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EDITORIAL

THE ONTARIO MEDICAL ASSOCIATION.

This association has a long and honorable history. Until within the past few years it was an independent organization and held a meeting annually, and met where it chose and fixed its own time of meeting. Its work was entirely voluntary, as a member of the profession was free to attend any meeting, or drop out for a year or more without losing his membership. The association was for the good of those who could attend, and was managed along lines of marked freedom. This method worked well, as under it the Ontario Medical Association prospered to a very gratifying degree.

But a change came, and we feel now, as we felt when that change was effected, that it was a retrograde movement. At the Hamilton meeting five years ago a report was adopted that the Ontario Medical Association should join with the Dominion Medical Association, in such a way that when the latter organization met in Ontario the former should forego its meeting for that year. The affiliation was completed at the Toronto meeting in 1910.

The effect of this union has been adverse to the Ontario Medical Association, and in more ways than one. In the first place, one must keep up continuous membership to belong to the Canadian Medical Asiciation. In order to belong to the Ontario Medical Association he must pay his fee of $2 each year he attends the meeting. But to belong to the Ontario Medical Association, through the Canadian Medical Association, he must pay $5 a year This has had an injurious influence over the membership. Many will not pay this fee for the years they do not attend; and, as this puts them off the list ,they cease attending altogether. It may be said, however, that they receice the *Journal of the Canadian Medical Association.* But experience has proven that subscribers cannot be secured by any rule of compulsion, or vote of an association.

Another injurious feature of the union, so far as the Ontario Medical Association is concerned, is that at intervals it has to forego a meeting. The year when the Canadian Medical Association meets in Ontario there is no meeting of the provincial association. Interest to a very considerable extent is lost in it by this arrangement. If the Ontario Medical Association is to be a successful society it must meet every year. On this point there can be no two opinions. We fail to see why an association that was holding such successful meetings and doing so much good to the profession in Ontario should have that usefulness crippled in any way for the sake of another association that meets in this province only at intervals. When one takes into consideration the geography of Canada it is reasonable to suppose that the Canadian Medical Association will meet in Ontario once every four years. This is frequent enough to have a most disastrous effect on the Ontario Medical Association.

The financial arrangement is not such as to lead to harmony or success. If a practitioner in Ontario belongs to the Ontario Medical Association only, he pays to its funds a fee of $2. If he belongs to the Canadian Medical Association he pays a fee of $5, of which the sum of 50 cents is returned to the treasurer of the Ontario Medical Association. This association cannot do much on such a meagre income. If most of the members of the Ontario Medical Association should also belong to the Canadian Medical Association this arrangement might bankrupt the former.

We have no word to say against the Canadian Medical Association. It has done good work in its own sphere, and has been most loyally supported by the medical journals of Canada. While this is true, each society should stand or fall on its own merits. Let the Canadian Medical Association secure its membership in its own way, and conduct its business to suit itself. It is free to establish branches in the various Provinces, after the fashion of the British Medical Association; but this should not be done at the expense of the Ontario Medical Association, or the association of any other Province. The Canadian Medical Association had succeeded for nearly fifty years without any arrangement that handicapped the work of the associations of the various Provinces, and we do not think that such a state of affairs is now necessary. The best way to promote the welfare of the Canadian Medical Association is to have the associations of the various Provinces in the healthiest condition possible. The present arrangements do not make for these ideal conditions.

We take the ground that the Ontario Medical Association should separate from the Canadian Medical Association, and hold an annual meeting of the very best possible, and at such fee as may be found

requisite to defray its expenses. We urge this course as much for the weal of the national as we do for that of the provincial associations.

A VALUABLE PUBLIC OFFICER.

The Associated Press despatches of the 10th December contained some interesting reading regarding a meeting of the County Council, which met in Hamilton. Quoting from the *Mail and Empire* we find the following:

"The County Council met this afternoon and Councillor Collins provided the usual fireworks. His remarks arose out of a consideration of the reports on the House of Refuge. He condemned in unmeasured terms the action of Dr. Bruce Smith in transferring certain insane patients from the asylum to the county refuge.

" 'Give that man an inch and he'll take a mile.' scolded the councillor, who proceeded to rate the provincial inspector soundly. This was followed by a wholesale denunciation of county refuge management and hot exchanges passed between Collins and Warden Vance. A motion to adjourn was necessary in order to end the hostilities."

The foregoing should not be permitted to pass without some comment. We have watched the public career of Dr. Bruce Smith since he assumed his present office of Inspector of Hospitals and Charities. During the years that he has held this important and responsible position his reports have been models of clearness and usefulness. He has been a powerful stimulus urging the institutions under his jurisdiction to improve their accommodation; and as a result of these efforts the hospitals and charities of Ontario have been improved to such an extent that the account of the change reads like a fairy tale. It would be impossible to overestimate the work that has been accomplished by Dr. Bruce Smith in his official capacity.

BIRTHS, MARRIAGES AND DEATHS IN ONTARIO.

The forty-third annual report of the vital statistics of the Province of Ontario for the year ending 31st December, 1912, is to hand. With the growth of the Province this report is steadily growing. During the year 1912 there were recorded 58,870 births, 28,845 marriages ,and 32,150 deaths. To make the report uniform with that of some other countries, still births are excluded.

In 1912 the birth rate per 1,000 of the population was 22.4, and the death rate was 12.4. The total increase of births over the year 1911 was 2,774. There were 1,256 illegitimate births. The marriage ratio

was 11.1 per 1,000 of the population. Of all the marriages 93 per cent. were by license and 7 per cent. by the publication of banns.

The causes of death that ranked highest were: Organic heart disease, 8.4 per cent.; tuberculosis, 7 per cent.; cancer, 5.5 per cent.; pneumonia, 5 per cent.; infantile diarrhœa, 3.5 per cent.; diseases of the arteries, 3.5 per cent.; cerebral hæmorrhage, 3.2 per cent.; Bright's disease, 2.6 per cent., and paralysis, 1.7 per cent. There were 118 deaths among males to each 100 among females. The deaths due to external causes numbered 1,831, of which 78 per cent. were males and 22 per cent. females. Typhoid fever and tuberculosis showed a decrease over the previous year, but heart diseases and Bright's disease gave an increase. With regard to tuberculosis 49 per cent. were males and 51 per cent. females. Deaths from infectious diseases, such as diphtheria, typhoid fever, and tuberculosis, showed a decrease, but deaths from organic diseases, such as cancer, heart affections and Bright's disease, yielded an increase.

AN ADVANCE IN SURGERY.

The formation of the American College of Surgeons is a long step onwards in the direction of sound and scientific surgery on this continent. Surgery is a science and an art. The one who wishes to be a good surgeon must be a good physician. He must know the treatment of disease as it is taught by the best exponents of internal medicine.

But this is not all. The one who would be a good surgeon must study the art of surgery as practised by the best surgeons of the day. He must know *how* to do, as well as *why* he should do an operation for the relief of suffering or the cure of disease.

In the promotion of both of these aims there is a great future in store for the new College of Surgery, if it will only lay down a high ideal and honestly live up to it. If it will be made impossible for one to become a Fellow who is not sound in his science and accurate in his art, or who has any fault in his view of the ethics that govern the medical profession, then the College will wield a mighty influence for good.

The officers elected at the recent convention in Chicago are: Dr. Finney, president; Dr. Chipman, Montreal, 1st vice-president; Dr. Watson, New Orleans, 2nd vice-president; Dr. F. Martin, Chicago, general secretary, and Dr. Ochsner, Chicago, treasurer. The profession will expect much of these gentlemen. They all bear a high reputation now, and they must do nothing to impair the same.

Each Fellow will be required to make the following declaration: "I hereby promise upon my honor as a just man, that I will, so long as I am a Fellow of the American College of Surgeons, practise no division

of fees in any form, neither will I collect fees for others referring patients to me, nor will I permit them to collect my fees for me, nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me, nor will I utilize any man as an assistant as a subterfuge for this purpose."

This rule is splendid, but it remains to be seen how strictly it will be enforced. This is the *crux* of the matter: A good rule violated or not enforced is worse than no rule at all. The entire profession of America looks to this College as such a body as will see to it that its Fellows shall live up to all that is contained in the foregoing declaration. In all this the new College has our best wishes and enjoys our fullest confidence.

PSYCHOLOGY AND MEDICAL EDUCATION.

The American Psychological Association some time ago appointed a committee to investigate and report upon this important subject. A part of the report has been published, from which we take some valuable suggestions:

1. It is urged that in all medical schools there should be a fair share of attention given to the subject of psychology, so that practitioners would be able to detect all forms of mental aberration.

2. That there should be a course in psychology at an early stage of the student's studies to enable him to understand the patients' conditions, and at a later stage of his studies, after he has had clinical experience, a second course of instruction.

TUBERCULOSIS SUNDAY.

On November 30th in about one thousand churches throughout the Province of Ontario the subject of tuberculosis was discussed. This would have two results. In the first place it would spread much useful information among the people, and accentuate the need for care on the matter of infection. This phase of the subject cannot receive too much attention.

In the second place it would bring before the people the need for concerted action if ever the disease is to be brought under control. But to control such a disease there is a demand for money. These sermons could not but have the effect of waking up the public conscience to a more liberal frame of mind.

Those that are now infected in many instances must in due course succumb to their disease; but the great lesson is to so instruct the people that all will take proper measures to prevent the spread of the disease.

ORIGINAL CONTRIBUTIONS

PROSTATIC HYPERTROPHY: ITS DIAGNOSIS.

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By the term "prostatic hypertrophy" is understood a non-inflammatory enlargement of the prostate gland, which is more or less uniform in size. The time of life at which this enlargement usually makes its appearance is from fifty to seventy years of age; and the most serious complication, in fact, the condition which causes practically all the symptoms, is a marked impairment of the function of the bladder.

It is not a true hypertrophy, because even in the earliest stages the microscopical structure of the gland is altered. Nor is it a tumor, but rather an adenomatous growth of the fibrous variety, which spreads upward under the mucous membrane until it reaches the bladder. Two definite and distinct types of enlargement occur. In the one—a pseudo adenomatous gland—there is a marked increase in the glandular elements, while in the other there is a conspicuous increase in the stroma of the organ. These two conditions may occur independently of each other, or they may co-exist in the same organ.

The hypertrophied prostate sometimes reaches an enormous size. Any gland weighing over six drachms may be considered abnormally large, though not necessarily causing any symptoms whatever. A gland as small as eight, or even six drachms may be the cause of retention of several ounces of urine, while one weighing even many times as much may be productive of but very mild symptoms. The size and weight of the organ depends materially on the amount of fibrous tissue present. The more fibrous tissue the greater the weight, though the size may not necessarily be correspondingly increased.

The greatest enlargement invariably takes place in the antero-posterior direction, and while neither lateral lobe is found to be constantly larger than the other, yet it is uncommon to find them of equal size. Even in the cases of greatest hypertrophy there is but seldom any enlargement of the so-called middle lobe; when such a projection does occur, it will usually be found to have its attachment to one or other of the two lateral lobes.

Next in importance to the size and weight of an enlarged prostate is a consideration of the density. The greater the amount of fibrous tissue present the greater will be the density—so much so that, in some instances, the gland will appear to have almost the consistency of leather. From this extreme it will vary all the way to the softness of a

sponge. The two extremes may be classified as the fibrous and adenomatous classes, while between these will be found cases with all degrees of hardness. The rate of growth is a variable quantity. The entire gland may increase symmetrically in size, or one individual part may become enormously hypertrophied entirely at the expense of another. The adenomatous form increases most rapidly, while the fibrous—though slower in growth—yet produces symptoms of a serious nature at a much earlier period in the disease than the adenomatous variety.

Section of the enlarged prostate shows microscopically but an unorganized mass of glandular tissue without ducts and without arrangement. This may occur in either lobe singly, but more commonly it is found in both combined. Apart from this it may sometimes have its origin in one of the detached glands in the sub-mucous layer of the urethra. From whatever may be the original focus, it spreads along the line of least resistance, which is upwards toward the bladder.

The physical appearance of the hypertrophied prostate will depend entirely on the relative amount of fibrous and glandular tissue. Where the glandular tissue predominates, the growth is likely to be rapid and may attain an enormous size. In consistence it is likely to be soft and elastic. Should the fibrous tissue predominate, the growth will be much more slow, the gland will be hard and nodular, and the resistance to the passage of urine will be great.

Acute retention of urine is, in most instances, due to congestion of the mucous membrane around the neck of the bladder. This only occurs when other conditions than simple fibro-adenoma are present. In these cases the enlargement is complicated by venous congestion and septic inflammation of the bladder, which extends into the urethra and which is co-existent with thickening of the urethral mucous membrane, with thrombosis, and many times with extravasation of blood.

Prostatic tumors, so-called, so long erroneously believed to be analogous with uterine fibroids, are caused by one part increasing in size more rapidly than those around it. They vary greatly in size, and on a small scale are present in nearly every case of hypertrophy. They may occur in any portion of the gland, and may be isolated or grouped together in bunches. These adenomatous masses appear to be constantly under pressure, as shown by the fact that, when cut across, they protrude beyond the level of the surrounding surface.

The walls of the blood-vessels traversing the prostate are invariably altered as a result of the glandular hypertrophy, the main change being a fibrous thickening of the intima and the media. This change in the blood-vessels has frequently been noted also in the kidney.

The urethra is always affected in enlargement of the prostate, and its length is probably always increased. In the lower part of the pros-

tatic urethra, the shape is influenced by the enlargement of the two lateral lobes; by them it is compressed from one side to the other, which frequently compress it so tightly as to present great difficulty in passing a catheter. Any increase in the upper part of the lobes has but very little effect on the urethra, as the bulging is invariably upward.

The frequency with which the different portions of the prostate are affected would be very difficult indeed to determine, as specimens kept for museum purposes are invariably retained because there is something unusual about them. It will be found, however, that in the majority of cases all parts of the gland are affected more or less.

The changes in the bladder due to enlargement of the prostate are vitally important. In all cases where the symptoms are at all severe, a post-prostatic pouch is formed. This is the result of a combination, the elevation of the urethral orifice and the depression of the vesical floor. There is no doubt but this pouch is a much more frequent cause of residual urine than the blocking of the urethra by a pedunculated middle lobe. In voiding urine the floor of the bladder is the last part to be emptied, and as the urethral orifice is elevated beyond its normal position, considerable strain is exercised to effect its complete evacuation. As the floor is the weakest part of the viscus, it naturally becomes more depressed with each effort to empty itself, until finally this pouch is formed and sometimes attains a very considerable size.

The effect on the bladder walls is more or less constant. First, on account of the increased work thrown on them in their efforts to empty the viscus, the muscular layer becomes hypertrophied; this, in turn, is followed by dilatation and atony. If by this time the obstruction to the urinary flow is not relieved, chronic retention is liable to occur, and, as the viscal walls continue to dilate, the amount of residual urine becomes in some instances enormous. This is the one extreme. The other is when the walls do not dilate at all, but instead become thickened and corrugated, sometimes contracting so much as to allow of only an ounce or two of urine in the bladder at a time.

Cystitis is an almost invariable accompaniment in all cases of long-standing prostatic hypertrophy. Catarrh of the bladder is a frequent diagnosis, and this is emphasized by the presence of a thick, stringy mucous, which is evacuated with the urine. The mucous membrane is congested and not infrequently ulcerated. Cystoscopic examination shows the veins standing out prominently on the surface, and as a result of their turgidity, hæmaturia frequently developes directly the urinary presence is relieved.

If prostatic hypertrophy with residual urine has remained for any considerable length of time, the kidneys and ureters cannot escape involvement. In the normal condition the ureters pass obliquely through

the bladder wall, traversing from one-quarter to one-third of an inch through the vesical coats. This acts as a valve and allows the urine to pass into the bladder in spurts or driblets. When, on the other hand, residual urine is present, it distends the bladder walls and thus compresses the valve openings, consequently making it very difficult for the urine to be expelled from the ureter. When in cases of extreme distention the wall is over-stretched, the valve disappears altogether, and the ureter becomes constantly continuous with the bladder. These are the cases in which dilatation of the ureter supervenes from constant back pressure of the residual urine.

This condition carried further, results in urine being dammed back into the pelvis of the kidney, which alone may be the cause of renal circulatory changes, and of even fibrous overgrowth in the kidney. Should any infection occur when the orifices of the ureters are patent, pyonephrosis is liable to become a speedy complication.

In the urine the effects of prostatic enlargement are marked. It becomes rapidly alkaline, and is a not infrequent cause of cystitis. Another result of its alkalinity is the formation of oxalate of lime calculi, a condition which is present in as many as one in five prostatic cases. On the development of chronic cystitis the usual characteristic symptoms appear—ammoniacal decomposition, pus, blood, shreds of mucous, and even the colon bacillus, staphylococci or streptococci.

A not infrequent accompaniment of prostatic hypertrophy is hemorrhoids, and sometimes even prolapse of the rectum. The hemorrhoids especially are in many cases directly due to the enlargement. Venous engorgement around the neck of the bladder, when chronic or even frequently occuring, soon leads to a varicose condition in the prostatic plexus. This causes the blood to regurgitate through the communicating branches, and since no relief to the venous obstruction can be obtained, hemorrhoids develop.

The etiology of prostatic hypertrophy is as yet but little known, though several conditions are believed to be instrumental in its causation; among the more important of these may be considered *age* and *previous diseases*. While heretofore it has been universally believed that the prostate gave no appreciable trouble under fifty years of age, yet it has of late been abundantly proven that this is not necessarily the case. While it is extremely rare to find acute symptoms in one under this age, there are on record instances of operation at forty-nine, at forty-eight, at forty-one, and one at thirty-six. The age at which the prostate commences to enlarge, and the age at which it commences to produce symptoms may be separated by many years. McGuire believed that in most cases of enlargement, the beginning preceded the

age of fifty by many years, but that the symptoms did not appear until sterile changes commenced to occur in the urinary tract as well as the rest of the body.

In a careful history of all prostatics, some evidence of previous disease is almost invariably obtainable, and the most prevalent of all is inflammation. Inflammatory changes may be due to several causes, but the most common is gonorrhœa. A venereal history is readily obtainable in at least a majority of cases coming to operation, and in many of the others it is not positively denied. Inflammatory changes other than venereal, however, play an important part in the etiology of prostatic enlargement. Repeated attacks of congestion in the prostate itself—or even in the prostatic urethra—in conjunction with catarrhal exudation so prevalent in this region, may be sufficient cause in many cases.

In many cases of prostatic enlargement a stricture is present, and by some authors is thought to be a predisposing cause. In any case, inflammatory changes, be they due to whatever cause they may, are considered as of primary importance in its etiology.

Symptoms and Diagnosis—The majority of patients with hypertrophy of the prostate gland present no symptoms whatever of their malady. These men may even live to advanced old age without ever suffering the slightest inconvenience or presenting the faintest symptom which would call their attention to the fact that all was not right with the urinary tract. In these cases there is no pain because of the extremely slow stretching in malignant disease, or even inflammatory hyperthrophy. In these cases the obstruction is not so great, but it may be overcome by compensation in the bladder. In fact, the growth may be so situated as to cause no obstruction at all. On account of the absence of straining there is no congestion of the mucous membrane around the neck of the bladder, and consequently no irritability of the bladder itself. Deaver is authority for the statement that only about one person in every seven who has an enlarged prostate suffers from it to an appreciable extent, and even among this number there are many who are unaware of their condition—so insidiously do the symptoms develop—until acute retention of urine reveals the fact that the cause lies in an enlargement of the prostate. In some of these cases, too, the attention of the patient may be first arrested by dribbling of urine, wetting the clothes by day and the bed-clothes by night; when examination will reveal the fact that this is not incontinuence, but rather an overflow, and the cause an hypertrophied prostate gland. In others, the symptoms, while mild, and causing but the slightest inconvenience, may yet be present from the first; and thus the patient may, from the very commencement of the disease, be aware that all is not right, and

may even have serious forebodings for the future. Be this as it may, the fact remains that it is only the minority of patients so afflicted who present symptoms of so serious a nature as to compel them to apply for relief.

