy. We have anticipated the wants of the medical profession from the new B.P. and are fairly well prepared to meet all demands; some of the preparations are, at present writing, on the ocean coming over to us, but will be here in a few days, others we have made or are in process of manufacture. We will be pleased to have you call and examine our dispensing stock, or any special preparations which you may desire and obtain a sample if you wish. Our aim is to be thoroughly up-to-date and in accord with the medical profession, and to aid them as far as it is in our power to do by putting the very best ingredients into the prescriptions strictly B.P. and U.S.P. when not in B.P.

When you desire anything urgently, we have special messengers which we despatch instantly; all prescriptions of an urgent nature are sent out by special messenger.

When you want to purchase any drugs or pharmaceuticals we will be pleased to quote you prices. We carry a very extensive stock of sundries, almost everything except surgical instruments.

All dispensing is done and checked by qualified chemists. As the Ontario Medical Council have not yet authorized the new B.P., we ask you to put '98 on prescriptions when desiring the new preparations.

Trusting the new B.P. will be a big advance on all previous editions,
We remain,

Yours truly,

THE T. EATON CO., LIMITED.

This seemed such a clear case of "bribery and corruption" that I wrote the company by return mail that I was unable to accept the book and therefore returned it.

I trust that this attempt to "capture the profession," by the free distribution of a job lot of books will have received its just deserts—the prompt return of the book by every member of the profession, long ere the next issue of your journal.

Yours,

GENERAL PRACTITIONER.

To the Editor of THE CANADIAN PRACTITIONER.

DEAR SIR,—I have the honor to forward to you a copy of an extract from the minutes of the thirteenth annual meeting of the International Conference of State and Provincial Boards of Health, of North America, held at Detroit August 10th and 11th, 1898. The matter referred to is one of such paramount importance that it has been deemed desirable to bring it to the attention of those charged with public education within Ontario, as well as those specially appointed to deal with public health matters.

Yours truly,

PETER H. BRYCE,
Secretary.

Toronto, Sept. 15th, 1898.

The chair appointed Drs. Bryce, Baker and Swarts a committee who, in due time, presented the following resolution, which was, on motion, adopted :

Whereas, It has been the unanimous voice of the International Conference of State and Provincial Boards of Health of North America, that since tuberculosis, which causes on this continent more deaths than all other contagious diseases together, is now recognized by all scientific and medical authorities as both curable and preventable ; and

Whereas, Since the onset of the disease depends especially upon hereditary weakness, and on malnutrition induced by over-crowding, bad ventilation, and over-pressure in school, social and commercial life ; and

Whereas, Since the continued presence in the homes of the poor and others of so many cases of this chronic disease means almost certain death to the patient, and probable infection to other members of the family, be it therefore

Resolved, That this Conference does publish, and instruct the Secretary to forward, copies of these resolutions to the Legislature, Departments of Education and Municipal Authorities of the several States and Provinces represented in the Conference, urging upon them the imperative need of:

(1) Having all schools and colleges placed under proper medical supervision with regard to ventilation, over-crowding and over-pressure in studies;

(2) Having all hotels, boarding-houses and work-shops where consumptives may be employed placed under municipal supervision and inspection;

(3) Urging all State and Provincial Legislatures to devote public funds, and to encourage private philanthropy, in the establishment of homes or sanatoria in one or more counties or districts of the several States and Provinces, to which tuberculized patients may be sent early, either at their own or municipal expense, and under proper regulations be encouraged to remain therein until recovery shall have taken place; while, at the same time, they shall have prevented the continuance of centres of infection in their homes.

Dr. C. A. Lindsay, Connecticut: I believe that this resolution should be in some way published at once. I do not think it should be held until published in the regular proceedings. I move that the Secretary prepare copies of this resolution at his early convenience and send them to every State and Provincial Board of Health that they may have opportunity to bring the matter before their Legislatures. Motion was seconded and carried.

Book Reviews.

SENN'S GENITO-URINARY TUBERCULOSIS. *Tuberculosis of the Genito-Urinary Apparatus, Male and Female.* By Nicholas Senn, M.D., Ph.D., LL.D., Professor of the Practice of Surgery and of Clinical Surgery, Rush Medical College, Chicago.

This work is one that every practitioner should make himself familiar with. The contents are so arranged that the whole field is covered, and the author has adopted a style that is more suitable to American and English readers, being more concise, than previous efforts of this distinguished author. The work embraces a vast amount of personal clinical experience, together with a very complete review of the opinions of the leading authorities on this subject from all parts of the world.

Dr. Senn has been able to collate the numerous essays and monographs on genito-urinary tuberculosis, and the resulting volume is an undoubted addition to medical literature. It is volumes like this that the profession require and should be appreciated by a liberal subscription. The book undoubtedly fills a niche, and authors who look for these unfilled spots and fill them with such a complete work as this deserve the thanks and support of the profession.

The typography, paper, and binding are excellent, and reflect credit on the publishers.

DISEASES OF THE NERVOUS SYSTEM: A Hand-Book for Students and Practitioners. By Chas. E. Beevor, M.D. Lond., F.R.C.P., Physician to the National Hospital for the Paralyzed and Epileptic, etc. With illustrations. H. K. Lewis, London, 1898. 10s. 6d.

This recent addition to Lewis's Practical Series will be welcome to students and practitioners. Its objects, as stated in the preface, are: "To enable students and practitioners to know how to examine patients suffering from diseases of the nervous system, and assist them to marshal their facts in definite order, and also to serve as an introduction to the study of the larger standard works on neurology."

Chapter I. is introductory. Chapter II. gives an outline of the anatomy and physiology of the nervous system. Chapter III. is devoted to case-taking. The author prefers the "physiological method," in which each system is taken separately and followed throughout. The motor and sensory systems are then taken up, and a table given of their

normal and abnormal actions. The chapter closes with a description of the general diagnosis of nervous diseases.

Chapter IV. deals entirely with modes of examination, and is a valuable guide to practice. Space does not permit us to follow Dr. Beevor through the body of the work, but his name is a guarantee of its worth. The condensation of a large subject into a small space is well done. The text is arranged so as to bring the salient points into prominence, and nothing new in pathology or treatment has escaped notice.

The collection of plates at the end of the book will be found very valuable as an aid to tracing the sites of lesions.

A SYSTEM OF PRACTICAL MEDICINE: By American authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York. In four imperial octavo volumes. Volume IV.—Diseases of the Nervous System and Mind; Vasomotor and Trophic Disorders; Diseases of the Muscles; Osteo-Malacia; Rachitis; Rheumatism; Arthritis; Gout; Lithæmia; Obesity; Scurvy; Addison's Disease. 1,099 pages, 95 engravings, and 8 full-page plates in colors and monochrome. For sale by subscription. Per volume, Cloth, \$5; Leather, \$6; Half Morocco, \$7. Lea Brothers & Co., Publishers, Philadelphia and New York, 1898.

The fourth volume opens with a comprehensive article on diseases of the peripheral nerves, by Frederick Finley, of Montreal. Then follows a series of articles on the diseases of the spinal cord, commencing with a really masterly monograph on "The diagnosis and localization of spinal-cord diseases," by M. Allen Starr, of New York. The new light thrown upon the nervous system by the researches of modern physiologists makes the careful study of such articles as this imperative if one would keep in touch with the rapid progress of medicine during the past few years. The diagrams are numerous and extremely useful. Starr also contributes the article on anterior poleo-myelitis. The other contributors to this section are Christian Herter and Edward D. Fisher, of New York, and D. D. Stewart, of Philadelphia. Herter also writes the article on diseases of the medulla and pons. The contributors on diseases of the brain are Eskridge, of Colorado, whose article on localization is useful; Francis T. Miles, of Baltimore; F. H. Dercum, the well-known neurologist of Philadelphia, and Edward Fisher.

The series on the functional nervous diseases is of more than average merit and includes articles on epilepsy, paralysis, agitans and tumors in general, by Peterson, of New York; infantile convulsions and eclampsia, by Edward Fisher; chorea and tetany, by Charles L. Dana; neuralgia and migraine, by W. H. Thompson; neurasthenia, by Putnam, of Boston; occupation neuroses, by Chas. K. Mills, of Philadelphia; traumatic neuroses, by Morton Prince, of Boston; sea-sickness, by W. Gilman Thompson; and hysteria and disorders of sleep, by Wharton Sinkler, of Philadelphia.

The general practitioner will find the series on "Disorders of the mind" extremely useful, and the names of the writers are sufficient guarantee of the excellence of the material. They include melancholia and dementia, by Pritchard, of New York; mania, by Willis E. Ford; paranoëa, by Noyes, of the Boston Insane Hospital; general paresis, by Laudon Carter Gray; idiocy and imbecility, by Pierce Bailey; and the sexual psychoses, by Morton Prince.