Of this very small minority who present symptoms from the commencement of the disease, some suffer from mechanical obstruction at the neck of the bladder due to the growth in the glandular substance, or in some cases it may be simply an alteration in the shape of the gland, but sufficient to cause swelling of the mucous membrane, and consequent hyperæsthesia resulting from the inflamed mucous membrane thus produced; and yet again others may be the victim of a combination of the former two conditions.

In all cases the first symptom to be observed by the patient is some change in the urinary function, usually an increased frequency of urination.

This frequency is present throughout the entire twenty-four hours, and the attention of the patient is first called to it by having to arise once or more during the night—a condition which heretofore, has been entirely foreign to him. Having thus had his attention drawn to this increased frequency at night, he soon discovers that the same condition holds good during the day; and if he is a comparatively young man, he will almost invariably seek advice from his medical adviser, but if he is somewhat advanced in years, he will usually accept it as a sign of advanced old age, and accept silently what appears to him as the inevitable, because the idea is very prevalent among the entire laity that such is the case in all old men.

Frequency of Urination may, therefore, be considered as the first definite symptom of prostatic hypertrophy, and may be present as the result of either one of three causes:

1 Because the mechanical irritation around the neck of the bladder produces a congestion of the mucous membrane, and by thus rendering the bladder much more sensitive to the presence of urine, demands more frequent emptying.

2 Prostatic hypertrophy is frequently the cause of changes in the quality of the urine, making it much more irritating, and the consequent increased demand for its expulsion.

3 It is a well-known fact that residual urine always lessens the capacity of the bladder, hence of necessity it must be more frequently emptied.

This increased frequency of micturition begins very early in the disease, usually before there is really any residual urine, and at this stage is consequently not due to this cause as is usually taught, but rather to the increased irritability of the mucous membrane at the neck

of the bladder due to its congested condition. This congestion may not be limited to the neck of the bladder, but may continue throughout the first portion of the urethra. With the exception of this part of the bladder, the rest of the viscus is comparatively insensitive, and the stimuli which excite micturition are believed to originate in this portion.

Marked frequency of urination in the early stages of the disease would therefore indicate the presence in the neck of the bladder of the projecting growth, and until such times as the whole of the lower mucous membrane becomes involved in the congestion so certain to follow in these cases, the increased frequency would be due entirely to this cause. As soon, however, as the congestion commences to spread wide in the mucous membrane, urination is instigated by the merest contact of the urine with the congested part, and the frequency may become so marked as to be almost incessant, and may represent a more or less continuous dribbling. The pain in these cases is extreme, and the suffering almost incessant.

In some instances a minute ulcer is present between the congested folds of mucous membrane, and its presence almost invariably causes the most intense suffering known to patients who are the victims of prostatic enlargement. This ulcer may be the means of exposing some nerve endings, and consequently as fast as the urine is secreted it finds its way to this part, the merest contact with which causes an intense desire to urinate. As there are only a few drops to be ejected this act becomes almost continuous, the pain and tenesmus on the completion of each urination, but a few minutes apart, being worse if possible than at its commencement. These are the cases which rapidly wear out the strength of the patient, and unless relief is early obtained, are liable to terminate fatally from pure exhaustion.

An unimportant factor in causing frequency of micturition is the fact that in many cases of prostatic enlargement, the actual quantity of urine secreted in the twenty-four hours is larger than usual, this increase being due to renal degeneration. This has, however, but a remote bearing on the causation of such frequency.

The belief in the common fallacy that urination occurs more frequently at night than during the day, is founded only on the fact that the risings at night are the more easily impressed upon the mind of the patient. So long as there is no difficulty in starting the stream, or no pain occasioned thereby, the act of micturition in the day-time passes unnoticed, but when one has to rise from his sleep for the same purpose there is a distinct tendency to impress the act upon his mind, and it is only the nocturnal urinations which he remembers. Careful inquiry will, however, usually elicit the fact that the daily urinations have been much more frequent than he really realized.

The time when urination is most frequent is in the early hours of the morning. Sleep may possibly be a strong factor in producing this apparent phenomenon. The bladder is usually emptied the last thing before retiring, and the patient at once passes into a refreshing sleep. The pain and distention does not become enough to waken him until he has slept for some hours, and consequently on awakening, his bladder is fuller than usual on account of the length of time which has passed since the last urination. By this time the distention has become great enough to waken him; the elapsed interval is much greater than during the day, and in consequence the bladder is stretched much beyond its accustomed point. This, by rendering the muscular coat tired, is the cause of the more frequent risings between this time and morning. Had the first interval not been so long, the succeeding ones would be somewhat longer.

In contradistinction to ordinary increased frequency must be distinguished the somewhat uncommon occurrence of intermittent micturition, or a sudden and complete stoppage without previous slackening. This condition can only occur when the prostatic outgrowth is in such a position that it can close the urethral passage like a valve. The hypertrophied portion may be confined to the prostatic urethra, or it may project into the urethra from either one or other of the prostatic lobes, but it must be in such a position so that, by a ball-valve action, it can suddenly and completely block the urethral opening. This sudden blocking of the vesical outlet is occasioned only by such an outgrowth, and in the presence of a forceful contraction of the bladder walls thus tightly forcing it into the urethra, or by the presence of a calculus. In either instance, the stream can be continued only after the straining has ceased and the obstruction is thus allowed to float backward.

Difficulty in starting the stream, decrease in force, and *dribbling at the end of micturition,* are three of the earliest symptoms to appear. The difficulty in commencing the act of micturition is due in the main to increased obstruction on the one hand, and a decided decrease in expulsive power on the other. The lack of expulsive power is occasioned by a complete alteration of the relationship of the structures forming the neck of the bladder. Instead of relaxing and becoming funnel-shaped, as in normal health, the neck of the bladder becomes rigid, the longitudinal fibres cannot contract, and as a consequence the prostatic urethra cannot dilate and form a portion of the bladder. Instead, then, of being filled with urine ready to pass away, the first portion of the urethra is contracted and has to be filled slowly by force from above. This sometimes takes considerable time, hence the delay and difficulty in starting the stream.

This delay in commencing the act of micturition is almost invari-

ably accompanied by a marked decrease in the force of the stream, and is therefore one of the earliest of the symptoms of prostatic hypertrophy. Instead of the usual curve on leaving the meatus, the stream drops vertically down, and no amount of effort is in the least effectual in making it otherwise; indeed, in some instances, straining serves only to check the stream altogether by producing contraction around the orifice. Unless complicated by stricture, the stream, when started, is of equal size to that in normal health, and yet, in spite of the fact that some residual urine always remains in the bladder, and the intervals between micturition are much shorter than normal, the fact remains that a longer time than usual is required to pass the urine.

The third of this trio of symptoms is found at the end of micturition when the urine involuntarily dribbles away, and is the first symptom of the commencing failure of the bladder, the impaired contractility of which is always present. It is the first indication to show that the bladder has already failed to force forward into the membraneous and bulbous urethra the last quantity of urine, and consequently the voluntary muscles have nothing to contract upon. The fault, therefore, does not lie with the voluntary muscles which remain unimpaired, but rather with the bladder itself.

One of the first pathological conditions produced by enlargement of the prostate, though the patient may be entirely unaware of it, is the presence in the bladder of *residual urine.* In practically all cases of prostatic enlargement, the bladder, as a result of the obstruction at its neck, early fails to completely empty itself; and, as a result, there is always a certain amount of urine remaining in the viscus—an amount greatly determined by the amount of obstruction. The amount of residual urine may very from a few drops to many ounces; and may even vary from day to day—being influenced in a minor degree by certain emotions, such as nervousness, etc.—but withal the tendency is for the quantity to increase as time goes by, and the prostate gradually increases in size.

As has been already mentioned, the patient is rarely aware of its presence, and is very much surprised when, after (as he thinks) he has completely emptied his bladder, a catheter reveals the presence of urine still left behind. The diagnosis is thus easily made, and catheterization should invariably be carried out as a routine procedure in all cases of suspected prostatic trouble. In cases of extreme retention, however, great care should be exercised in catheterization, as, after a long period of marked retention, the sudden relief obtained by the catheter will sometimes by suddenly relieving the back pressure from the kidney, produce an acute nephritis, or even renal apoplexy. This is especially true in cases of long-standing chronic nephritis. A correct estimate of

the amount of residual urine can never be obtained by one catheterization, but can only be made after several such measurements. Various conditions are liable to vary the amount of urine thus obtained, but an average may be readily arrived at.

Residual urine sooner or later becomes contaminated, not from its mere presence in the bladder, but usually by infection from without. The use of the catheter is the most potent cause of the cystitis so certain to develop in the majority of cases of marked hypertrophy. The catheter introduces infection, the mucous membrane is congested, and consequently pus and debris are deposited within the bladder. This being heavier than the urine, it settles in the most dependent portion; in these cases the post-prostatic pouch, and cystitis is rapidly developed.

If urination was frequent before the advent of cystitis, the presence of this inflammation now makes it much more so, and the relief experienced by evacuation is much less than before contamination. Tenesmus is marked, and the suffering now becomes almost intolerable. A complete urinalysis will almost invariably reveal the presence of mixed infection with mucous, pus, and blood all present.

Retention of urine presents itself to the patient as a symptom only when it becomes acute. This is usually caused by excessive congestion in the neck of the bladder, and the first warning a patient may have of his condition is sometimes the sudden and acute retention which follows. More often, however, he will remember that heretofore the urine had not passed naturally—that there had been delay in starting the stream, that there had been lack of force or some of the other symptoms already described. He may never have noticed them before, or, having noticed them, were banished from his mind as a matter of no importance until acute retention developed.

It is quite possible, and frequently happens, that acute retention develops without the slightest previous warning; and, after relief by catheter, months or even years may pass without recurrence, and in some instances may never appear again. Whatever may be the subsidiary cause, the immediate and direct cause of acute retention is one of three things—failure in expulsive power, increase in resistance, or a combination of both.

The most common cause of the three is *sudden increase in resistance.* The mucous membrane around the neck of the bladder is congested, and suddenly by some exciting cause it becomes much more swollen, when, by the aid of the prostatic outgrowth, it succeeds in effectually blocking the opening into the urethra. This sudden increase in resistance may be, and usually is, caused by some such inflammatory action as that produced by the irritating condition of the urine or sudden exposure to cold, though not infrequently it is depend-

ent upon some such cause as obstruction to the venous circulation in the neck of the bladder. In still other cases the first attention of the patient may be drawn to the fact that a little urine is constantly coming away, when examination will reveal the pathology of the condition to be due to prostatic enlargement, and the constant dribbling merely an overflow. In these cases there is frequently no pain because there is no cystitis, and no cystitis because a catheter has never been used. The bladder on becoming fully distended and being unable to empty itself completely, finds relief only in proportion to the amount of urine entering by the ureters. As each few drops of urine is secreted by the kidneys and finds its way to the bladder, an equal amount is forced into the urethra and thus escapes, producing as it were a continuous overflow. This condition is noticed first at night, but later as the contractility of the bladder becomes more impaired it becomes pronounced in the daytime—especially during any exertion producing contraction of the abdominal muscles.

Incontinence of Urine, a condition sometimes mistaken for that just described, is one of the most infrequent symptoms of enlargement of the prostate. In the presence of true incontinence, the catheter will reveal an empty bladder. When incontinence is present, its cause is likely to be found in the inability of the voluntary sphincter to contract properly, because of some minute outgrowth of the prostate, which is so placed as to keep constantly open the vesical end of the urethra.

Haematuria is met with in a small percentage of cases. Some of the most constant causes of blood in the urine are:

1 Even the most gentle ure of the catheter will in some cases produce a considerable amount of bleeding.

2 Varicose veins in the prostatic urethra or the neck of the bladder, and their spontaneous rupture is a not infrequent cause of the blood which is present.

3 Ulceration is sometimes present, and is due in part, at least, to over-active congestion, to prolonged cystitis, or to calculus. Ulceration will invariably result in at least some blood in the urine. The bleeding point may be sometimes inferred with a fair amount of accuracy by the character of the bleeding. For instance, if bloody urine is being passed, that is a more or less perfect admixture of blood and urine, the inference is that the blood is coming from some point in the prostatic urethra or the neck of the bladder. If, after great straining, only a few drops of blood appear, it is a reasonable certainty that there has been a rupture of some congested veins somewhere around the neck of the bladder. In cases of blood collecting

in the post-prostatic pouch, it will usually flow only on the completion of micturition.

Whether sexual power is really impaired to any great extent by prostatic enlargement is as yet a moot question. It is a well-known fact that prostatic fluid is essential to the life of the spermatozoa, and in those cases where the gland is enlarged uniformly, it is difficult to see how the function could be successfully carried out. In the early stages of prostatic disease, many instances are known of painful intercourse, the pain being usually most severe after the orgasm, and in practically all cases of advanced disease in the prostate, sexual power is lost. It remains, however, yet to be learned whether prostatic hypertrophy, except in the final stages, has any direct effect upon the procreative powers.

The prostate increases in size very slowly, and consequently there is never any pain associated with its growth. When pain is present there is invariably some associated complication, such as inflammation or congestion of the mucous membrane. According to the severity of the complication, pain may vary from a slight aching in the perineum to an intense and intolerable agony, involving any or all the branches of the sacral plexus. The suffering most commonly complained of is an intense burning sensation around the neck of the bladder, associated with pain in varying degrees of intensity at the end of the penis.

Many patients complain of a sense of fulness in the rectum, as though there was a mass there which they could not pass. In these cases, examination reveals a prostate enlarged toward the rectum, and sometimes making a very considerable obstruction to the passage of fecal matter. The patient is continually desiring to go to stool and invariably accomplishes no result. Arising from constant straining such as this, will frequently develop a congestion or inflammatory condition of the mucous membrane of the rectum, which is the forerunner of hemorrhoids—or, in more severe cases, prolapse of the rectum itself. These are the cases in which the sense of weight and fulness in the perineum are the greatest.

If no catheter has been in use, urinary changes occur slowly, the most important being a diminution in the specific gravity with an increase in the quantity. This is due in the main to fibroid induration of the kidneys, the result of back pressure from an over-distended bladder. In cases where a catheter has been much in use, this condition is not to be found because of the absence of urinary back pressure. Another contributing cause to a lowering specific gravity is to be found in persistent renal hyperæmia occasioned through constant irritation reflexly transmitted from the acutely congested mucous membrane around the neck of the bladder. Albumen is sometimes, though infre-

quently, present before contamination takes place through the introduction of the catheter, but it is surprising how rapidly albumen may appear when once a catheter has been passed and all the residual urine drawn off.

With the exception of a lowering of the specific gravity, the urine, in the absence of any complication ,undergoes but little change. With the first introduction of the catheter, however, it is surprising to note how rapidly changes may occur. The residual urine is removed, the back pressure on the kidneys is relieved, and in many cases, either from some slight damage by the catheter itself, or from the spontaneous rupture of one of the congested veins at the neck of the bladder, free bleeding may occur. Urinary changes are now rapid. Septic organisms which heretofore have been harmless, find in this admixture of blood and residual urine an excellent culture medium. From this an acute inflammatory condition is set up, involving in turn the mucous membrane of the bladder, then the ureters, then the pelvis of the kidney. Detached epithelium, pus, blood and albumen appear in rapid succession; the odor is offensive and the urine rapidly becomes alkaline.

The condition of the general health is by this time commencing to show signs of being undermined. This is not the result of enlargement of the prostate in itself, but rather from the secondary changes it produces in other organs, such as the bladder, the kidneys or the heart. Evidences of failing health, and of early and somewhat premature old age, commence to appear as micturition becomes more frequent, and a greater strain is thrown back upon the kidneys. Loss of weight is a common symptom, the appetite is poor and the general health fails gradually. The patient is frequently unable to state, especially in the early stages, just what he really does complain of, so general and insidious do the symptoms appear.

All this is changed, however, the instant acute congestion attacks the neck of the bladder. Increased congestion means an increase in residual urine; residual urine with infection results in retrograde pyelitis, which, in turn, rapidly develops into a nephritis—either acute or chronic. Such impairment of the kidneys frequently manifests itself not only in increased frequency of urination, but also in a markedly increased quantity. These are the cases in which acute retention rapidly develops into uraemia. Even although acute retention does not occur, the quantity of urine thus remaining in the bladder may gradually increase to such an extent as to become almost retention, that voided being practically an overflow. In this condition there is a constant dribbling to a greater or less degree. The residual urine rapidly becomes alkaline, and a chronic cystitis exists. The general health is slowly undermined, hydronephrosis frequently occurs, and in many in-

stances, as a result of the retention in the blood of toxic materials which should have been eliminated by the kidneys, uraemia, the final scene, is ushered in.

Although the *subjective* symptoms may be definite, and the conclusions drawn from them may be unmistakable, yet in every instance the *objective* symptoms obtained from a complete physical examination should invariably be obtained to corroborate the conclusions at which we may have already arrived when the symptoms from these two viewpoints are collected, and not much difficulty should be experienced in arriving at a correct diagnosis. More than one examination, however, is occasionally required in order to determine the extent of the trouble caused by the growth itself, and that produced by the congestion or cystitis so liable to be present, for it must be remembered that many conditions other than prostatic overgrowth may be the direct cause of these complications. I have never known a patient to apply for relief when the only symptom was frequent urination, and therefore at a time previous to the appearance of complications; but, on the other hand, many old men having been taught by a neighbor its use, will use a catheter for months or even years, and will only consult their physisian when the pain from the ensuing cystitis becomes unbearable, or when perchance, acute retention should supervene.

Since all prostatic cases suffer from more or less urinary retention, and since at least a fair percentage of them have not been in the habit of employing a catheter, the first objective symptom to search for is a distended bladder presenting above the pubes. Should such a distention of the bladder be discovered, *never introduce a catheter and hastily evacuate the contents.* I have known more than one instance where death followed such a procedure. In these cases of chronic retention with overflow, the urine is backed up into the ureters, and its sudden evacuation is liable to produce acute renal congestion. One case of this kind which came under my observation ,died on the seventh day from uraemia. Where such a condition is found, repeated catheterization should be made with about three hours interval, each time emptying the bladder a little more until finally, in from two to three days, the bladder is completely emptied, and may now be kept so by catheterizations as often as may be necessary. Should the trouble for which the patient consulted his physician be due to either simple cystitis or congestion, it will now, by judicious catheterizations and irrigations with warm boric acid lotions or a weak solution of nitrate of silver, rapidly disappear; while, on the other hand, should the prostate be the seat of the trouble, it will remain constant and permanent.

In cases of chronic retention, such as this, and much more so in cases of acute retention, no radical operation should ever be performed

—and not until after the bladder has somewhat recovered its normal tone can any definite opinion on the prostate itself be expressed.

The amount of information which may be gleaned by observing a patient pass water is astonishing. The difficulty in commencing the stream, the size of the stream itself, its apparent force, the regularity of the stream, showing whether any interruptions occur, and whether urination is concluded in the normal manner or by the latter portion of the stream dribbling perpendicularly down with no apparent control, are all points of the greatest value bearing on the case. From the urine itself much may be learned. If the quantity passed should be measured, and the time since last urination learned, an approximate idea of the amount passed in the twenty-four hours may be arrived at. A patient thus passing from forty to fifty ounces in this specified time has probably no kidney lesion, or, if so, it has probably not got beyond repair.

Should there be no retention with overflow, a catheter should invariably be passed in order to learn the amount of residual urine and as an aid in palpation of the prostate itself. The prone position I find to be the most convenient for these manipulations. If the prostate is very large, not one, but several, catheters may have to be resorted to before finally reaching the bladder. In some cases a small quantity of a one per cent. solution of cocaine will add considerably to the ease with which this examination is effected, while occasionally it may be even necessary to administer a general anæsthetic. Especial care must be exercised to guard against shock or exposure to cold, and in all cases it is well to keep the patient in bed for at least some hours after the examination is completed. In the absence of a purge given the evening before, a high simple enema will evacuate the lower bowel and make the examination much more satisfactory. Too much caution cannot be exercised in obtaining the strictest asepsis in an examination of this kind, because infection carried into a bladder such as this means untold misery and suffering to the patient.

The bladder having been entered, the absence of strictures noted, and the residual urine drawn off and measured, the first point of interest to observe is the length of the urethra. A graduated metal catheter, which is also used as a sound, will show exactly at what distance from the meatus the urine commences to flow. The mistake must not be made of thinking the bladder has been entered the instant a few drops of urine are obtained, for the prostatic urethra is frequently enlarged sufficiently to hold from one or two ounces. The diagnostic points learned from the passage of the catheter may be enumerated as follows:

1 Residual urine favors prostatic hypertrophy.

2 If the urethra measures more than eight inches in length, it is strong presumptive evidence in favor of enlargement of the prostate.

3 If the vesical orifice of the urethra is raised, as demonstrated by the fact that the shaft of the catheter must needs be greatly depressed between the legs of the patient before urine begins to flow, prostatic enlargement is evident.

4 As the catheter passes through the prostatic urethra, hypertrophy will cause it to deviate to the right or left, according to the direction of the growth. In the presence of enlargement, it is rarely possible to pass a metal catheter without deviation to one side or the other.

5 Strictures are never present in the prostatic urethra; so that if an obstruction is encountered more than seven inches from the meatus, it may be reliably presumed to be hypertrophy.

6 With the catheter in the bladder, the residual urine will flow freely if there is no atony of the viscus, but in cases of long standing hypertrophy with chronic retention and overflow, atony of the bladder may be so marked as to necessitate abdominal pressure from the hand of the physician above the pubes.

7 By means of the catheter also a fairly accurate idea of the condition of the bladder walls—whether dilated or contracted—may be obtained. After withdrawing the residual urine, several ounces of warm boracic acid solution should be introduced into the bladder, the amount of resistance indicating the condition of the walls.

Rectal examination alone, after the bladder has been emptied, will frequently reveal considerable information. With the patient on his back and the forefinger of the right hand in the rectum, the posterior surface of the gland may be accurately mapped out. By placing the left hand over the pubes and pressing firmly, the prostate, especially in thin patients, may be easily palpated, and its size and density adjudged. The degree of projection into the bladder may, in this way, be fairly well ascertained.

In general enlargement of the prostate ,the posterior or rectal surface is uniform; when either lobe is hypertrophied more than the other, the inequality is easily detected. Rectal palpation in simple hypertrophy should cause no pain. Pain and discomfort on pressure would indicate congestion or inflammatory changes. In cases of marked congestion or inflammation of the gland itself, the rectal sphincter is frequently found in a state of spasm. In spite of the information it may sometimes give, rectal examination will often reveal a prostate appar-

ently normal in size when its anterior enlargement may be enormous, which tends to substantiate that which has been frequently pointed out, that the direction in which prostatic overgrowth gives trouble is vesical and urethral, and not toward the rectum.

Combined examination with the finger in the rectum and metal catheter or sound in the bladder (bimanual, as it were) will reveal the greatest amount of accurate information. To do this it is most convenient to have the patient flat on his back, with his knees drawn up; stand on his left side, pass the index finger of the left hand into the rectum, and with the right hand manipulate the sound or catheter. This catheter may, after some experience has been attained, be used with almost the same amount of precision as a long finger, and bimanual examination would be complete. This method will positively admit of the detection of any enlargement of the prostate.

With the catheter in position in the bladder, the examining finger in the rectum will first detect the catheter in the bulbous urethra, then by tracing it backward can readily detect it in the membraneous urethra. In the presence of an enlarged prostate it can be traced no further, but the examining finger immediately somes in contact with the posterior portion of the prostate projecting into the anterior wall of the rectum. By downward pressure on the catheter this projecting mass can be made much more prominent, and the rectal finger can be readily made to pass around and examine either lateral lobe, and if the growth has not attained too great a size, the finger may be able to reach over it and even detect the catheter in the recto-prostatic pouch. To do this, however, would require but a moderate-sized prostate and an exceedingly long finger, and consequently this point can seldom be attained. The exceeding great value of this method of examination is in the fact that it invariably detects without possibility of error the presence or absence of prostatic enlargement. But even in the presence of hypertrophy of this nature, it remains to be disclosed whether the attendant symptoms are due to this or some other cause, for it is equally possible to have hypertrophy without symptoms, and typical symptoms without hypertrophy.

Cystoscopic Examination has not proven the success which was at one time anticipated. If the prostate is large its introduction is difficult, and from the fact that it occasionally produces acute retention of urine, it is somewhat dangerous. When introduced, however, certain valuable information is sometimes obtained. Small growths around the neck of the bladder may be detected, and the condition of the vesical mucous membrane may be determined. A calculus which otherwise may escape detection may be seen, and the presence of vesical sacculi is readily noted.

The condition of the bladder and kidneys should, in every case, be carefully and accurately determined, because on this—and, to a very great extent, on this alone—will depend the line of treatment to be adopted for the relief of the symptoms displayed. An hypertrophied prostate is important mainly on account of the changes which are by it wrought in the urinary organs. To determine this accurately, four main points are of special interest:

(1) The amount of residual urine .
(2) The condition of the vesical mucous membrane.
(3) The amount of vesical atony.
(4) The renal condition.

The amount of residual urine is probably the least important of the four. A very large amount may be retained by a very small prostate. An accurate estimate of the amount may be best obtained after making several repeated measurements. The patient is directed to pass all the urine he can, and when he has, as he supposes, completely emptied his bladder, a catheter is introduced and the residual urine drawn off. After several such measurements, taken at different times of the day and under different conditions, an approximate average may be obtained. As the nervousness of the patient decreases, and by continued catheterizations the tone of the bladder is improved, the amount of residual urine may perceptibly diminish.

The condition of the vesical mucous membrane is seldom difficult to determine. The means at our disposal for such an examination are the cystoscope and chemical examination of the urine. When the cystoscope can be introduced without difficulty, the vesical wall can be examined minutely for evidences of congestion and inflammation, and this instrument will also reveal the presence of any adherent encrustations from urinary deposits. But it is from chemical examination of the urine that the greatest amount of information is obtained. In making this analysis, the frequency of micturition, the mode of passing and the amount of pain accompanying it, and the acidity and alkalinity are all taken into account.

Before obtaining the urine it is well to cleanse the urethra from all contamination by an irrigation of boracic acid, otherwise bacteria present there will be mixed with the urine, and may seriously affect the ultimate conclusions. Micturition, frequent and painless, may be invariably taken to mean retention with overflow and without the presence of any complication. When pain is present it likewise invariably means congestion or inflammation at the neck of the bladder, and the amount of inflammatory action may be fairly judged by the urgency with which the call is made. Especially if the pain is burning and intense, and spreads down to, or nearly to, the end of the penis, the pres-

ence of a virulent form of inflammation may be suspected. This inflammation, on the other hand, may be the result either of an enlarged prostate or a calculus.

The mode of passing the urine is important in estimating the condition of the bladder wall. If sacculi are present there may be much difficulty in starting the stream, and likewise in fulfilling its accomplishment. If this difficulty is experienced, and the immediate introduction of a catheter reveals little residual urine, it is strong presumptive evidence in favor of the presence of such sacculations. In these cases, it is sometimes possible to slip the catheter into another pouch and evacuate an ounce or more of urine after the instrument has already apparently emptied the bladder.

The reaction of the urine is one of the greatest importance. If it is strongly alkaline, and has been so for some length of time, its effect on the condition of the bladder wall may be well estimated. The mucous membrane is likely to be raw on the surface, probably ulcerated in spots, and tends to bleed freely on the slightest irritation. If the case is at all advanced, the muscular fibres of the wall itself are commencing to break down and the lymphatics are clogged with inflammatory exudate or septic foci. This condition is of the utmost importance in determining a line of treatment, because the occurrence of a marked cystitis and the length of its existence marks the possibility or impossibility of any line of radical treatment. In this condition there may be marked atony of the urinary walls with the serious weakness from chronic disuse; but so long as there is no acute inflammatory congestion from septic origin, it is not yet too late for a cure if the cause is promptly removed—provided always the general condition of the patient is such as to warrant such a radical procedure.

The condition of the urine must invariably be accurately determined, for in it lies a strong clue to the condition of the vesical mucous membrane. The reaction has been already noted. The condition of the sediment is equally, if not more, important. From the fresh specimen it is collected by centrifuge and examined microscopically. If any doubt exists regarding the micro-organisms, cultures should be made. If an inflammatory condition exists, bacilli or pus are always present. Moullin is authority for the statement that there is no such thing as idiopathic or catarrhal cystitis. With the exception of specific organisms, inflammation of the bladder is always purulent, and the micro-organisms will invariably show after centrifuging or from a culture. The more severe the inflammation, the greater the deposit of pus corpuscles, of septic organisms and of blood will be found in the urine. In such cases the mucous membrane bleeds freely on the slightest irritation.

The amount of vesical atony is best estimated by watching the patient void urine through a catheter. If the bladder walls have retained their power, the urine passes away in a full-sized stream; if atony is developing, the stream will pass more slowly, will rise and fall with each respiration, and the last few ounces may even have to be expelled by suprapubic pressure.

The renal condition is of supreme importance in all cases of prostatic hypertrophy. The changes in the kidney come slowly, and are sometimes well advanced before they are even suspected. The symptoms are vague and indefinite, and may be nothing more than premature old age. On examination, the urine will at first show a greatly increased amount with a corresponding decrease in specific gravity. When septic nephritis once supervenes, the symptoms become rapidly more marked. The effect upon the urine is decided, casts of various kinds at once appear, albumen is increased and urea is decreased; the general health rapidly fails.

In order to throw as much light as possible, a thorough physical examination should invariably be made. The condition of the arteries, of the circulation, of the heart, and of the advent of premature old ago, should always be sought for. Where renal pressure is marked, cardiac hypertrophy soon makes its appearance. Dilation of the heart is not infrequent, and when accompanied by dyspnoea, oedema of the extremities or hepatic congestion, the outlook is anything but promising.

Differential Diagnosis. As in duodenal ulcer the symptoms are almost pathognomonic, so in prostatic hypertrophy the chain of symptoms presenting themselves in their characteristic sequence, may be regarded as almost pathognomonic. In a man past middle life increased frequency of micturition, especially at night and in the early morning, decrease in the force with which it is expelled, difficulty in starting the stream, and dribbling at the end of urination, all point unmistakably to enlargement of the prostate as the existing cause. But it must be remembered that other diseases also produce an increase in the size of the gland, and to distinguish with certainty chronic hypertrophy from any of these, a careful urethral and rectal examination must be made. In thus making a differential diagnosis, the greatest difficulty is usually experienced in those cases where a small or impassible stricture prevents the passage of a sound, and consequently prevents a combined rectal and intravesical examination.

Cystitis almost invariably makes its appearance sooner or later, and using this as the turning point in these case histories, it is frequently possible from the subjective symptoms to foretell with fair accuracy the stage to which the disease has already advanced. As in the case in many other surgical affections, so in prostatic hypertrophy, it

holds true that the earlier the case presents himself for treatment, the greater is the hope for cure. It is seldom that patients apply for relief before they have commenced catheter life, and it is also seldom that any complications ensue until after the commencement of catheter life. The catheter introduces the infection, and complications rapidly multiply. The lower the constant specific gravity of the urine the more grave the outlook, and when it remains consistently below 1012 or 1010, it indicates an advanced state of kidney involvement, and bespeaks a very doubtful prognosis indeed.

Two main classes of prostatic overgrowth occur—the adenomatous and the fibrous. In the adenomatous variety, the history will usually date back many years, a history mainly of frequent urination without pain. In these cases there is likely to be a much dilated bladder with a considerable quantity of residual urine, and cystitis is infrequently present. Mimanual examination reveals a growth much larger than the fibroid variety; it is less dence. Unless it reaches an abnormal size, and from its size alone becomes fixed, rectal palpation will find it moveable, and the mucous membrane of the rectum will glide easily over its surface. The two lobes can frequently be distinguished, and even the dividing commissure is occasionally palpable. These are the cases in which dense and well-defined tumors can sometimes be distinctly felt jutting out from the substance of the gland.

In the fibrous variety the prostate is sometimes but slightly enlarged. Periprostatitis has invariably occurred, and as a result the gland is solidly fixed in position and is correspondingly much denser and harder than in the adenomatous variety. The mucous membrane of the rectum is fixed to the gland, and the two lobes are exceedingly difficult to determine. The gland is hard and smooth and is characterized by an absence of protuberances. In this variety, too, much more marked changes are found in the bladder itself. As a result of early infection, cystitis has been an early symptom, and the viscal walls are thickened and contracted. The history of the case will reveal very early suffering, and the stage of chronic retention with overflow is seldom, if ever, reached on account of the above-mentioned condition impelling him to keep his bladder empty or nearly so, and the constant use of the catheter in doing so, continually adds fuel to the already unquenchable flame and adds materially to the distress. Truly the fibrous prostate produces a clinical picture deplorable in the extreme.

Clinically speaking, then, there are two distinct types of prostate, the adenomatous with a dilated and passive bladder, the absence of cystitis until late in the disease, and the presence of a considerable quantity of residual urine; the fibrous with a contracted and irritable bladder due to acute cystitis, a short case history and the absence of

any considerable amount of residual urine. From these clinical symptoms it would appear that the two conditions may indeed be due to different contributing causes.

In differentiating between diseases which either directly or remotely simulate chronic prostatic hypertrophy we must take into consideration the following:

(1) Atony of the bladder.
(2) Stricture.
(3) Cystitis.
(4) Calculus.
(5) Chronic prostatitis.
(6) Tuberculosis of the prostate.
(7) Abscess of the prostate.
(8) Prostatic malignancy.

Atony of the Bladder, itself one of the complications of prostatic hypertrophy, is likewise produced by other pathological conditions as well, though the differentiation is easily established. The symptoms produced by atony are the same no matter what may be the cause of the atony. For instance, if the atony should be produced by urethral stricture the chain of symptoms would include delay in starting the stream, decrease in force, a certain amount of residual urine left behind, and, because of the latter condition, urination more frequent than normal. Thus, from the subjective symptoms alone, it may be impossible to differentiate atony from hypertrophy, from atony from any other cause; but bimanual examination will in every instance indicate whether hypertrophy is the cause of the trouble. Vesical palpation with a metal catheter, combined with rectal palpation with the finger, will prove or disprove beyond a doubt the presence or absence of enlargement of the prostate. The presence of a stricture may, however, make the combined examination very difficult, or even impossible.

Stricture. Stricture in the urethra is met with at all ages, and is not infrequently the cause of atony of the bladder. It is most frequently found before middle life—the converse of which is true in prostatic hpyertrophy. With stricture in many instances the symptoms strongly simulate those displayed in prostatic enlargement. The one strong distinguishing point can be demonstrated on the passage of a full-sized sound. When stricture is present it will be encountered in the membraneous portion of the urethra, or, to be more exact, within seven inches of the meatus. If obstruction is encountered beyond seven inches, it is in the prostatic urethra, and must therefore be due to hypertrophy, as organic strictures are never found beyond the membraneous urethra. If a stricture is encountered, and by dilation can be successfully passed, combined examination as before described will reveal the absence of any prostatic enlargement.

Cystitis. When in a patient past middle age cystitis is present, it is often accompanied by symptoms strongly simulating prostatic enlargement. A catheter, however, will readily reveal the fact that there is no residual urine. Residual urine is present in only two conditions —stricture and prostatic hypertrophy. A cound will speedily show the absence of stricture, and combined examination will reveal a prostate of normal size.

Calculus. A calculus simulates an enlarged prostate only in those cases in which the stone is firmly fixed in the immediate neighborhood of the prostate, and is so thickly coated as to make its presence imperceptible with the employment of a sound. If the calculus is prostatic, the difficulty in diagnosing becomes doubly great. A calculus co-exists with an enlarged prostate in about one case in four. In chronic prostatic hypertrophy residual urine is one of the most constant of symptoms, while in calculus it is rarely present; and once again the urethral sound will deviate neither to the right nor to the left while passing through the prostatic urethra. Unless a calculus is prostatic and embedded in the body of the organ, bimanual or combined examination will reveal a normal gland.

With calculus pain is a more pronounced symptom, especially when the bladder is emptying itself. This pain radiates to the end of the penis. In simple chronic prostatic hypertrophy, pain is an insignificant symptom. With stone, increased frequency of micturition is marked during the day in contradistinction to the nocturnal frequency of enlarged prostate. Calculus causes no diminution in the force of the stream. Exercise especially produces much more marked hemorrhage than is present in hypertrophy. When other means fail, an X-ray photograph of the bladder will sometimes detect the presence of calculus.

Chronic Prostatitis. Chronic prostatitis is a common sequel to the acute form. Acute prostatitis, especially in the younger patient, is usually the sequel to gonorrhœa. The history and character of its onset is sufficiently characteristic to admit of positive diagnosis. Prostatic palpation through the rectum is excessively tender. Prostatorrhœa, totally absent in prostatic hypertrophy, is a common accompaniment of chronic prostatitis. It is when chronic prostatitis occurs past middle life, and in the absence of gonorrhœa, that the greatest difficulty is experienced in the differential diagnosis. In these cases considerable confusion may occur, especially as the two conditions at this time of life so frequently co-exist. In the case of chronic prostatitis developing on chronic hypertrophy, it usually commences in the mucous surface of the gland and is the result of either septic or specific urethritis, the contamination having been introduced by the passage of catheters. The symptoms common to both chronic prostatitis and an adenomatously

enlarged prostate are few; those to the fibrous variety more definite. In cases where fibroid degeneration of the prostate early takes place, and at the same time the symptoms of chronic prostatitis are manifest, it is often only after the most exhaustive analysis of the general symptoms that a conclusion can be reached as to the origin of the prostatitis.

Tuberculosis of the Prostate. Tubercular disease in the prostate is not an uncommon affliction, and by the symptoms it produces may sometimes simulate to a remarkable degree chronic hypertrophy of the gland. The disease, however, occurs for the most part in young adults and only occasionally in men past middle age. It is accompanied by deposits or encrustations in the mucous membrane of the bladder. The symptoms of tubercular disease as a rule do not appear until caseation commences, or even until the mucous membrane lining the prostatic urethra has given away. Rectal palpation of the gland will now reveal it to be irregular in outline and of variable consistence. Combined examination reveals a prostate but slightly, if any, increased in size. When caseation has set in, or when the urethral mucous membrane of the prostate has given way, the pain and the suffering are unbearable. The constant desire to urinate, with all the symptoms of acute ulceration, produces an almost uncontrollable agony. The tubercle bacillus can usually be detected in the centrifugalized urine. In tubercular disease the cystoscope may be of considerable value in enabling the physician to locate a tubercular ulcer.

Abscess of the Prostate. Prostatic abscess is in its course so acute that, except in special cases, it is unlikely to be mistaken for hypertrophy. It is usually inflammatory in origin, though sometimes it may result from an injury. The abscess will always point either in the perineum, the urethra or the rectum, and careful palpation will frequently indicate the location where it will likely break.

Prostatic Malignancy. Malignancy in the prostate simulates to a greater degree than any other, chronic prostatic hypertrophy, and is also a more common affliction than is commonly supposed. It is chiefly of the adenocarcinomatous type. True sarcoma of the prostate is one of the rarest of diseases, and, when encountered, is usually present in boys under twenty. To a much more marked extent than is the case in carcinoma, cachexia is rapidly developed, and the rate of growth is correspondingly increased. Carcinoma produces severe pain, both local and referred. It is sometimes felt severely at the end of the penis, and thus may simulate stone in the bladder, though the most common location for referred pain is down the inner side of the thighs. Rectal examination reveals a prostate firmly fixed, dense, hard and somewhat enlarged. Hemorrhages are not uncommon, and may occur into either the urethra or the bladder.

The first known operation for prostatic cancer was performed by Billroth in 1867, and two years later was repeated by Jolly; but it is only within recent years that any success has attended this treatment. One reason for this may be the difficulty of an early diagnosis. In its early stages, prostatic cancer simulates to an exceptional degree ordinary prostatic hypertrophy, and consequently is often beyond help before a diagnosis is made. One great difficulty in diagnosis is apparent —its inaccessibility. It is intrapelvic at best, but one side of the organ can be felt and examined; and since it is so frequently the site of inflammatory changes and of bacterial invasion, an error in early diagnosis is made the more probable. This is furthermore exemplified in the frequency with which prostatic cancer and chronic prostatic hypertrophy co-exist in men over fifty years of age.