Our own James Stewart, of Montreal, is the author of an able article on vaso-motor and trophic disorders, which discusses such interesting diseases as acromegalia, Raynaud's disease, angio-neurotic œdema, facial hemiatrophy, scleroderma, and vertigo.

The article on diseases of the muscles is by Frederick Finley.

Finally come a number of miscellaneous subjects which defy classification, viz., osteomalacia, by Finley; rickets, by Jacobi; rheumatism, gonorrhœal arthritis, arthritis deformans, gout, lithæmia, obesity, and scurvy, by Gilman Thompson; and, last of all, Addison's disease, by Warren Coleman.

The fourth volume completes the work. We have discussed its value with several subscribers and all have expressed themselves as well pleased with their purchase. The writers have been chosen on account of their special knowledge of the subject treated, and we can turn to its pages with confidence that we shall there find the latest and best views.

AN AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN, including special chapters in essential surgical subjects: Orthopædics; Diseases of the Eye, Ear, Nose and Throat; Diseases of the Skin; and on the Diet, Hygiene and general management of children. By American Teachers. Edited by Louis Starr, M.D., late Clinical Professor of Diseases of Children in the University of Pennsylvania, etc., etc., assisted by Thompson S. Westcott, M.D., Instructor in Diseases of Children University of Pennsylvania, Member of the American Pediatric Society, etc., etc. Second edition, revised. Canadian agents, J. A. Carveth & Co., Toronto. Price \$8 cloth, \$9 sheep or half morocco.

This is a handsome volume of 1244 pages, produced in Saunders' best style. The text is illustrated by twenty-eight plates and innumerable cuts. There are sixty-five contributors, including many of the ablest physicians of the United States. There are over one hundred subjects discussed besides the specialties. Each subject is dealt with in a short, concise chapter, full enough for clinical purposes, but from which discursive matter has been carefully excluded. Nothing is omitted, yet everything is concise. The subject-matter is limited to practical points, such as etiology, symptomatology, diagnosis and treatment, including therapeutics, feeding and hygiene. The articles were all written about the same time, so that each one has the same freshness, and the book as a whole is thoroughly abreast with the rapid advancement in this branch of medical science.

New articles in the present edition are on "Modified Milk and Percentage Milk Mixtures," "Lithæmia" and on "Orthopædics." Many of

the other articles in the first edition have been rewritten and many others have been revised, including the articles on Infant Feeding, Diphtheria, Cretinism and Scurvy.

Dr. Blackadar, of Montreal, is the only Canadian writer. He writes on Gastric Catarrh and Ulcer; Osler writes on Tuberculosis, and Dillon Brown on Diphtheria. I am impelled to quote one of Dillon Brown's statements: "Clinically cases of follicular amygdalitis are frequently diagnosed as cases of catarrhal or purulent inflammation when they are really diphtheria. All such cases should be treated as true diphtheria and isolated until such time as the diagnosis can be made with certainty."

In the article on Diseases of the Pharynx and Naso-pharynx, the author—Castlebury of Chicago—distinguishes between an "infectious pseudo-membranous tonsillitis and a simple follicular tonsillitis." In the former the exudate proceeds from the crypts of the tonsil and spreads itself around the margin, covering an area of from two to four millimetres, whereas in the latter the exudate is of the nature of a cheesy pellet which cannot be dignified with the name of pseudo-membrane. The infectiousness of the former depends on different varieties of cocci. Thus the division of pseudo-diphtheria is omitted and the cases are called infectious pseudo-membranous tonsillitis. We believe this to be clinically a better method.

The reviewer has much pleasure in bearing testimony to the value of this book. He believes it to be one of the best, clinically speaking, of the books on pediatrics. The fact that it deals with some essentially surgical subjects makes it more valuable. These are diseases of the eye, ear, nose, skin and of the anus and rectum. Also circumcision, tracheotomy, intubation, venereal disease and other allied subjects.

Books received :

PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Third edition, enlarged and thoroughly revised. In one octavo volume of 615 pages, with 204 engravings and 13 full-page colored plates. Cloth, \$4.75 net. Lea Brothers & Co, Publishers Philadelphia and New York.

MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M.D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (sixth) edition. In one 8vo. volume of 532 pages, with 46 engravings and 8 colored plates, illustrating 64 of the most important chemical tests. Price, Cloth, \$3, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Medical Items.