An established rule in the etiology of cancer in any part of the body, is that it is prone to follow in the wake of chronic or prolonged stimulation or irritation. There is no reason why this should not hold good in prostatic cancer, and is, *per se,* one reason why so large a percentage of cases (variously estimated at from ten to twenty per cent.) of prostatic hypertrophy should rapidly degenerate into prostatic malignancy.

Prostatic carcinoma is always glandular in type, and usually of the hard variety. When the growth originates in an already hypertrophied gland, the differential diagnosis is much more difficult, and consequently the disease has frequently spread beyond hope before the real malady is discovered. The growth rapidly infiltrates the tissues inside the capsule, and penetrates the latter only at a late stage in the disease. The usual course of involvement is along the ejaculatory ducts and along the lymphatics to the trigone of the bladder. Metastatic deposits in the bones sometimes occur very early in the disease.

An additional difficulty in differential diagnosis is due to the fact that cancer and benign hypertrophy occur about the same time in life —from fifty years upward. The duration of symptoms will vary according to whether the cancer originates in an otherwise normal gland, or in an adenomatously enlarged prostate of long standing. In the former instance the symptoms may be of less than a month's duration, while in the latter they may have been present for many years. In either case, the nature of the symptoms will be much the same—increased frequency of urination, difficulty in starting the stream, more or less dribbling, residual urine, and always more or less pain with occasional hemorrhage.

As is the case in cancer in any other part of the body, three distinct stages of the disease may be here demonstrated microscopically:

1 The class of case in which there is no physical sign, subjective or

objective, suggesting malignancy. This is the early intramural invasion, and may attack either the otherwise normal gland or the one already hypertrophied. In those cases in which hypertrophy is present, the operation is usually performed for the relief of the sypmtoms produced thereby; the patient goes on to complete recovery and unless microscopical examination is made, no suspicion will be entertained that cancer was really present.

2 The second stage of the disease is demonstrated by the microscope when the infection attacks the periphery, when it becomes subcapsular, when it travels backward along the ejaculatory ducts and even involves the seminal vesicles. Pain, sometimes severe, is now present, hemorrhage is not uncommon, and rectal examination will reveal an hardened, nodular and immoveable growth.

3 When the third stage is reached, pain and hemorrhage are the two most constant symptoms. Cachexia and anaemia, marked and progressive, are ever present. Metastasis, especially in the long bones, is of frequent occurrence, while the same condition through the lymphatics is always evident. The prostate is much enlarged, urinary embarrassment are distressing, and the clinical picture of one so afflicted is pitiable in the extreme.

Any definite line of differentiation between classes one and two, and again between two and three, is exceedingly difficult to determine. In fact, the bladder so gradually adjusts itself to the altered conditions as to make, in many instances, even the presence of disease unsuspected. In all cases of senile hypertrophy of the prostate, cancer is liable to co-exist, and until it has passed well into the second stage where hemorrhage and pain become more pronounced, the symptoms are liable to be mistaken for the ordinary frequency of urination commonly believed to be the natural condition co-existing with advancing years. Certain symptoms, however, may cause the patient some anxiety, and cause him to seek the advise of his physician. The more persistent of these will be pain, frequency of urination, and hæmaturia.

Pain. In cancer of the prostate, three distinct and separate stages of pain are encountered. At first it is present only during micturition and is felt in the bladder, the rectum and the penis. As the disease progresses, it becomes more intense, and is especially so during defecation. The third stage is when the pain becomes almost continuous. Referred pain is not at all uncommon, and may be present as sciatica, or manifest itself in the femoral, sacral, scrotal, or inguinal regions. One peculiar feature about this referred pain is that it is always ex-

aggerated by either urination or catheterization.

Frequency of Urination. Probably seventy-five per cent of prostatic cancer cases suffer from frequency of urination before the pathologic condition has produced any obstruction to the urinary flow, and as is the case in benign hypertrophy, this is the most constant and dependable symptom. This is occasioned by the encroachment of cancer cells stimulating muscular activity and lessening nervous control of the bladder. As a result, an almost continuous state of contraction is produced and the vesical contents are thus frequently expelled. As the disease progresses the prostate enlarges, and before long there is exhibited the frequency of micturition from an hypertrophic cause as well as the one just named.

Haematuria. Opinions differ widely as to the persistence with which hæmaturia is to be encountered in prostatic cancer. All will agree that hemorrhage is more indicative of stone or even of tumor, but the cystoscope will readily reveal these causes. In the absence of any such apparent cause, hemorrhage of frequent occurrence must be viewed with suspicion, as it is one of the most significant symptoms of prostatic cancer. Microscopical examination of the blood thus obtained will occasionally help to clear up the diagnosis by revealing the presence of cancer cells. If, in addition to the presence of any one or all of these three conditions, the patient should be at either extreme of the prostatic life—that is, before fifty or over seventy—suspicion will be much more firmly grounded.

Some of the more important objective signs may be gleaned from a comprehensive rectal examination, and many points of differentiation between cancer and simple senile hypertrophy may be demonstrated. In cancer, the gland is at first but very slightly increased in size; in fact, not nearly enough to account for the train of symptoms presented. The consistency of the gland in atony is hard, and it may be smooth or nodular. The hard induration usually starts in the left lobe, and the unilateral hardness is considered by some as almost pathognomonic of cancer. The mobility of the gland is much reduced by cell invasion of the deep urethra and of the vesiculæ seminales. Rectal palpation shows the gland to be practically immobile.

A valuable sign of malignancy is to be observed in the passage of a catheter. The prostatic and membraneous urethra become more or less infiltrated with carcinomatous cells, making the walls hard and inelastic, and consequent catheterization extremely painful.

Taking it all in all, the differentiation between prostatic cancer and simple hypertrophy presents many difficulties indeed—more so, in fact, than any other pathological condition of the prostate; and because of these difficulties many cases of early carcinoma are even to-day passing

undiagnosed to that stage where all treatment, of whatever kind it may be, is doomed to failure.

Prognosis. When a patient with chronic enlargement of the prostate gland appears for relief, the most important question to his mind is, "What is my chance for a complete and permanent cure, and if such cannot be attained, what amount of amelioration of my present suffering can be obtained?" The conscientious surgeon in attempting an answer to the foregoing question, must consider each question on its own merits, as not even a general line of treatment for all cases can be laid down; and in placing before the patient the possibilities or probabilities in his particular case, much sound judgement and experience is required.

One of two general lines of treatment are applicable to each case, the palliative and the radical. There is the patient advanced in years, with arteriosclerosis, with kidney involvement, and with his general health in such a condition as to preclude the possibility of any radical treatment. To this man, general palliative measures, judiciously applied, may add many months of comparative comfort to his already miserable existence. To him, careful attention to his general health, careful catheterization and judicious irrigations of the bladder may promise much; not in the way of even any attempted cure, but only as an attempt to make more comfortable the remaining months of his life. To the other man, even though he may have attained just as many years as the former, and though his sufferings may be just as great, yet because of a lesser degree of involvement of the kidneys, his prospects of a radical cure by total extirpation of the gland, and the chances of prolonging his life for many months (or even years) in complete comfort, may be very bright indeed. It is in advising and carrying out in each individual case the treatment which will, in that case, be productive of the best results, both immediate and remote, wherein the responsibility of the surgeon lies so great.

If due care is exercised, no death-rate is directly resultant from catheterization; and, therefore, in all those advanced cases where the approaching end is only a matter of time, it should be given a prominent place in palliative treatment. Catheter treatment, however, in cases in which it is possible to remove the gland, should never be employed except as in so far as may be necessary to get the patient into the best possible shape for operation. The continued use of the catheter must sooner or later always end fatally. It must not be forgotten that the average life of a catheter patient is only four or five years at the most. At first it succeeds admirably, and the patient is buoyed up with false expectations, the hope of a permanent cure. But time soon tells a different tale. The prostate continues to grow, thus rendering the

obstruction greater; and adding, as it were, fresh fuel to the fire, the very means of supposed relief—the catheter—is continually carrying infection into the bladder, and ere long we have not only the obstruction to deal with but an infective cystitis as well. Could the final condition be foretold by the patient, he would never lend himself to the end which certainly awaits him; but by the apparent improvement in the early stages, he is led by a false sense of security to reject the advice of the experienced physician or surgeon.

The mortality in radical treatment is greatly reduced by judicious preliminary treatment. Never operate immediately after an attack of acute retention or of acute cystitis. Always disinfect the genito-urinary tract as far as possible by such agents as urotropin and aseptic bladder irrigation, and the intestinal tract by the use of salol, duotal, etc. Always build up the appetite and the general health by such tonics as iron, quinine, nux vomica, etc. Upon the care with which the preliminary treatment is carried out, as much as upon the expertness with which the operation itself is performed, will depend to a very large extent the mortality rate in prostatectomy.

Where immediate relief is imperative on account of acute ulceration or cystitis, drainage of the bladder (preferably suprapubic) will offer the best possibilities. This not only gives immediate relief to the distress, but prepares the way for the more radical operation of prostatectomy, by causing amelioration of the cystitis, and thus giving the kidneys an opportunity to get into better shape.

By exercise of the best judgment in dealing with each particular case, whether it be by catheterism, by drainage, or by the radical removal of the gland itself, the mortality rate may now be kept very low, and the amount of relief obtained in selected cases be conversely very high.

BREAST TUMORS.

By R. W. Wesley, M.D., Toronto.

ALTHOUGH the discussion of breast tumors has been frequent and the subject has become time-worn, we still continue to find points of interest in it. For are we not each year seeing more patients present themselves for breast operations? One of the saddest things that can befall a woman with breast cancer is to have an early inadequate operation. Statistics tell us that cancer is rapidly on the increase and the great cancer campaign that is now being waged in the United States is ample proof of this statement.

The tumors of which I speak in particular are those that prove to

be malignant. But among the benign are some that resemble the malignant so closely that the pathologist has difficulty in differentiating them, so it may be well to say something of their clinical history.

There is a form of interstitial or lobular mastitis which sometimes gives a great deal of difficulty in its diagnosis, for it often presents a number of clinical aspects which resemble the scirrhus very closely. For example, it is often seen at the cancer period, it may cause retraction of the nipple, or the lymphatic glands may be enlarged, and the lump may be hard and nodular and cause considerable pain at the menstrual periods. Now, these symptoms alone would make one very suspicious of a malignant tumor, but with a careful examination there will usually be found other points by which we may differentiate it. Although the nipple may be retracted the skin is seldom found attached to the tumor, nor is the tumor adherant to the pectoral fascia. Women with small, atrophic, non-lactating breasts usually present these kind of tumors. With careful palpitation it is almost always possible to find other small tumors, may be, in the opposite breast. It is said that at least 50 per cent. of these tumors eventually become malignant. They may remain the same size for years or they may disappear till only a thickening may be felt, when for some unknown reason they will start to grow rapidly and prove to be one of the most malignant forms.

A case typical of this form was Mrs. D., aged 56, married, and nursed one baby 28 years ago. She suffered with a mastitis for several years and a slight thickening could always be felt at this place. Some months previous to consulting surgical aid, she noticed some slight increase in size in this thickened area, and when she presented herself for examination there was a tumor the size of an egg in the breast, and a number of enlarged hard glands in the axilla. This small induration after remaining quiet for 26 years suddenly assumed a rapidly-growing malignant form.

With regard to cysts of the breasts there are many different varieties described, and no two authorities seem to agree on the number of kinds. The simple cyst is by far the most common, composing about 50 per cent, of all cystic growths of the breasts. These sometimes grow quite rapidly and as a result cause considerable pain. They are often very difficult to palpate, especially when they are deeply situated, and fluctuation is rarely felt unless the cyst happens to be located near the surface and the wall is soft. Many of them have an indurated wall and are very tense, which gives one the impression of a solid growth .

Then we have the retention cyst, or the galactocele, which is not very common, and is almost always met with in women during or shortly after the puerperium. It results from obstruction to some of the milk ducts, which may be caused by infection introduced through an

abrasion in the nipple. The cyst in this case will be found to be filled with inspissated milk.

When one thinks of the different structures that go to make up the breast we are not surprised to find a great number of different kinds of tumors described. The breast seems to be a location where almost any kind of tumor may be found, and we find described along with the common forms, the chondroma, the osteoma, the myxoma, the angioma, and a number of other rare forms. The three chief varieties are the adenoma, the sarcoma, and the carcinoma, the latter two being malignant. Now, a pure adenoma is very rare; there is usually a large amount of fibrous tissue combined with it and so we have the fibro-adenoma, which is the ordinary solid benign tumor that we meet so often, especially in the breasts of young women.

The fibro-adenoma is usually quite definite and easily palpated and sometimes there will be several of such tumors in the same breast. The growth is slow, in fact, at times it may seem to retrogress and may even disappear entirely. Some of the rarer forms grow very rapidly and are much softer, but they always retain their capsule. They sometimes, if not removed, grow to a very large size, giving no symptoms except those caused by the inconvenience of a large tumor of the breast. It would become momotonous to attempt to describe all the different forms of fibro-adeonma, but before passing on to the carcinoma I would like to say a word about the sarcoma.

It is estimated that about 4 per cent. of all breast tumors are sarcomata, so it should be considered as ar a rere growth. It usually has its origin in the interlobular connective tissue and it may be deeply placed or at the periphery of the gland. You will sometimes meet with a metastatic growth in the breast from some focus in another part of the body, but this is unusual.

Now, a sarcomatous growth may possess a capsule at its commencement, and in its early stage, before removal, it is impossible to distinguish it from a benign growth. But it will be noticed to grow much more rapidly than the benign tumors; in fact, it will often become the size of one's fist in a few months. And as it continues to grow it becomes softer, so that its outline becomes more indefinite. The nipple becomes retracted, neither does the tumor become attached to the skin. There is very little pain and the breast is not even tender except perhaps at the menstrual period. Sometimes these growths will be found to be multiple or bilateral, but this is rare. As the tumor increases in size it has a tendency to become cystic, and a great number will show evidences of breaking down by the time they have reached the size of an egg.

The growth advances very rapidly, involving the entire gland,

pectoral fascia and muscle in a short time, and the skin overlying it exhibits a red shiny appearance and soon breaks down. It is often possible to feel enlarged axillary glands, but these, it is said, are never of a metastatic nature and metastases will be found in other organs of the body long before they appear in the axilla. This form of tumor occurs earlier in life than the scirrhus, being met with in women between the ages of 25 and 40.

When we come to the carcinomata it is rather surprising there are not more varieties described. The pathologists have limited their descriptions to four or five and there seems to be a difference of opinion about several of these.

For clinical purposes, they readily divide themselves into the acute and chronic. The acute form is rare; it is intensely malignant and grows with wonderful rapidity. It usually attacks young women somewhere between 30 and 35 years of age, following or simulating a mastitis that has been caused from the puerperium. There is no retraction of the nipple or dimpling of the skin, it seems to grow too rapidly for that. The whole breast becomes prominent and distended and the skin soon becomes involved. Metastases form rapidly in the liver and intestines, the whole process may only take three or four months. This form usually becomes well advanced before being noticed, as the patient is probably misled by having had trouble with mastitis since the birth of her last child.

The chronic form of carcinoma is what is known as the scirrhus, of which we are all so familiar. It is by far the commonest form and it is less malignant than the acute. It usually makes its appearance in the upper or outer quadrant, and even from the first its outline is not at all definite. As it proceeds to grow it causes contraction of the trabeculæ, producing dimpling of the skin. The whole breast at first appears to be smaller than the opposite and in cases where the growth is above the nipple, on comparison, the breast will be noticed to occupy a slightly higher level owing to the contracted stroma.

The scirrhus rarely grows to a large size, and before it has reached the size of an orange there will usually be found metastases in the axilla. The skin and the pectoral fascia soon become involved and instead of being freely movable, you have a hard fixed mass which may cause pain on manipulation. As a rule the axillary lymphatic glands are the first to become involved, and the growth in the breast may be no larger than a chestnut when glands in the armpit may be palpable. It is said that in the ordinary scirrhus it is usually from six to eight months after the tumor is recognizable that enlarged glands can be felt. But one would imagine that it would depend on the malignancy of the tumor and on the age of the patient, as a younger patient has a

more elaborate system of lymphatic anastomosis between the two breasts, and if the growth is situated in the inner quadrant there is a greater possibility of transmission of the disease to the opposite breast.

As a rule, on examination of the breasts, there is very little difficulty in making out the presence of a tumor if one exists. But one should be very careful about giving too definite an opinion. Both personal and family history are important. Has the patient had other members of the family with breast tumors? Or has the breast ever been injured leaving a scar or an inflammatory thickening? How many children has she nursed? Was she troubled with sore nipples? The frequency of hyperplasia with retrogression may increase the likelihood of cancer.

Careful inspection of both breasts is important; notice if both nipples are on the same level. A mastitis or an infiltration from a cancerous mass will cause contraction of the trabeculæ and draw the breast into an abnormal position. Ask the patient to change her position in some way; in a stout patient you may get a clue from a slight abnormality in movement or from retention of the skin over a small area. Never neglect to palpate both breasts and axillæ. Some months ago a lady came to my office with a small adenomatous growth in the left breast. She was a rather nervous woman and had an unusual dread of operations. On being told of the dangers of such tumors she went into the hospital and had the growth removed. She was there only three or four days, but imagine my feelings when she came to the office a few days later with a similar tumor in the other breast and she had to undergo a second operation.

It is not enough to examine the breast with the flat of the hand, although by standing behind the patient and using this method a cancerous mass can be more readily distinguished. But the breast should be taken between the thumb and fingers, for there are some growths which are best belt by this method.

Never forget to raise the arm up to the head so putting the pectoral muscles on the stretch when any connection which a tumor may have to the pectoral fascia can easily be made out. The glands of the axilla may be enlarged from a number of causes, such as: tuberculosis, syphilis, local inflammation or from poison absorbed at some distant point. Both supraclavicular spaces should be carefully examined, for sometimes an enlarged gland may be felt in these spaces when there is no evidence of trouble in the armpit. The inability to palpate enlarged glands in the axilla does not mean that they do not exist; but their presence with a suspicious tumor in the breast is of great value as a guide to the extent of our operation as well as to the prognosis.

There is never any difficulty in recognizing the malignant growth when there is oedematous infiltration of the skin and ulceration; or when a secondary growth in the axilla has caused oedema of the arm. It is the early diagnosis that gives us difficulty and it is the early diagnosis that is so immensely important. The benign growth is usually easy to palpate on account of having a distinct capsule, giving it a definite outline. The infiltrating growth has no sharp border and passes out indefinitely into the breast tissue and is not moved about freely in the breast even in its early stages.

If we decide that a certain tumor is of a malignant nature it is well to re-examine our patient in order that we may determine the nature and extent of our operation. Shall we remove just the tumor? Or shall we take off the breast? Or should we remove both the pectoralis major and minor and dissect out the axillary glands? And shall we attempt to remove the supraclavicular glands also? Or is the case advanced too far to advise any operative treatment? These are important questions and we should make a careful examination of the axilla, the supraclaviculer region, the extent of skin involved, the condition of the opposite breast and axilla, and consider the probability of metastases in other organs.

If there is involvement of the supraclavicular glands there is practically no hope of saving the patient's life. In the literature I have been unable to find the description of any operation for removal of the supraclavicular glands where the writer holds out any hope of curing the patient. And in such cases it is advisable to do only a palliative operation and nothing radical. I mean by a palliative operation the removal of a sloughing or cancerous mass from the breast, thus giving the patient relief from frequent dressings or from a foul discharge till some metastatic growth in another organ terminates her life.

Abbe says: "Even axillary involvement should be considered as the beginning of generalization of the cancer, because only 5% of the cases with involvement of the axillary glands, that are operated on, are cured. Hence we do well to follow the teaching that the more limited the disease the more extensive the operation should be (in the hope of cure) and the more extensive the disease the more limited the operation because cure is proportionately less likely, and the vitality of the patient should be saved from the shock of the elaborate operations."

It is not the custom of most surgeons to remove the supraclavicular glands if there is no clinical evidence of involvement, although some operators do a most radical operation by dividing the clavicle and dissecting out every trace of the lymphatics that can be found in that region. I think it is safe to say, that when there is no clinical evi-

dence of involvement such radical treatment is not necessary, and their results do not show any greater percentage of cures than in those cases where only a clean dissection of the axilla is done.

It should not be difficult for us to decide whether we should remove the pectoral muscles. Nowadays we can have an almost positive diagnosis from a pathologist in from 5 to 10 minutes, while the patient is under the anæsthetic, and we have no excuse for not doing the radical operation in every case where the growth is found malignant even though there is no evidence of lymphatic involvement. In such cases the pectoralis minor should always be removed along with the major, for time and again have we found lying under these muscles hard nodules, undoubtedly malignant, when no other evidence of glandular involvement could be found.

It is a very dangerous proceeding to excise the mass or a piece of it for examination with the idea of doing further operative work at a later date if the examination proves the growth to be malignant. Bloodgood, at Johns Hopkins, has proven beyond a doubt that dissemination may be very rapid and widespread from contamination of the tissues by this method. There are cases on record where the thrusting of a hypodermic needle into a malignant nodule in the breast has caused a generalization of the cancer.

In making the incision for a radical operation, it is of the utmost importance to remove a wide area of skin around the tumor. Too often we are thinking about saving skin for a neat closure, instead of keeping far beyond the infiltrated area. The number of recurrences in the skin are very numerous and many of these could be entirely avoided by taking away a larger amount of skin at the primary operation.

Obtaining enough skin to cover the raw surface should never be a source of anxiety, for it is surprising how by loosening the surrounding skin from the underlying fascia it may be made to slide over and cover in the raw area. It may be stretched in some cases till the opposite breast approaches the middle line, and by silk stay sutures, placed several inches back from the line of incision, the drawn edges will be found to unite quite readidly. If this method is found impossible, which is rarely the case, an area of skin may be removed from the abdominal wall, where there is always an abundance, and implanted on the raw surface.

One would imagine that after an extensive operation the arm would be deprived of a great deal of its usefulness. But this is not the case, for most of the patients are able to use their arms quite freely, doing

almost every kind of work they did previously. Swelling of the arm sometimes occures and may give the patient a great deal of pain and worry, but it usually disappears after a few months. Rarely it will persist and the patient will have to resort to an elastic bandage.

It is well to impress upon these patients the great importance of returning to their doctor every three months for the first year and every six months thereafter for examination. We cannot state any definite period for how long this should be kept up. Some years ago the statement was accepted that a patient showing no signs of recurrence for three years was considered as cured; this was soon increased to five years, and we now know that there will sometimes be a recurrence after eight or ten years, although most of the recurrences occur in the first or second year after the operation. The length of time must depend on the fact as to whether the primary growth is of a rapid or slow growing nature.

When local recurrences appear in the skin the X-ray has been found to be of great benefit in retarding the growth, but it has not reached expectations as a curative factor.

It is of the greatest importance to take these cases early. Never let a patient out of your consulting-room without making her aware of the risk she is running by not having even the most benign tumor removed.

Dr. Maurice Richardson said: "The worst disaster that can befall a woman is the overconfidence of her physician or surgeon in the benignancy of a tumor." He also adds: "However positive one's view as to the benignancy, a single experienced contrary opinion is enough to indicate exploration. And in the cancer age a reasonably certain diagnosis of benignancy is not strong enough to justify postponement of the operation, unless there are contraindications to operation other than in the tumor itself."

The ideal treatment of cancer is preventive and early operation. So it rests with every doctor to give directions for the proper care of nipples in nursing mothers, to enlighten every patient regarding the possible dangers of indefinite masses persisting after an inflamed breast, and to assist in the education of the public in advising every woman to go frequently to her physician for examination.

There is a patrol service on the south boundary of Manitoba on account of an epidemic of smallpox across the border.

CURRENT MEDICAL LITERATURE

SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE TORONTO WESTERN HOSPITAL

SOME PHASES OF INHERITED SYPHILIS.

Dr. Paul L. Parrish concludes his article in the *Long Island Medical Journal* as follows:

1. The disease should be made reportable as a communicable disease like typhoid or tuberculosis.

2. The prostitutes found to have it in a transmissible form should be prevented from plying their trade by being confined in an institution until cured, or until they do not show evidences of the disease to a contagious degree. To do this it will be necessary to register them and have them frequently examined.

3. To protect innocent women and unborn children, both men and women contemplating matrimony should be compelled to show a clean bill of health in this regard, not after an examination by a family physician, but after examination by an impartial physician who is competent to diagnose the disease. In some of the western states there is now a medical examination required.

4. A concealed syphilis contracted before marriage should be *prima facie* cause for an annulment or a divorce.

5. The birth of syphilitic children should be reported to the Department of Health and supervision kept over the infant and its parents till the disease is cured. This should be done by the attending physician if he can keep them under his control; if not, then by the department physicians. In this way accurate statistics could be collected which would give an idea of the actual incidence of the disease which we do not now possess.

6. As the public becomes educated every case must be reported and kept under supervision as the contagious diseases are now supervised by the Department of Health. It is said that if you report the cases the patients will not come for treatment and the cases will be concealed and allowed to grow worse without treatment. This may be so for a time, but now every case is concealed from the innocent victims and it is allowed free spread. Most of the victims now take inefficient treatment and go on spreading the disease as their desire pleases them.

This may seem like a dream of Utopia, but some such measures must be adopted to control the disease and they will only be allowed after the public is awakened to the seriousness of the present conditions.

OBSERVATIONS ON GASTRIC DISEASE.

Dr. A. L. Scudder, in the *Boston Medical and Surgical Journal,* gave an analysis of two hundred cases of gastric disease that have been under his care. He is impressed by the part which syphilis plays in the etiology of chronic stomach disease. Syphilis of the stomach is more common than generally has been supposed. It is a tertiary manifestation. A multiplicity of lesions are possible. These lesions may be a gummatous tumor, or ulcerations in the stomach wall involving the mucosa, or adhesions extending from the stomach to neighboring organs. Syphilis of the central nervous system with symptoms of gastric crises may confuse the picture, when only the spinal fluid will show evidences of the infection. The symptoms of syphilis of the stomach may resemble chronic ulcer—or even cancer—differing from ordinary ulcer in their lack of regularity and persistence. In all of the author's suspected cases there have been many peritoneal adhesions. He has made mistakes in diagnosis in the following cases: The diagnosis of gastric ulcer in twelve cases proved to be adhesions in one case; no pathology in three cases; syphilis, but not of the stomach, in one case; leioma in one case; and appendicitis in six cases. A diagnosis of duodenal ulcer in three cases proved to be Lane's kink and appendicitis in one case, sarcoma of the stomach in another, and appendicitis in the third. A diagnosis of carcinoma of the stomach in two cases proved to be gastric ulcer in one case and duodenal ulcer in the other case. In one doubtful case a diagnosis of stomach, gall-bladder ,or appendix disturbance proved to have no visible pathology. The author has been most assisted to a diagnosis of chronic ulcer by a carefully elicited story of the onset and course of the symptoms. Definite pain in the stomach region has been the most constant symptom. The hunger pain, so-called by Moynihan, has been found to be associated so frequently with ulcer on the gastric side of the pylorus that the author is inclined to think that it is not diagnostic of duodenal ulcer. As regards the surgical treatment of cancer of the stomach it is pointed out that gastroenterostomy is a poor pallative measure. The length of life secured is but about four months. It is better, if practicable, to resect as a palliative measure, and rid the patient of a sloughing mass of cancer, not being content simply with a posterior or anterior gastroenterostomy. The

length of life is longer after resection than after gastroenterostomy.—*Medical Record.*

POSTOPERATIVE INTESTINAL STASIS AND THE INTRA-ABDOMINAL USE OF OIL.

Dr. W. F. Burrows, in the *Medical Record* gave the following conclusions on this subject, based upon the peritoneal reaction to chemical irritation and upon the results of using neutral oil intra-abdominally to control infection and effects of traumatism, both mechanical and chemical, as observed in guinea pigs and dogs: 1. Iodine, mercuric chloride solution, phenol, alcohol, etc., applied to the peritoneum rapidly spread beyond the area intended, through capillary action and affinity for the tissues, destroy the endothelial cells, cause an excessive exudate, and tend to produce permanent adhesions. 2. Olive oil containing fatty acids and commercial liquid petrolatum, the impurities of which are acids, resins, fats, and oils, both animal and vegetable, produce inflammation of intact peritoneal surfaces, as is shown by a watery exudate, which differs, however, from that which takes place in the absence of oil in that agglutination and organization do not follow. 3. Bland, non-irritating oil, represented by a purified liquid petrolatum obtained from Russian oil, causes none of the changes occurring in the process of adhesion formation. It has no appreciable chemical action upon the tissues or deleterious effect upon the animal, and is slowly absorbed. 4. Oil, used intro-abdominally in sufficient quantity, prevents, to a great extent, the formation or recurrence of adhesions. 5. Oil fills the lymphatic channels leading from spaces denuded of peritoneum or opened by incision, thus limiting septic absorption, and, through preserving the endothelial cells, prevents extension of destructive processes. 6. Oil is used to advantage, intra-abdominally, in place of salt solution, upon abdominal pads, and to protect and lubricate the abdominal contents, thereby eliminating or minimizing post-operative intestinal stasis, vomiting, and abdominal pain.—*New York Medical Journal.*

REMOVAL OF BULLET FROM THE THIRD VENTRICLE.

A. Exner and J. P. Karplus (*Wien. klin. Woch.*, July 10th, 1913) have removed a bullet from the third ventricle of the brain, and, though the patient died, they are optimistic as to the future of their operation. The patient was a man, aged 25, who attempted to commit suicide in December, 1905, by discharging a bullet into the right temporal region from a 6 mm. bore revolver. In spite of severe temporary paralyses,

he regained his normal condition, except for slight paresis of the left arm and leg. In 1911 he developed violent headaches, which were most troublesome at night. In January, 1912, a futile attempt was made to relieve the pain by removing a piece of bone, of the size of a "krone" piece, at the point where the bullet had depressed th skull. The headaches became more frequent, and were increased by walking down-stairs. Impairment of vision, nausea, vomiting, and fits were also complained of. The bullet was shown by the Roentgen rays to be 1.5 cm. to the left of the middle line in the sagittal plane; and, when the head was petrous portion of the temporal bone. These observations in two planes, when compared with the measurements of the cadaveric skull, located the bullet under, and 2 to 3 cm. in front of, the posterior portion of the corpus callosum. As the symptoms progressed and the bullet was found to be moving a little during several months' observation, its removal was demanded by the patient and his relatives. The operation was based on Karplus's and Kreidl's experiments on monkeys. The first stage of the operation was the formation on the lift side of a skin, periosteum, and bone flap, larger than ahand , and reaching to a point 2 cm. from the middle line. The whole of the occupitallobe was thus exposed, and the wound extended in front to the outer angle of the orbit. The inferior border of the wound was carried down low enough to render the dislocation of the left cerebral hemisphere easy. The second stage of the operation was performed six days later, when the dura was incised in the line of the flap, and the occipital lobe was displaced without difficulty. A vein on its medium aspect bled profusely. The corpus callosum was now brought into view, and incised 3 cm. to the left of the middle line. A large vein was exposed passing over the third ventricle, in the region of which there was some scar tissue. A cyanosed tumor, of the size of a hazel nut, was found in the anterior portion of the incision in the corpus callosum. When incised it yielded the bullet and a considerable amount of fluid from the third ventricle. After the hæmorrhage had been arrested and the occipital bone replaced, the dura mater and skin were sutured. The patient did not recover consciousness, and died an hour after the operation. The necropsy showed that the track of the bullet through the right occipital lobe was marked by lellow softening and fibrosis. The lower cornu of the right lateral ventricle was lined by a thin and much pigmented membrane. There was also partial adhesion of the injured cortex with the leptomeninges. On the left side the cyst from which the bullet had been removed was found close to the middle line, and in the upper portion of the thalamus. The third ventricle had evidently been invaded from its dorsal aspect. There was no sign of recent hæmorrhage into the brain substance or the ventricles. The authors who performed the second stage of the operation

in less than thirty minutes found it easy, and they trace the patient's death partly to the great loss of blood, and partly, perhaps, to manipulation of the brain near the third ventricle. The hæmorrhage might have been less had they prolonged the interval between the two stages of the operation.—*British Medical Journal.*

THE CONTROL OF VENEREAL DISEASES.

In the recently published bulletin (Vol. 8, No. 9) of the Massachusetts State Board of Health for September, 1913, is reprinted an article by Dr. Hermann M. Biggs defining the attitude of the New York City Department of Health in relation to venereal diseases.

The compulsory notification of venereal diseases from public institutions, and the optional notification of such cases from private physicians by number, was established by the board on February 20, 1912. At the same time provision was made for doing in the city laboratories the Wassermann and the complement fixation tests for syphilis and gonorrhea, and for the examination of fresh smears for spirochetes and gonococci. The principles of action and the measures thus adopted were essentially similar to those employed in the first attempts to secure registration and control of tuberculosis.

In practice, the operation to these regulations has proved greater in the case of the venereal diseases than in that of tuberculosis. Some public institutions have refused to comply with the orders of the board. During 1912 the total number of cases reported treated by 1,500 of the 8000 private physicians in New York was: Gonorrhea, 24,980; syphilis, 13,348, and chancroid, 4,331; total, 42,659. Obviously these figures must lie far below the actual incidence of these diseases among the people of New York. Nevertheless the Department of Health is not at all discouraged in its intention ultimately to secure full registration of venereal diseases, believing that it will be supported by public opinion as proved the case in tuberculosis.

In July, 1912, the board further established a diagnosis clinic for venereal diseases. During the first four months of 1913, the total attendance at this clinic was 1,275, upon a large percentage of whim the Wassermann test was done. The board believes that registration, early diagnosis, and prompt, efficient treatment are the essential agents in dealing with these, as with all infectious diseases. Hospital provision for such treatment is now the most urgent need in this important movement.

The venereal diseases will doubtless be the last to disappear from the earth, but doubtless they will disappear after having served their evolutionary purpose. The deliberate effort to control and suppress them is one of the encouraging signs in an age which abounds in phenomena of discouragement.

CANCER OF CERVIX UTERI.

E. Ries (*J. A. M. A.*) states that in the beginning when there is no cancer in the body except at the original focus one ought theoretically at least to cure by its removal *en bloc*. In the later stages much wider limits must be given and one must include in the cancer block all the lymph vessels between the original focus and the metastatic foci in adjoining lymph-nodes. One must consider risks of leaving behind infected portions or wandering cancer cells in still uninvolved lymph channels. The observation of these at a distance, however, i. e., of carcinoma in transit, is practically unknown. The improvement in results of operations for cancer in any part of the body can be shown to depend on the continuous rather than the discontinuous dissection out of the morbid growth. Where the dissection is discontinuous the results are most unsatisfactory. The operation for cancer of the cervix involves greater risks than that of cancer of some other portions of the body, that fo the breast, for example. The accessory risks from anesthetic or infection carried in from the outside are the same in carcinoma of the cervix as in other cancer operations. The gravest accessory risk is that of sepsis from the infected primary tumor by the much-dreaded tearing of the cervix or infection of the field from crumbling lymph-nodes, which, in addition to the carcinoma, have been loaded with virulent germs from the primary focus. The author has little doubt that virulent germs may lurk not only in suppurating lymph-nodes, but in lymph-vessels in their neighborhood as well. The enlargement of the block to th elimits indicated by the author in 1895 has greatly improved the remote results, but at the cost of increased inherent risks from hemorrhage, injury to ureters, and large wounds in the connective tissue. The dissection of the ureters out of the broad ligaments unavoidably breaks the rule of continuous dissection, and this is another point of weakness. It could be eliminated if one could include the ureters in the carcinomatous block and resect them every time, but there is a limit to the tolerance of the patient and also of the operator. The operation for cervical cancer is the most extensive he knows of in surgery and there is no means of which he is aware by which one can determine the limits of this tolerance in individual cases.—*Medical Record.*

ERRORS IN DIAGNOSIS OF ABDOMINAL CANCER.

Dr. W. S. Brainbridge, in *New York Medical Journal,* mentions some of the conditions that may be mistaken for abdominal cancer:

1. Appendicitis with abscess formation.

2. Tuberculosis of kidney ,liver, spleen, etc.

3. "Stomach trouble"—healed ulcer, with pyloric stenosis.

4. Stone in kidney, with cachexia, etc.

5. Gallstones.

6. *Apparent Tumors of Stomach.* (Kemp.) Conditions mistaken for:

7. Prolapse of left lobe of liver.

8. Pulsating aorta.

9. Thickening of abdominal muscles (recti).

Gastroptosis is usually associated with these conditions, consequently there is generally a long history of *emaciation.*

10. Simple adhesions of the stomach, generally following gall-bladder disease, gastric ulcer, or localized peritonitis.

11. *Syphilis,* according to Kemp, may present symptoms which simulate carcinoma of the stomach, unless very careful examination is made. He cites three cases.

Kemp's cases: (1) Sclerosis of stomach; (2) Cirrhosis of liver; (3) Stenosis of pylorus, due to gummatous tumor, stimulating malignancy.

12. Aneurysm of celiac axis simulating carcinoma of pylorus.

13. Chronic gastritis.

14. Nervous gastralgia.

TREATMENT OF FURUNCULOSIS OF THE EXTERNAL AUDITORY MEATUS.

G. Laurens, in *Nouveaux Remèdes* for June 24, 1913, advises that a small, flexible wick of gauze be inserted in the canal and the patient be required to drop upon it every two hours a few drops of the following fluid, previously warmed:

℞ Hydrargyri chloridi corrosivi .. gr. 2-5 (0.025 gramme)
Alcoholis .... ℥ (2.5 grammes)
Aquæ destillatæ .... ʒvi (25 grammes)
Glycerini .... ʒvi (25 grammes)
Misce.

The gauze wick should be changed daily.

Hot moist compresses should also be ordered, to be placed over the whole auricular region and be renewed eight to ten times a day.—*New York Med. Jour.*

TREATMENT OF VARICOSE ULCER WITH CHEESE.

Williams, Greene, N.Y., (*Med. Rec.*, Vol. 84, No. 11, Sept. 13, 1913, p. 481) reports the successful use of an ointment composed of "soft, well-ripened cream cheese and equal parts of cream and water" sufficient to make a soft mass, in a case of varicose ulcer of three months' standing. From a size of 2 x 3 inches, the ulcer was cured in 20 days without compelling the patient to go to bed. Some pain on first application he attributes to salt in the cheese.

ANOCI-ASSOCIATION IN GRAVES' DISEASE.

Crile, of Cleveland, (*Interstate Medical Journal*), believes that everyone will agree with him that a technique, that can carry an advanced exophthalmic goitre case through an operation, without increasing the pulse-rate, can all the more readily do as much for any other condition.

If ligation is made, it may be performed without removing the patient from his bed. In such a case nitrous oxide may or may not be administered, but a complete blocking of the local field with novocain during the operation is essential, as is also a complete quinin and urea hydrochloride infiltration at the close of the operation.

If lobectomy is to be performed, fictitious anesthesia under the guise of an inhalation treatment is administered for several days previous to the operation. On some day then, without his knowledge, but with previous consent, the patient is anesthetized with nitrous oxide in his own room, and so is kept free from preoperative psychic strain. When completely anesthetized the patient is taken to the operating room. The progressive division of tissue is preceded by a progressive blocking with 1-400 novocain, so that no activating impulse may reach the brain. Before the wound is closed the entire raw field is infiltrated in every part with quinin and urea hydrochloride. The patient, while still unconscious, is returned to his room and anesthesia continued until his room is completely restored to its previous condition. In the course of the whole cycle from his room to the operation and return, the brain has received no activating stimuli, and as a result there can be no change in the pulse.

This immediate control, however, is not the end of the benefit to the patient. The postoperative hyperthyroidism is prevented or minimized, that is, the later clinical results are improved equally with the immediate results.