Dr. Laphorn Smith, who has been studying in Europe during the summer, has returned to Montreal. Following the example of the European gynæcologists, he is forming a class (post graduate), limited to six practitioners, each course of demonstration lasting a month.

UNIVERSITY SENATE ELECTION.—The following are the results of the recent election. There were 1,301 ballots cast in arts: Prof. Alfred Baker, 1,118; Mr. Wm. Dale, 1,052; Hon. Sir Wm. R. Meredith, 1,033; Prof. Maurice Hutton, 966; Mr. A. B. Aylesworth, Q.C., 818; Mr. John King, Q.C., 794; Mr. J. L. McDougall, 779; Mr. Wm. Houston, 767; Rev. Prof. Ballantyne, 743; Prof. W. H. Ellis, 719; Prof. A. B. Macallum, 714; Mr. W. H. Ballard, 704. Elected. The other candidates were: Mr. J. H. Coyne, 684; Mr. W. H. Bunting, 683; Mr. Walter Barwick, 525; Mr. W. F. Maclean, M.P., 435. There were 919 ballots cast in medicine: Dr. Jas. E. Graham, 740; Dr. A. H. Wright, 699; Dr. W. H. B. Aikins, 528; Dr. I. H. Cameron, 505. Elected. The other candidate was Dr. James M. McCallum, 481. There were 181 ballots cast in law: Mr. W. R. Riddell, 127; Hon. Mr. Justice Street, 106. Elected. The other candidate was Mr. J. M. Clark, 93. The High School representatives were: Mr. J. Henderson, 246; Mr. H. I. Strang, 245. Elected. The other candidate was Mr. H. B. Spotton, 169. The Victoria representatives elected by acclamation were: Rev. A. H. Reynar, Mr. J. J. Maclaren, Q.C., Rev. Albert Carman, Mr. Henry Hough, Prof. A. R. Bain.

NAPOLEON AS SCHENCK'S PREDECESSOR.

Napoleon's opinion on the determination of sex was less prolix and more easily followed than the present theory of Dr. Schenck's, with which we are all familiar if we may judge from a letter dated August 31, 1806, addressed to the Princess Augusta, the wife of Prince Eugene. In this epistle the emperor advises his sister, who was then in an interesting condition, to take good care of herself, and adds: "Try not to have a daughter. I will give you a receipt to this end, but you may not believe in it; that is, drink water and wine daily." This receipt is simple and much easier to follow than Dr Schenck's. It appears, however, that it is either not infallible or else the princess did not follow it, for she had a girl.—*Le Nord Medical.*

Oct 1898

OBITUARY.

ANDREW FISHER, M.D.—Dr. Fisher, of Amherstburg, one of the oldest and most highly respected physicians of Western Ontario, died, September 28, after a short illness from pneumonia. He became a Licentiate of the Old Medical Board of Upper Canada in 1854, and received the degree of M.D. from the University of New York in 1855.

R. T. CORBETT, M.D.—Dr. R. T. Corbett, of Port Hope, was killed at Duck Harbor, near Port Hope, October 6, 1898. He went out in the afternoon of that day with a friend on a hunting expedition. It seems that he was on the railway track and, noticing an east-bound freight train, got out of the way. After it passed he went again on the track without looking in the opposite direction, and was struck by a west-bound train with the result that he was instantly killed. Dr. Corbett graduated in Trinity College, Toronto, in 1893, and, as a student, gave promise of future success. After completing his course he practised in Port Hope, and had already acquired a good reputation as a conscientious and skilled physician when death cut him off in such a sad way. He had been married only a few months before to Miss Mackie.

HAROLD HEBER HAWLEY, M.D.—Dr. Harold Hawley, of Trenton, was one of the brightest young physicians. He received his medical education in Trinity Medical College and received the degree of M.D. from Trinity University in 1885. In his undergraduate days he and his friend Logan were considered the best students in the school, and captured most of the prizes. At the final examinations Hawley won the Trinity Medical College Gold Medal, while Logan took the University Gold Medal. We deeply regret that we have to announce the death of Dr. Hawley, which occurred at Algonquin Park, October 4, after a short illness from pneumonia. After graduating Dr. Hawley practised for some years in Colborne and Trenton, and about one year ago went to Canoe Lake in Algonquin, where he acted as surgeon to the Gilmour Company, who had large mills at that place. The remains were brought to his home in Trenton and buried October 6. Our readers will probably remember that we announced the death of Dr. Logan a few years ago.