The proof of a surgical principle is found in the clinical results of

its employment. In the adoption of this principle at the Lakeside Hospital, Cleveland, Crile has found there is no longer need of a postoperative recovery room; that the work of the nurse has been greatly minimized; that the clinical aspect, both in and out of the operating room, nas been altered. Last year Crile and Lower, performed 729 abdominal sections of every grade with a mortality rate of 1.7 per cent. In the Lakeside Hospital service, where all kinds of acute emergencies are met, and where most of Crile's private work is done, there were last year performed by him and his associate, operations on 2,762 patients, with a mortality was 0.8 per cent., an enviable record.—*The Medical Times.*

THE PREPARATION OF THE PATIENT BEFORE THE OPERATION.

(By Dr. Hermann, Graduate of New York.)

It appeared in the *American Journal of Obs. and Dis. of Women and Children* of March, 1912. We quote a portion of the article as follows:

For the past two years no calomel has been administered to my operative cases. Patients requiring laxatives receive cascara, licorice powder, A. B. & S. pills. If a cathartic is called for, they receive magnesium citrate or magnesium sulphate, in small doses. Compound cathartic pills are very seldom used, and the same is true of castor oil. The majority of my patients go to the ether room with absolutely no cathartics. The rectum and sigmoid are emptied by enemata in all cases before operation. For a morning operation the enema is given late the previous evening and for an afternoon operation the enema is given in the morning.

Since adopting the method of little or no cathartic before operation, I have been convinced more and more that the teaching of the routine administration of cathartics and purgatives before operation is an error. Patients who have not been purged before operation will experience a smoother postoperative convalescence than those who have been subjected to purgatives or cathartics. It must, of course, be considered that the postoperative convalescence of a patient, after all, depends on many factors, and therefore this matter is of difficult diagnosis. The postoperative convalescence will depend on the nature and extent of the operative procedure, on the condition of shock of the patient, on the length of time on the anesthesia, of the power of the resistance of the patient, on the various states on sepsis, etc., and, therefore, it is most difficult to compare the postoperative convalescence of patients. However ,taking all things into consideration, and taking up the cases

in classes, it will be found that the postoperative convalescence of the patients that have not been purged will be more comfortable, smoother, the reaction from the class of patients subjected to free catharsis. The smooth postoperative convalescence of patients not subjected to purgatives is a striking matter and so is, also, the ease with which a bowel movement can be obtained after operation. A small enema of either plain soap suds, or one consisting of glycerine and water, a mild laxative, or a small dose of saline will in almost all cases bring about a bowel evacuation. The bloatings, the bowel distentions, the torments from gas retention, the inability to expel flatus, are all conspicuously absent and if present are so in a mild degree. When a patient has been freely purged she is more apt to suer with gas formation and retention and it is more difficult to obtain a bowel movement from her. The gastro-intestinal storms so to say, which the purgatives administered before operation bring about, can be brought to quiescence with difficulty, and while this storm rages in the abdomen the patient is mighty uncomfortable. Why raise a storm at all? Fifteen years ago when a laparotomy was performed the surgeon's anxiety about the case ceased only after he had obtained a bowel movement, and for a few days after the operation all his efforts were directed toward getting an evacuation of the bowels. When a patient has not been purged it is easy to obtain a bowel movement. If the patient is not distended with gas, has no cramps, passes flatus readily, little or no attention is paid to the bowels. It is not unusual for a patient to go four or even five days after operation without a bowel evacuation. If the patient is uncomfortable and the indications for the necessity of a bowel movement are present an enema or mild laxative is ordered earlier, but with patients who have flat obdomens and no symptoms, particularly if they pass flatus, the evacuation of the bowels is delayed for days.

THE SURGICAL TREATMENT OF PENDULOUS ABDOMEN.

James McKenty (*The Canadian Medical Association Journal*, May, 1913, reports that from a study of the litreature and from a consideration of two cases here reported, the author comes to the following conclusions regarding pendulous abdomen operations:

There are two main indications, first, to bring the rectus muscles together, and secondly, to correct the vertical elongation of the aponeurosis. The double-breasted coat operation, supplemented by a transverse incision with overlapping in the vertical direction, effectively me ts these indications. The Webster operation is suitable for mild degr es of relaxation only. The practice of some surgeons of mobilizing the

rectus muscles, drawing them out of their sheaths, and suturing them together in the median line does not seem well considered, as it disturbs their nerve and vascular supply. A much stronger wall is formed by duplication of the aponeurosis. In cases associated with much subcutaneous fat, the transverse skin incision is preferable, as it permits free excision of the fat in the flanks, where it is most abundant.—*American Journal of Surgery*, Aug., 1913.

GYNÆCOLOGY

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNÆCOLOGIST TO THE TORONTO WESTERN HOSPITAL.

PERITONITIS FROM RUPTURING PUS TUBE.

Every case of pus tubes or parametric abscess, regardless of its duration, should be treated as a case known to contain organisms capable of producing peritonitis in the event of rupture. It is by such a course only that the risk of infection is reduced to the minimum.—F. D. Smythe in the *Southern Medical Journal.—American Journal of Surgery*, Aug., 1913.

ACUTE INTESTINAL OBSTRUCTION.

Richard A. Barr, of Nashville, emphasizes the following points in respect to intestinal obstruction:

1. Digestive disturbances, with colic, following abdominal operations, should be treated with opiates and not by purgatives.

2. A suspected mechanical obstruction should never be treated or tested by purgatives by the month.

3. Under such circumstances the painful peristalsis should be quieted with opiates. Attempts to move the bowel should be made only with enemata.

4. Patients with suspected strangulation of the bowel, or with mechanical obstruction of any type that does not yield promptly to opiates, gastric lavage, purgative enemata, and hypodermoclysis, should be treated by section.

5. In all patients, except desperate cases that are operated on, a search should be made for the obstruction, provided no adhesions are present. This search should, if possible, start with the cecum, and should proceed up or down the gut, as determined by the flaccid or distended state of the cecum.

6. If the obstruction is not located after a brief search, enterostomy should be done at the lowest point in the distended gut that is practicable. This should be made by fastening in a rubber tube with sutures, after the manner of a Kader or Senn gastrostomy.

7. When resection is done for damaged gut, and anastomosis is

considered justifiable, use the lateral suture method, and establish gut drainage by fixing the proximal end of the gut in the operating wound, or in a stab wound, after fixing a tube in it by two or three successive purse strings of catgut. By this means the proximal bowel is given an outlet for its accumulations, and the suture is absolutely relieved from stress and strain due to distention of the gut. Spontaneous closure of the fistula is practically assured, since a portion of it is lined with peritoneum.—*New York Medical Journal,* May 31, 1913.—*New York Med. Times,* July, 1913.

PELVIC DISORDERS AND NEURASTHENIA.

Dr. Carlton Oldfield discusses this subject in the *Practitional* (London). He takes up post-operative neurasthenia, and among other things says:

This serious condition seems to me to be the greatest blot on the fair features of surgery. It results mainly from operations on neurasthenics and on patients predisposed to neurasthenia. Although I cannot agree that all women are neurotics, I think it is wise to regard neurasthenia as one of the chief dangers which a woman has to face, when she is about to have an operation, or even a labor. If we devote ourselves whole-heartedly to the prevention of ugly scars on the abdominal wall, it is surely worth while to give considered care to the prevention of an uglier scar on the mind. This is not the place to discuss in detail the precautions that should be taken; but, generally speaking, they are to prevent, as much as possible, mental and physical pain just before, during, and after an operation or labor.

If I can read the signs of the times aright, there is as great a necessity at present, as in the past, to guard against neurasthenia. Operations on frany neurasthenics should be avoided. Oophorectomy, gastroenterostomy, ventri-suspension, and nephropexy, for symptoms apart from organic disease have, by most surgeons, now been discarded. The present dangers appear to be "appendix dyspepsia" and "intestinal stasis," both conditions being practically devoid of demonstrable physical signs.—*Pacific Medical Journal.*

LEUCORRHEA.

A useful routine prescription for leucorrhea is prepared as follows:

℞ Zinc sulphate ..... 1 dram
Alum ..... 1 dram
Glycerin ..... 6 ounces

A tablespoonful of this is added to a quart of water and used as a daily injection.

A dram of powdered hydrastis to 8 ounces of water makes a useful injection in vaginal leucorrhea and gonorrhea.

THE AUTOPLASTIC OVARIAN GRAFT.

B. Whitehouse (*B. M. J.*) notes that one of the most important uses for this operation is as a conservative measure when it is necessary in a young woman to remove both uterine appendages for old-standing inflammatory disease without having to sacrifice the uterus. Another indication which he puts forward as a suggestion is the possibility of transplanting fragments of ovarian tissue in cases of severe dysmenorrhœa. Instances of most intense menstrual pain undoubtedly occur where the source of discomfort lies, not in the uterus, but in the ovaries. Curetting and drugs rarely cure such patients, and if an examination is conducted during the height of the attack the ovaries can frequently be palpated as extremely tender bodies occupying the posterior quadrants of the pelvis. In more than one case oöphorectomy has been and is still practised for this condition, and the author knows of instances where panhysterectomy has been performed. A cure is undoubtedly effected thus, but, the author asks, may not it be possible to bring about the same result without unsexing the patient, by substituting ovarian grafting? In conclusion the author summarized those points which he regards as essential to the success of a grafting operation: (1) Absolute asepsis and the avoidance of strong antiseptics which would destroy the vitality of the tissues. The apparent contradiction to this maxim in the case of chronic pyosalpinx and salpingo-oöphoritis is met by the fact that the pus in such cases is usually sterile, and the tissues may be treated as surgically "clean." (2) The employment of minute or "seedling" grafts. (3) The presence of a good vascular supply in the tissue used as the bed for the graft. Muscle is entirely satisfactory for the purpose. (4) The ovarian tissue should be left in contact with the body fluids within the peritoneal cavity until it is required for the purposes of the grafts. In the case recorded in this paper the ovary was placed in Douglas's pouch until the time arrived for closure of the abdominal wound.—*Medical Record.*

CERVICAL DECIDUA.

Lynch (*Surgery, Gynaecology and Obstetrics,* June, 1913) reports an example of decidual reaction occurring in multiple cervical polypi

removed from a primipara, aged 22, on account of repeated hemorrhage during the third month of pregnancy. The polypi numbered twelve to fifteen, and varied in length from 4 mm. to 1 cm. In texture they resembled brain substance, and were very soft and friable. The base of the growths covered at least one-fourth of the lining of the canal. Under the microscope the tissue showed areas presenting a typical decidual change. The surface epithelium was low and flattened. The cell margins were distinct, and the nuclei round. In some cases two nuclei were present in the individual cells. Many lymphocytes were seen in the tissue, and the blood vessels were markedly dilated. The author observes that cervical polypi have long been recognized as a cause of bleeding during pregnancy, but no case has been recorded which presents the same picture as that now reported. The majority of records deal with polypi in accosiation with cases of placenta praevia. Nevertheless, the presence of decidual tissue in the cervix was first demonstrated in two cases by Bayer in the folds of the "arbor vitae." The observation was apparently overlooked, and the majority of case reports credit V. Weiss with being the first to control the observation with specimens. Lynch concludes his paper with a full bibliography on the usbject of cervical decidua.—*British Medical Journal.*

TREATMENT OF CYSTITIS IN WOMEN.

The mild cases of this affection will usually clear up under plenty of water and some alkaline diuretic, such as potassium citrate, and hyoscyamus or belladonna. With these it is well to give also hexamethylenamine, in the dose of from 15 to 40 grains (1 to 2.5 Gm.) daily. Absolute rest in bed with the bowels kept moderately loose will hasten recovery. Hot vaginal douches during the acute stage are often comforting. If the dysuria and increased frequency are so marked as to interfere with sleep, sedatives should be given freely.

As the acute symptoms subside, irrigations and instillations are valuable. The author irrigates twice daily with a one-half saturated (2 per cent.) solution of boric acid, and adds to this semi-weekly irrigations with 1:5000 silver nitrate solution, gradually increased in strength. For the instillations, 2 per cent. protargol or 10 per cent. argyrol are efficient. When there are isolated areas of inflammation, direct topical application through the air cystoscope is valuable.

The condition known as cystitis colli is a mild inflatmmation about the internal urethral orifice and trigonum, and is probably of gonorrheal origin. Direct applications of 10 per cent. silver nitrate solution once or twice a week are valuable. They should be followed up by alkaline diuretics.

Occasionally severe cases of non-tuberculous cystitis require the formation of a vesicovaginal fistula, with continuous irrigations for several hours daily in a tub of warm water, before relief is obtained.

Tuberculosis of the bladder in women is almost *prima facie* evidence of tuberculosis of the kidney. After the renal infection has been properly treated, the bladder will tend to clear up. Irrigations of 1:5000 mercury bichloride solution, or instillations of 1:500 or greater strength; silver nitrate in weak solutions, or 10 per cent. iodoform emulsion in glycerine, are helpful. Excision of ulcers or even curettage of the bladder is advisable in some cases. To these loca lmeasures should be added climatic, hygienic, and dietetic treatment, with the aid of which the prognosis can be greatly improved. F. Webb Griffith (*Southern Medical Journal*, July, 1913, and *Monthly Cyclopaedia*).

TREATMENT OF GONOCOCCAL VAGINITIS.

H. Roulland, in *Semaine gynécologique* for February, 1913, states that in the acute period of this affection, absolute rest in bed for a few days should be advised. Vaginal irrigations three times daily with a decoction of poppy or marshmallow, at a maximal temperature of from 102.2 deg. to 104 deg. F. (39 deg. to 40 deg. C.), may be ordered. These may be alternated with a 0.5 per cent. solution of sodium bicarbonate. If the use of a glass cannula proves too painful, a soft rubber tube should be employed. As soon as the pain has been reduced by these irrigations, a one in 4,000 solution of potassium permanganate should be substituted. At night a simple gylcerin suppository, or one medicated with ichthyol, may be left well up in the vagina.

To assuage the marked local pain and burning, the following suppository may be used:

℞ Morphinæ hydrochloridi ..... gr. 1-6 (0.01 gramme)
Extracti belladonna foliorum ... gr. ½ (0.03 gramme)
Olei theobromatis .... gr. xlv (3 grammes)
Fiat suppositorium No. i.

An enema consisting of the following combination might also be ordered:

℞ Antipyrinæ .... gr. xv (1 gramme)
Tincturæ opii .... gtt. xv
Aquæ bullitæ .... ℥v (150 grammes)
Misce.

Copious enemas of water, as well as laxatives, likewise afford considerable relief in these cases. The diet should be light, and fluids freely ingested.

Where the affection is of a subacute type, vaginal irrigations with a one in 2,000 solution of potassium permanganate are alone indicated. In the intervals between injections the walls of the canal should be kept apart by means of a gauze tampon upon which some soothing yet stimulating ointment such as the following, advised by Doléris, should be spread:

℞ Petrolati .... ℥iiss (10 grammes)
Zinci oxidi .... ℥iiss (10 grammes)
Camphoræ .... gr. xlv (3 grammes)
Resorcinolis .... gr. xv (1 gramme)
M. Ft. unguentum.

The amount of gauze should be just sufficient to keep the walls of the vagina apart, and not enough to produce pressure.

When the local redness and burning have distinctly lessened the mucous membrane, including all its folds, should be painted every three days, using a speculum, with a one in 50 or a five in 30 solution of silver nitrate. After this tampons of sterile cotton impregnated with a five per cent. suspension of iodoform in glycerin may be applied to the uterine cervix. If the silver nitrate gives rise to too much pain, a solution of one of the organic silver salts or a colloidal silver preparation may be used. The following preparation may also be employed:

℞ Acidi lactici .... gr. lxxv (5 grammes)
Glycerini .... ℥iii (100 grammes)
Fiat solutio.

When vaginitis becomes chronic it is localized at the cervix and vulva. Metritis and vulvitis are therefore the conditions requiring treatment. The vulva and vagina should be repeatedly washed with soap and water morning and evening. Applications of silver nitrate, colloidal silver, or concentrated permanganate solutions are indicated and will not fail to yield beneficial results.—*New York Med. Jour.*

PRACTICAL ITEMS

SINUS DISEASE AND THE EYES.

1. Sinus involvements are found to explain and clarify the etiology and pathology of many ocular and orbital diseases.

2. Sinus diseases and ocular complications have been especially prevalent in Los Angeles and Southern California the past two or three years.

3. In our examinations special care and repeated efforts are neces-

sary in order to discover the source of the trouble in non-suppurative and closed suppurative cases of sinus involvement.

4. No part of the eye or its appendages is exempt from secondary invasion from sinus disease.

5. Such cases frequently occur in the epidemic form.

6. Early recognition of the exact nature of such cases is highly important in pointing the way to correct therapy and the conservation of the health and the preservation of the eyes of those who apply to us for relief.

HYDRONEPHROSIS.

1. The diagnosis of hydronephrosis is materially aided and, in some instances, only feasible by pyelography.

2. It offers a valuable guide to the method of treatment or operative procedure to be followed in a given case.

3. This method should be applied only on the basis of strict indications and by a skilled operator.

WEEPING ERYTHEMATOUS ECZEMA.

When occurring upon the face there is usually much edema of the loose tissue in the infra-orbital region, so that the condition may be mistaken for erysipelas. Avoid greasy applications and use wet dressings soaked in normal saline. This lotion will relieve the irritation and smarting:

℞ Calaminæ .... ℥jj.
Zinci Oxidi .... ℥j.
Glycerini .... ℥ss.
Aq. Calcis .... ad ℥vj.
M. Ft. Lotio.

When the exudation has practically ceased, one may use a powder of oleo-palmitate of zinc, mixed with one-half its weight of powdered starch, or this zinc cream:

℞ Zinci Oxidi .... ℥j.
Adipis Lanæ ..... ℥ij.
Ol. Olivæ, Aq. Calcis, ana partes æquales .... ad ℥iv.
M. Ft. Cremor.

TREATMENT OF MUCOUS COLITIS IN CHILDREN.

T. R. C. Whipham states that in the management of this condition it is necessary to exclude sugars from the diet and to administer alkalies

to dissolve the mucous. The following may be given regularly before meals:

℞ Potass. bicarb.,
Potass. citrat., aa grs. v.
Tinct, nuc, vom., ♏ ii.
Inf, gentiane co. (B.P.), ad ℥ii.

A rhubarb and soda powder ,together with 2 grains of gray powder, should be given every night or every other night.—*Medical Diseases of Children.*

BLEPHARITIS.

Blepharitis is a condition common in children and one which should at once raise a suspicion of eye-strain. The blepharitis can be got rid of by bathing and ointments, but the cases quickly relapse unless the error of refraction is treated.

DEPILATORY.

A good depilatory is a mixture of one dram each of starch and barium and one-half dram of zinc oxid. Mix with a little water in a watch glass, and apply to the part to be denuded. Remove after two minutes, when the hair will usually have disappeared.

WILKINSON'S SALVE FOR PRURIGO.

℞ Sulphuris precipitati .... ℥iss
Olei rusci .... ℥iss
Cretæ præparatæ .... gr. xl (x2)
Saponis mollis .... ℥iiss
Adipis .... q. s. ad. ℥i

M. Sig.: For external use.

From *Hare's Modern Treatment,* by Fox.

POINTS IN DIAGNOSIS.

The following items of diagnostic importance may be gathered from this group of cases:

1. The loss of the sense of smell may be of very great use in localizing the disease in the prefrontal area. I find that some textbooks do not make this clear; they mention this disturbance rather as resulting from a lesion of the uncinate gyrus of the temporal lobe; Oppenheim, moreover, states that he has repeatedly observed the occurrence of unilateral or bilateral anosmia associated with tumors of the cerebellum, resulting from the pressure of the base of the brain upon the olfactory nerve. Had this statement been allowed to prevail in the cogitations

upon the situation of the tumor in the first case, it must have misled us into seeking the growth in the posterior fossa.

2. Three of the cases supply confirmation of the assertion that in frontal tumors it is the eye on the side of the tumor that is likely to be affected the earlier and the more severely.

3. The X-ray picture may conduce to certainty in localization by revealing a circumscribed hyperostosis over the tumor.

4. Circumscribed tenderness of the skull to pressure or percussion may be a valuable localizing sign.

5. Whatever a positive Wassermann may mean, it does not necessarily mean that the patient's cerebral disease is cerebral syphilis.

TREATMENT OF DIPHTHERIA BACILLUS CARRIERS.

J. D. Rolleston treated ten chronic diphtheria bacillus carriers by spraying and swabbing the throat and nose with a bouillon culture of staphylococcus pyogenes aureus. In six faucial cases findings became negative within two to seven days after starting the treatment. In the two nasal cases the treatment was ineffective. In all but two cases a mild form of sore throat was produced, but no complication ensued.—*British Journal of Children's Diseases.*

USES OF SODIUM CITRATE IN DYSPEPSIAS.

Plicque, in *Bulletin médicale* for May 31, 1913, states that sodium citrate appears to exert, in the treatment of dyspepsia, several beneficial actions. In the first place, it facilitates the digestion of milk when a milk diet is being given, preventing the formation of large, compact clots where the fluid is drunk too quickly or in excessive amount at one time. Variot showed that many cases of infantile dyspepsia, such as occur so often in bottle-fed infants, yield when a tablespoonful of the following solution is added to each four ounce (120 gramme) bottle ful of milk:

℞ Sodii citratis ..... gr. xxx (2 grammes)
Aquæ destillatæ ..... ℥iii (100 grammes)
Solve.

Again, sodium citrate acts as an alkali, and as such, becomes a soothing agent in cases of pyrosis, besides diminishing gaseous fermentation and even obviating the regurgitation of food.

Finally, sodium citrate, even in small doses, is a very good laxative. In combating constipation, so frequent among dyspeptics, it lessens

autointoxication from intestinal fermentative processes and obviates the mechanical disturbances resulting from the accumulation of gases. In constipation associated with hepatic congestion, Huchard frequently advised its employment, along with solium sulphate and bicarbonate:

℞ Sodii citratis .... 3v (20 grammes)
Sodii bicarbonatis .... 3v (20 grammes)
Sodii sulphatis .... 3v (20 grammes)
M. Sig.: One teaspoonful every morning in a hot infusion.

Even if given without the sodium sulphate, sodium citrate acts quite sufficiently as a laxative.—*N. Y. Med. Journal.*

TREATMENT OF CONSTIPATION.

Phoebus, in *Paris médical* for March 15, 1913, is credited with the following formula of a laxative suppository:

℞ Sodii sulphatis exsiccati ... ... 3ii (8 grammes)
Saponisebli pulveris ... ... 3iv (16 grammes)
Mellis spissi ..... q. s.
M. Fiant suppositoria No. iv.

An electuary of sulphur for the treatment of habitual constipation might be prescribed thus:

℞ Sulphuris loti .... ℥i (30 grammes)
Potassii bitartratis ... . ℥ss (15 grammes)
Mellis albi .... ℥iii (90 grammes)
M. Sig.: One teaspoonful once or twice daily.

THERAPEUTIC HINTS

THE TREATMENT OF ATONY OF THE STOMACH.

L. Pron outlines the dietetic and medicinal treatment of this condition as follows: The patient may eat meat and a small quantity of bread. He may partake at dinner of a glass of light wine diluted with plain mineral water. A small cup of coffee at the close of this meal is permissible. There are indicated all those medicinal agents that favor the evacuation of the stomach—whether or not their action is a chemical one. For the loss of appetite the following mixtures have been found of distinct value:

℞ Tincture of gentian .... 5 grams
Tincture of quassia .... 5 grams
Tincture of calumba .... 5 grams
Tincture of anise (Russian Pharmacopeia) . . 5 grams

The dose is 20 to 40 drops in a quarter of a glass of water twenty minutes before meals.

℞ Tincture of nux vomica ..... 5 grams
Tincture of gentian ..... 5 grams

The dose is the same as the above.

℞ Tincture of condurango ..... 60 grams
Glycerin ..... 60 grams

Of this mixture the dose is one teaspoonful in a little water and should be taken fifteen minutes before each meal.

Another remedy is tincture of jaborandi in twenty-drop doses, one-quarter of an hour before meals, or its alkaloid pilocarpine, in the following solution:

℞ Pilocarpine nitrate ..... 0.05 gram
Distilled water ..... 150 grams

The dose is a tablespoonful before each meal. Ipecac may be administered in doses of 10 to 20 drops of the tincture (German Pharmacopeia). Of similar efficacy is bicarbonate of sodium, one-half gram in a little water, one-half hour before meals. The postprandial distress is relieved by the following:

℞ Potassium sulphate ..... 0.05 gram
Potassium nitrate ..... 0.05 gram
Powdered ipecac ..... 0.01 gram
Amorphous quassin ..... 0.01 to 0.02 gram
Powdered nux vomica ..... 0.02 gram

This powder is to be taken immediately after each meal.

Another important stimulant of smooth muscle is magnesium chloride, which may be given as follows:

℞ Magnesium chloride ..... 1 gram
Distilled water ..... 150 grams

Of this solution a tablespoonful is given before or after meals.

If the gastric atony is accompanied by pain one may give 10 to 15 drops of equal parts of tincture of condurango and tincture of hyoscyamus, one-quarter of an hour before meals; or the following:

℞ Sodium sulphate ..... 2.50 grams
Sodium phosphate ..... 2.50 grams
Sodium bromide ..... 2.50 grams
Distilled water ..... 250 grams

One tablespoonful is given twice a day, ten minutes before meals.

Dover's powder in 0.2 gram doses may be given after each meal, or one-half teaspoonful of Hoffman's anodyne in a little sweetened water.—*Thérapeutique Clinique des Maladies de l'Estomac.—Med. Record.*

PERSONAL AND NEWS ITEMS

Ontario.

A deputation waited upon Hon. Dr. Pyne, Minister of Education, a short time ago and urged that medical inspection of school children be made compulsory throughout the Province. Dr. Pyne said that he was of the opinion that ultimately medical inspection of school children would pertain in all the schools.

At a meeting of medical men held in St. Thomas it was decided to organize a Medical Health Association in Elgin County, and Dr. Dorland, of Rodney, was elected president; Dr. McKillip, health officer, St. Thomas, first vice-president; Dr. Shannon, St. Thomas, secretary-treasurer.

There was reported an overdraft of $23,000 in the Health Department of Toronto. The Board of Health was loud in its praises of the work of Dr. Hastings.

Dr. D. E. Struthers has urged an improved condition of the toilets in the public schools. He contended the exposed toilets should be discontinued, and that there should be one for every ten scholars.

The new cases of tuberculosis reported to the Health Department of Toronto, during November, numbered 61. On December 1, 1,451 cases were on the visiting list. The number of deaths during the month was 15.

The attention of Hon. W. J. Hanna has been directed to the lack of hospitals in Northern Ontario. To the fact that doctors are often far apart and large districts without any real medical attendance. It has been suggested that medical cabinets for first aid work be fitted up and supplied to some of these districts.

On the occasion of leaving Harriston to enter upon the practice of his profession at Oakville, Dr. Thomas R. Henry was on 5th December entertained by a large number of friends and presented with a valuable gold locket and chain suitably inscribed.

The new wing of the Infants' Home, Toronto, was opened a short time ago. It cost $60,000. It was equipped at a cost of $4,000 by the Ladies' Board.

At a meeting of the Medical Officers of Health of Kent recently, called by Dr. Bentley, the district officer, a Kent County Health Officers' Association was formed to promote the general health of the county and to make a special study of sanitary surroundings. The officers elected were: President, Dr. C. R. Charteris, Chatham; vice-

president, Dr. Hanks, Blenheim; secretary, Dr. Reid, Merlin. An effort will be made to secure data relative to the health conditions of the county to serve as a basis for recommendations which will later be made to the various municipalities.

A Society for the Care of Children has been formed in the county of Welland. The officers elected were: President, J. W. Marshall; vice-president, James Gilmore, Welland, and a representative from every other municipality in the county; secretary-treasurer, John Flower, Welland.

The new $40,000 addition to St. Joseph's Hospital in Chatham was formally opened 1st December. The ladies of St. Joseph's Church conducted a bazaar to assist in defraying the expenses of the addition.

Dr. Wm. H. Ross, formerly head of Byron Sanitarium, London, Ont., was recently found guilty of bigamy and sentenced to twenty-one months in Central Prison by Judge MacBeth.

During 1913 in Toronto there were 73 deaths from diphtheria, 45 from scarlet fever, and 52 from typhoid fever.

At a recent meeting of the Toronto Humane Society it was stated by some that there was a belief that the society supplied animals for vivisection experiments. It was stated in reply to this that the society had been accused of buying up small animals to prevent them being used in laboratories. Many members of the society expressed themselves as opposed to vivisection.

Dr. A. D. McKelvey has located at 193 Bloor Street East, Toronto, and is limiting his practice to diseases of the ear, nose and throat.

Dr. J. Gordon Gallie has opened his offices at 153 College Street, Toronto, and will specialize in obstetrics.

Quebec.

The late Hugh Watson, of Montreal, left $122,000 in twenty-three separate bequests to charities.

Western Provinces.

Hon. Dr. W. H. Montague had a majority of 370 in Kildonan and St. Andrews, Manitoba. He has joined the Cabinet of Sir. R. Roblin, as Minister of Public Works. Dr. Montague graduated in medicine from the University of Toronto in 1880.

Dr. N. M. McNeil, of Prince Rupert, B.C., has gone to Europe for a period of post-graduate study.

The Calgary Medical Society has elected Dr. T. J. Costello, president; Dr. G. R. Johnson, vice-president; Dr. Roache, secretary, and Drs. Madden, McKeachan and H. Johnson, executive committee.

Dr. J. W. McNeil, late of Hanley, Sask., has been appointed superintendent of the asylum at Battleford, Sask.

From Abroad.

The Daily Mirror says the British scientists, Rolfe and Smith, have discovered a method of extracting radium economically from the residue of vanadium ore imported from Colorado. The vanadium is used in the manufacture of steel.

Sir Rickman J. Godlee, surgeon to King George of England, and president of the Royal College of Surgeons of England, was made an honorary member of the National Institute of Social Sciences, New York.

The Society in Aid of the Lepers has collected $1,164.24 for this work. In 1881 there were 121,000 lepers in India, whereas last year there were only 82,000.

Fire in the west wing of the main building of the Rochester State Hospital occurred on 19th November past, which resulted in removing 105 patients from the building, and for a time threatened serious results.

The Board of Health officials of Wheeling, W. Va., have discovered a "Diphtheria Mary" similar to "Typhoid Mary," who some time ago caused the New York health authorities so much trouble. The local germ incubator is Mildren Shilton, 14 years old. According to Health Officer W. C. Etzler, the girl carries millions of the diphtheria germs around in her system, yet she never has been ill of the disease.

Helen Keller, who has educated herseif despite the overwhelming handicap of being deaf, dumb and blind since she was a young girl, and Dr. Maria Montessori, famous Italian teacher of children, recently held an hour's conference in Dr. Montessori's rooms at the Holland House, New York. Dr. Montessori was amazed at the famous girl's developments and at the system of education developed by Miss Keller, who explained it in detail.

Dr. Charles McBurney, the well-known New York surgeon, died on 7th November, 1913, at the age of 68 years. He is known the world over as the surgeon who directed attention to a certain part of the abdomen as of diagnostic value in appendicitis, called "McBurney's Point." He also worked out the details of the steam sterilizer. He is also largely responsible for the introduction of rubber gloves in operations. He was

a man of remarkably alert mind, and could on the moment devise some method for coping with the many surgical problems that arose in his daily work.

Professor F. Loeffler, who since 1888 has occupied the chair of Hygiene in the University of Greifswald, has been appointed director of the Koch Institute of Infectious Diseases at Berlin, in succession to Professor Gaffky.

The convocation exercises of the American College of Surgeons were held in the gold room of the Auditorium Annex, Chicago, November 12, 1913. The names of the surgeons who were made members of the College were read by the secretary, Dr. Franklin H. Martin, Chicago, and the president, Dr. J. M. T. Finney, Baltimore, pronounced them fellows of the College. The number of fellows admitted was 1,050. Sir Rickman Godlee, president of the Royal College of Surgeons of England, read a message to the members of the College from the Council of the Royal College of England. In the message felicitations were conveyed to the Americans and hopes expressed that the College would grow and prosper and that by its influence the ideals and standards of surgery in America would be advanced and maintained on a high plane. The following were made honorary members of the College: Dr. W. W. Keen, Philadelphia; Dr. William S. Halsted, Baltimore, and Dr. J. Collins Warren, Boston. President Finney in his address urged every member of the College to assist in raising the ideals of the profession and to erase the blots which now disfigured the escutcheon of the business of surgery. One of the most important functions of the College, he said, is to wage a relentless war against the evil practices with which the profession is tainted, chief among which is the pernicious practice of fee-splitting and giving commissions.

The corner-stone of the new Children's Hospital, of Philadelphia, to be erected at Eighteenth and Bainbridge Streets, was laid with appropriate ceremonies on October 22. The actual placing of the stone in position was done by Miss Charlotte Rush, a lineal descendant of Dr. Benjamin Rush. Addresses were made, among others, by Dr. Joseph S. Neff, Director of Public Health and Charities, and Dr. J. Claxton Gittings, secretary of the medical staff of the hospital.

A Royal Commission on Venereal Diseases has been appointed in Britain. This is an event of very great importance.

Professor Ernest Henry Starling, F.R.S., M.D., has been awarded a medal by the Royal Society for his contributions to the advancement of physiology.

To the student of Russian civilization the prevalence of alcoholism will account in a large part for the barbarianism, superstitiousness, and a low grade of morality of the masses. Just how early in life

the Russian begins to drink *vodka* (spirits), the following figures taken by *Roussky Vratch* from two Russian newspapers show: In the Government of Saratoff 79 per cent. of the boys and 48 per cent. of the girls, ranging in ages from five to ten years, drank either spirits or beer. Of the 1,350 boys and 600 girls questioned, 296 boys and 35 girls drank to intoxication. In the Government of Pskoff of 5,101 children investigated, 83 per cent. of the boys and 68 per cent. of the girls drank, the ages ranging from six to eight, and in some instances from three to four. Of 4,034 children 30 per cent. of the boys and 8 per cent. of the girls drank to intoxication. It is recorded in history that when Vladimir the saint was choosing a new religion for the Russian people he rejected Mohammedanism on the ground that it "does not permit drink and a Russ can't be without it."

Pneumonia, a dirty-air disease, is still taking terrible toll of human lives in Chicago. During the first ten months of this year 4,164 persons in this city were killed with pneumonia, an increase of 61 over the deaths from this same disease for the corresponding period of 1912. For the month of October, there were 213 deaths due to pneumonia, as compared with 311 for the same month of last year. These figures, despite the better showing made for this disease in October of this year, show that people continue to be indifferent as to the kind of air they get; and that hibernation rather than ventilation is still popular among a large number of our citizens.

Dr. Charles Scott Sherrington, Professor of Physiology in the University of Liverpool, has been appointed Waynflete Professor of Surgery in the University of Oxford.

The fifth annual convention of the American Association of Clinical Research was held in Chicago during the week of Nov. 8th. Dr. Leonard H. Hirshberg, of Baltimore, was elected president, and Dr. James Krauss, of Boston, secretary and treasurer, for the ensuing year.

Edward Nettleship, F.R.C.S., F.R.S., died at his home near Haslemere on 30th October. He was a distinguished ophthalmic surgeon, and was a noted writer on diseases of the eye.

Owing to the extensive prevalence of uncinariasis in Asia, it is believed that many immigrants entering the United States through Pacific ports bring with them this undesirable infection. Report from Washington, D.C., on Nov. 3 states that quarantine officials have been directed hereafter to inspect for this disease, and to hold such persons fo rtreatment before admission.

At a meeting of the New York chapter of the American National Red Cross Society, held on Oct. 31, it was announced that the gifts of $100,000 each from James A. Scrymser and Jacob H. Schiff and an annual endowment of $2,000 from Mrs. Whitelaw Reid had been re-

ceived for the society. Some time since, the $500,000 endowment fund which President Taft appointed a committee to collect in New York was completed by the contribution of $100,000 by the late J. Pierpont Morgan.

OBITUARY

R. C. YOUNG.

Dr. R. C. Young, who practised his profession since 1874 in Ridgetown, Ont., until the past two years, died in Detroit, Mich., 25th November, aged 62 years. The deceased was born in Wentworth County, graduated from McGill, Montreal, and the Ontario College of Physicians He was twice Mayor of Ridgetown, and a prominent Mason. A widow, and one son survive him.

JOHN M. DEE.

Dr. John M. Dee, a lifelong resident of Stamford, died at the family homestead near Stamford Green, 2nd December, at the advanced age of 80 years. He had been in poor health for some time, but his death nevertheless came as a shock to his many friends. He was unmarried, and leaves a nephew and niece in Buffalo. Born in the town of Stamford, Dr. Dee was one of the best-known practitioners in the Niagara peninsula, and up to three years ago was in active practice. Stamford Green was laid out by his ancestors many years ago, and, as a memorial to his name, Dr. Dee several years ago deeded the property to the township that it might always be a park.

S. C. PREVOST.

Dr. Prevost, of Ottawa, had been in poor health for some time. He went to California for his health, but without benefit. He died on 8th November, 1913.

ARTHUR FISHER.

In the death, on 3rd December, of Dr. Arthur Fisher, father of Hon. Sydney Fisher, Montreal lost one of its most loyal and patriotic citizens.

Dr. Fisher, who was 98 years of age, had the unique experience of

seeing Montreal grow from being a city of 15,000 population to being the chief city in the Dominion, with a population of 600,000. Fifty years ago he predicted that Montreal would be the largest Canadian city, and the fulfilment of his early prophecy was a source of keen pleasure to him. He always took deep interest in the city's progress and its welfare, and he kept in touch with its affairs until within a few weeks of his death. The construction of the tunnel through the mountain was also predicted by Dr. Fisher, who said many years ago that the tunnel would have to come some time.

The late Dr. Fisher was born in Montreal on March 2, 1816. He was educated in Montreal and in Edinburgh, Scotland. He was a licentiate of the Royal College of Surgeons, Edinburgh. He returned to his home city after graduating in the old land, and was one of the first physicians to introduce the school of homeopathy in medical practice in this city. He continued to practise his profession until about fifty years ago, when he retired.

Dr. Fisher belonged to one of the pioneer English-speaking families in Quebec. His father, Mr. John Fisher, was born in Montreal about 1790, the family having come from Dunkeld, Scotland, in 1785. After a short residence in Quebec, they removed to Montreal, where the family home has been ever since. In later years, he spent most of his summers with his son, the Hon. Sydney Fisher, at Knowlton.

Hon. Sydney Fisher is the only son. A sister, Miss Agnes Fisher, also survives.

JOHN CAVEN.

Dr. John Caven, B.A., University of Toronto, M.D., C.M., Victoria College, and L.R.C.P., London, England, died 10th December, of Bright's disease, at his residence, 66 Bloor Street West, Toronto. The late doctor had been suffering for a month.

The deceased for a number of years had been a consulting specialist of wide distinction. He had a winning personality.

Twenty-four years ago he married Miss Minnie Eastwood, of Toronto, who survives him. Dr. W. P. Caven, and Dr. J. J. Caven, of Toronto, are brothers, and Mrs. Wilson, of Indore, India, and Miss Caven, of Farnham Avenue, Toronto, sisters of the deceased.

Born in St. Mary's, Ont., in 1860, he was the eldest son of the late Principal Caven, of Knox College. His early education was obtained at the Model School and Upper Canada College, under the late Principal Cockburn.

Graduating from Upper Canada College he entered University of Toronto, taking his Arts degree. From the University to the Toronto Medical College was the next step, and from there to London, England. In England Dr. Caven obtained the diploma of L.R.C.P. He then took a course of study at Strasburg, Germany, in pathological work. Returning to University of Toronto he became Professor of Pathology. Eventually he went into private practice.

The well-known doctor was a Liberal in politics. Very fond of birds and plants, they attracted much of his attention, and he was considered an authority on them. A great reader, he was widely informed on many questions of the day. He was a member of Westminster Presbyterian church. The funeral was a private one to Mount Pleasant Cemetery.

BOOK REVIEWS

CASE HISTORIES IN PEDIATRIES.

A Collection of Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Diseases of Infancy and Childhood, with an Introductory Section on the Normal Development and Physical Examination of Infants and Children, by John Lovett Morse, M.A., M.D., Associate Professor of Pediatries, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and at the Children's Hospital, Boston. Second edition. Boston: W. M. Leonard, publisher, 1913.

In this edition the number of case histories has been doubled. The author, in this way, has been enabled to cover the ground of the diagnosis and treatment of children's diseases much more fully than in the former edition. Typical and atypical examples of the diseases affecting the various systems are taken as the basis of study. From the signs and symptoms recorded a diagnosis is made out, and then the best line of treatment laid down. This method of dealing with medical and surgical diseases has come to the front of late, and is destined to occupy more attention in the future. Abernethy once said that "the hospital is the only proper college in which to rear a true disciple of Æsculapius." Next to the wards of the hospital, a case book is the next best. We can very heartily recommend this volume of 640 pages to all who wish a very practical and useful book on the diseases of infancy and childhood. The publishers have issued the work in an attractive form.

THE MEDICAL SOCIETY.

The Ideals and Organization of a Medical Society. By Jamieson B. Hurry, M.A., M.D., author of "A History of the Reading Pathological Society." London: J. & A. Churchill, 7 Great Marlborough Street. Price, 2s net.

This is a beautiful little volume. Everything about it is attractive and artistic. This much must be said for the well-known publishers. For the author we wish to offer our words of commendation to his excellent description of the working of a well-managed medical society. He is particularly apt in his choice of quotations for his various sections. Among these we would mention the following: "With purity and with holiness I will pass my life and practise my art." (Oath of Hippocrates). "A society plays the part of a whet-stone which rendereth iron sharp." "A council of the good and the wise (Quintilian) men can yield nothing more acceptable to the gods than by giving health to their fellow men," (Cicero). "Men worthy the song of Apollo." "The great consulting room of a wise man is a library," (George Dawson). "A library and a museum are twin institutions having for their common aim the advance of knowledge," (Sir Jonathan Hutchinson). "The most pleasing records of many benefactors," (Cicero). "Historical portrait galleries far transcend in worth all other kinds of national collections of pictures whatever," (Carlyle). The remarks on all the phases of the working of a medical society are worthy of attention.

THE PREVENTION OF TUBERCULOSIS.

The Canadian Association for the Prevention of Tuberculosis, Thirteenth Annual Report, with the Transactions of the Annual Meeting held in Ottawa, Ont., March 12th and 13th, 1913. Ottawa and Montreal:The Mortimer Press.

All through this volume are the evidences of earnest and progressive work. This association has now secured a firm foothold on the confidence of the people. From year to year it is spreading forth useful knowledge. The effect is being felt far and near for good.

THE PRACTITIONER'S VISITING LIST.

The Practitioner's Visiting List for 1914. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each is one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, $1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Philadelphia and New York: Lea & Febiger.

Being in its thirtieth year of issue "The Practitioner's Visiting List" embodies the results of long experience and study devoted to its development and perfection.

It is issued in four styles to meet the requirements of every practitioner: "Weekly," dated for 30 patients; "Monthly," undated for 120 patients per month; "Perpetual," undated, for 30 patients weekly per year, and "60 Patients," undated, for 60 patients weekly per year.

The text portion of "The Practitioners' Visiting List for 1914 has been thoroughly revised and brought up to date. It contains, among other valuable information, a scheme of dentition; tables of weights and measures and comparative scales; instructions for examining the urine; diagnostic table of eruptive fevers; incompatibles, poisons and antidotes; directions for effecting artificial respiration; extensive table of doeses; an alphabetical table of diseases and their remedies, and directions for ligation of arteries. The record portion contains ruled blanks of various kinds, adapted for noting all details of practice and professional business.

Printed on fine, tough paper suitable for either pen or pencil, and bound with the utmost strength in handsome grained leather, "The Practitioners' Visiting List" is sold at the lowest price compatible with perfection in every detail.

UROLOGICAL ASSOCIATION.

Transactions of the American Urological Association, Twelfth Annual Meeting at Boston, Mass., April 15, 16 and 17, 1913. Publication Committee: Hugh Cabot, Richard F. O'Neil and George G. Smith. Printed for the Association at the Riverdale Press, Brookline, Mass., 1913.

This association has much reason to be proud of its work. The volume before us tells of much study and steady advances in a very important branch of the healing art. The papers and discussions are such as to command respect, and to form a safe guide to those who are giving attention to this field of practice.

INTERNATIONAL CLINICS.

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthalmology, Pathology, Otology, Rhinology, Loryngology, Hygiene and Other Topics of Interest to Students and Practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, and John A. Witherspoon, M.D., Nashville. Vol. iv., twenty-third series, 1913. Philadelphia and London: J. B. Lippincott Company. Montreal: Charles Roberts, 201 Unity Bldg.

This is the last volume for the year 1913, and is like all that have gone before it, of a very high order. The articles are excellent and

prepared by persons who can speak with authority on the subjects they discuss. In this volume are articles on treatment, medicine, neurology, surgery and eugenics. The illustrations are numerous and well executed, and a number are in colors. Of this volume we can do, as we have had the pleasure of doing so often in the past, speak in terms of commendation of this series and of this volume in particular.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and L. F. Appleman, M.D. Vol. iv., December, 1913. Philadelphia and New York: Lea and Febiger, 1913. Price in paper, $6.00 per year.

Progressive medicine holds its own. This volume takes up diseases of the digestive tract by Edward H. Goodman, M.D.; diseases of the kidneys by John Rose, Bradford, F.R.C.P.; genito-urinary diseases, by C. W. Bonney; surgery of the extremities, etc., by J. C. Bloodgood, M.D.; and practical therapeutic referendum, by H. R. M. Landis, M.D. Each contributor has done his part well. The articles are all interesting and valuable. We can recommend this series of volumes.

CONTROL OF SMALLPOX.

The Administrative Control of Smallpox: How to Prevent or Stop an Outbreak. By W. McC. Wanklyn, B.A., M.R.C.S., L.R.C.P., D.P.H., Fellow of the Royal Society of Medicine, Fellow of the Society of Medical Officers of Health, etc. London, New York, Bombay and Calcutta: Longmans, Green and Co., 1913. Price, 3s. 6d.

This is a distinctly valuable contribution to the subject of preventive medicine. The chapters are a general review, some points in the natural history of smallpox, details of administration, the intelligence department, other practical details, the observation of contacts, vaccination, an outbreak and how to handle it, and a recapitulation. Under these headings the author tells us what he has to state about the control of smallpox. His views are sound and practical, and some with authority from one who has had much experience. The book is an attractive one.

MISCELLANEOUS MEDICAL NEWS

EDINBURGH UNIVERSITY CLUB DINNER.

Ottawa, December 17th, 1913.

Dear Dr. Ferguson:

The dinner of the Edinburgh University Club of North America

takes place at Chateau Laurier here to-morrow. The celebrated Dr. Storer, of Boston, now in his 84th year, is unable to be present, and wrote the inclosed letter to the secretary, Dr. Maloney, of New York. The letter is so interesting, instructive and historic I thought it should appear in *The Canada Lancet*. Dr. Storer, as you are aware, was for some time the assistant of Sir James Y. Simpson, and well known in scientific medical circles. President Falconer, of Toronto University, is President of Club.

Wishing you and yours the compliments of the season,

Very sincerely yours,

J. A. GRANT.

Newport, R.I., December 15, 1913.

To the Secretary, Edinburgh University Club of North America:

Dear Sir,—As you already know, I regret very much my inability to attend the meeting of the Edinburgh University Club at Ottawa. The friendships that I have enjoyed in Canada have been so many, the ties, both professional and more vital, that have bound me to the Dominion have been so strong, that whenever I have crossed the border I have always felt that I was still at home. Very many years ago I was honored by membership in the Canadian Medical Association and the New Brunswick Medical Society, and when in 1876, then a householder in London, I was admitted by formal vote of the Branch Council of England to enrollment upon the official medical register, as many of yourselves, "a British practitioner resident abroad," I recognized that the bond between us was much more than a merely nominal one.

Most of my contemporaries, upon your side and upon my own side of the Great Lakes, are now dead. It is one of the severest trials of old age to be left thus alone. It has, however, this consolation, and I may also say compensation, that with the many delighteful memories of the past, one can the better appreciate the medical and surgical victories and progress of the present, and foresee by proud comparison what must inevitably result from these all in the future.

I am old enough to know from personal experience the terrible days when I entered the profession in 1853. Surgical anæsthesia had been but recently discovered. Crawford Long, of Athens, Georgia, had employed sulphuric ether during operations in 1842. The method had been rediscovered, to use a charitable term, in Boston in 1846. Your own Simpson had suggested the infinitely superior chloroform in 1847, but in 1853 neither of these agents had come into its own.

Even at the Massachusetts General Hospital, where I commenced my pupilage, and at which my father was then and for many years one of the medical staff, operations were still performed without even the lesser solace of whisky and opium, and the cries and writhings of intense suffering still almost unnerved both operator and beholder. Obstetric unconsciousness, so protective of the lives of both mother and child, was still condemned by theologians, and ungranted by physicians, save by the most sympathetic and bravest of accoucheurs. The union of surgical wounds by first intention was almost unknown. They always closed by granulation merely reeking as they were with pus. Erysipelas and sepsis universally prevailed. Maternity hospitals, especially were but charnal houses. Simpson, through his papers upon hospitalism, depicting all these horrors, and the misfortunes that attended every surgeon, no matter what his technical skill, would have incontinently destroyed every hospital, or purged its walls with fire. It was only the work that Lister was even then commencing, impelled no doubt by his teacher, Simpson's revelations, that saved to the world the enormous pecuniary loss that by the removal of these virtual morgues would otherwise have occurred.

At Edinburgh I saw somewhat of Lister, a year or two my senior, and then a subordinate at the Royal Infirmary. The quiet young Quaker, devoted to his duties as assistant, gave little promise, save in his already prospective conquest of his master, Syme, as his father-in-law, of the gift he was eventually to confer upon surgery and general humanity.

It was my great good fortune, though yet still a tyro, to have contributed my little aid to the then few great leaders in the progressive field. Immediately subsequent to 1853, during my residence in Edinburgh in 1854 and 1855, as a student of Syme, the great surgeon, Christison, the famous toxicologist and medical jurist, and Simpson, alike the conqueror and leader of our profession, there were laid the foundations of all that I personally have been able to do towards guiding medical and surgical thought and practice. Even feebler men than Hercules have their place in combatting the ever-appearing progeny of the professional Hydra. My now fifty-eight years of official hospital service have been extremely interesting ones.

Shortly after my return to Boston, we began to hear, in 1866, of Pasteur's wonderful achievements, and then of Lister's philosophical developments of what the illustrious French savant had accomplished. The suggestions of Lister were at first received upon this side of the water with the same disbelief and obloquy that always characterize the inception of any great advance in medicine or surgery. The very term "biology" was scouted as the latest conception based upon utter non-

sense and fruitless transcendentalism. Very soon after his reports reached America, carbolic acid atomization was in full employment at St. Elizabeth's Hospital, in Boston, then under my headship, and in my private practice! The wards were saturated with its vapor, the beds, and the patients themselves. At every abdominal section we flooded the abdomen and the after-dressings with the spray. In my instructions to the nurses, and it was at St. Elizabeth's that systematic nurse training in America has been thought to have initiated, antisepsis to the very limit was insisted upon.

Gynaecological Listerism may be said to have been unconsciously foreshadowed by Holmes, of Boston, in his "Puerperal Fever a Private Pestilence," just as obstetric anaesthesia was dreamed of by an early Edinburgh student, our great Benjamin Rush, of Philadelphia, "the American Sydenham," but these men were both of them but as John the Baptist crying in the wilderness. They were heard, but not understood or heeded, and they were both forgotten until their words were disinterred by medical historians. Their prophecies indeed seem still unknown to many of the best accredited writers of the present time.

Then, after the lapse of years, there came to the wonderfully improved surgery and its after treatment, the simple and common-sense asepsis of to-day. It has been owing, in the main, to the careful technique of Keith, of Edinburgh, whom I then knew, and of Lawson Tait, of Birmingham, also an Edinburgh man, and for long one of my correspondents.

It is not without intention that I have imperilled your patience by these prefatory remarks. I have wished to show you that with these three great successive steps which have revolutionized surgery, accomplishing in but a half century more than had ever before been realized, our dear old University of Edinburgh had been identified. Surgical and obstetrical anaesthesia became recognized as legitimate in great measure through the unremitting and convincing arguments of Sir James Y. Simpson. His please for induced unconsciousness, irrespective of the agent employed, were greatly aided by the massive book upon Etherization in Childbirth by his personal friend, also an Edinburgh student of long ago, Dr. Walter Channing, of Boston.

Antisepsis, or Listerism, the second great advance, was the life work of an Englishman, who all through his mature life even to its close, seems to have recognized Edinburgh, his wife's old home, as really that of himself also.

While the third, and consummate flower of the three, may be fairly asserted as again of Edinburgh.

I have thus dwelt upon the claims of the Edinburgh University to

universal honor and gratitude, that I might conclude my felicitations by referring to another point, which perhaps some of you may not as yet fully appreciate—and, that is, the influence for prefessoinal progress exerted by Edinburgh medical graduates not upon the Dominion of Canada merely, but upon the United States.

The earliest Canadian physicians and surgeons were, of course, almost without exception, graduates of British universities, notably of Edinburgh, though often resorting to the United States for their final degree after obtaining their earlier instructions at McGill, Laval, or Toronto, almost invariably were aided towards the choice of their profession by the advice and frequently preliminary office and clinical oversight of Edinburgh men. Beside this, the influence of the Canadian medical press must not be forgotten. Many years ago, as responsible editor of the *Journal of the Gynaecological Society of Boston*, I chanced to be president of the Association of American Medical Journals. Of the some forty publications comprising this organization, several were Canadian. Through these several causes, a great number of the younger Canadian physicians with Edinburgh leanings have settled in the States, without exception becoming recognized as most worthy accessions, and acquiring proportionate influence.

In the old days before it became the vogue for all American practitioners to visit Europe, the young to complete their so-called education, and the older men to review and extend their knowledge through post-graduate instruction, handicapped as they almost all have been, and are, by absolute ignorance or but imperfect knowledge of the language they would have to hear upon the continent, it was the habit of many of our very best to go to Great Britain, and mostly to the renowned Scottish school. The effect of it all has been very pronounced towards creating that high standard of professional attainment, in the States American as well as States Canadian, which is constantly advancing, and will continue to improve until the coming of that perfect day when professional ignorance will have become unknown, all malpractice of whatever nature have ceased, and conservative medicine and surgery, of the very highest type, have become universal.

To myself it would seem, judging from my professional associates in this Edinburgh Club, that our organization, if equally proficient in all its other departments of science and education, must prove of the highest advantage and satisfaction to its members, and conduce to the continued renown and progressive welfare of our great university.

My best wishes for all.

Sincerely yours,

HORATIO R. STORER.

CONTAGIOUS DISEASES IN ONTARIO.

That legislation providing means for more thorough notification of tuberculosis is likely to be proposed this session is becoming increasingly evident. When tuberculosis was by legislation declared a communicable disease and therefore subject to compulsory notification, it was expected the monthly returns from local Boards of Health would become almost as reliable a guide as those of scarlet fever, typhoid and similar diseases. But the change has not improved the situation to any extent and the Provincial health authorities by looking up death registrations in the Registrar General's Department, have discovered that only about fifty per cent. of the deaths from tuberculosis are being reported. This means that there is a still larger proportion of cases about which the Provincial Department hears nothing.

The general November returns show an all round increase in the number of cases of communicable disease, typhoid, with a small decrease, being the sole exception.

The detailed returns show:—

	1913		1912	
Diseases.	Cases	Deaths	Cases	Deaths
Smallpox	54	0	33	0
Scarlet fever	298	8	165	12
Measles	175	5	91	1
Diphtheria	319	22	237	13
Whooping cough	63	8	44	2
Typhoid fever	120	28	142	27
Tuberculosis	90	48	148	80
Infantile paralysis	1	0	3	0
Cerebro-spinal meningitis	3	0	1	1
	1,123	119	864	136

DR, MARK AKENSIDE.

Sunday, November 9, was the birthday anniversary of Dr. Mark Akenside, one of the few distinguished physicians of history who has also won distinction in literature. In his day he was a well-known practitioner of London, and his poetry was much read and praised by Alexander Pope and Dr. Johnson. Yet such is the instability of medical and literary reputation, that Akenside is now almost forgotten both as a poet and as a doctor.

Mark Akenside was born at Newcastle-on-Tyne, England, on Nov. 9, 1721, the son of a butcher. He at first studied for the Presbyterian

ministry at Edinburgh, but after two years abandoned theology for medicine. Proceeding to Leyden, in 1741, he pursued his medical studies at that university, from which he received his doctor's degree in 1744.

It was apparently during his residence in the Netherlands that he composed his most familiar poem on "The Pleasures of Imagination," perhaps consoling himself therewith for the realistic drudgery of his professional education. The piece was published in 1744, the year of Akenside's graduation, by Dodsley, who paid the author £100 for it. It made an immediate success, and went through several editions within few years. To our modern taste, it is a rather frigid effort in conventional blank verse, but was then considered a masterpiece of style and thought. There is little of medical interest in its text; indeed, Akenside's tastes and point of view seem to have been chiefly philosophic and classical. One is reminded of his professional affiliation only by occasional passages such as that describing a convalescent:

> "Fair is the face of Spring
> To every eye; but how much more to his
> Round whom the bed of sickness long diffus'd
> Its melancholy gloom!"

On first returning to England from Holland, Dr. Akenside settled in practice at Northampton, where he published, in 1745, a volume of odes, which were on the whole of inferior quality, and met with little success. In 1746 he removed to Hampstead and in 1748 to London. Whether discouraged by the reception of the odes, Akenside seems from thenceforth largely to have given up writing verse, except for revising his previous work, and devoted himself almost exclusively to medicine.

At first his profesional success was small, and he was forced to depend on an annual subsidy of £300 from Mr. Jeremiah Dyson. He turned his attention to medical composition, and wrote in prose on dysentery, the lymphatics, and white swelling of the joints. Finally he was appointed physician to St. Thomas' Hospital, where he delivered a series of Goulstonian lectures on anatomy, and in 1759 the Harveian Oration. His fame as a consultant rapidly spread, and in 1761 he was appointed physician to the Queen. For nine years he lived to enjoy his popularity, but in 1770 died of a "putrid fever."

Akenside was one of those probably with more taste for letters than for medicine, with little real genius for either, yet with sufficient talent to succeed better than the average at both. Like Gray, he is in literature a man of a single poem, yet unlike Gray that one was not of the first excellence. It is interesting to-day to remember him not as a great poet, but as an able physician to whom literary diversions brought increased reputation and doubtless much contentment and solace.—*Boston Medical and Surgical Journal.*

MEDICAL PREPARATIONS, ETC.

THE ELEMENT OF UNCERTAINTY.

In the treatment of disease the element of uncertainty with special reference to individual idiosyncrasy, must always be considered, but the element of uncertainty as to the therapeutic action of a remedy can be elminated providing ordinary care is exercisel in selecting drugs or remedies which are not inert and have proven their efficiency.

For over 45 years, Hayden's Viburnum Compound has maintained its reputation as therapeutically efficient in the treatment of dysmenorrhea, menorrhagia, post-partum pains, puerperal convulsions, and in pain resulting from spasmodic contraction.

It is a well-known anti-spasmodic and as it contains no narcotics nor habit-forming drugs, no disagreeable after-effects is the result of its administration.

Given in teaspoonful doses, administered in boiling water, it will not disappoint you thus eliminating the element of uncertainty, and as it is not a secret remedy, but a carefully compounded and ethical pharmaceeutical, it will render most satisfactory results in those conditions wherein especially indicated.

THE PNEUMONIA CONVALESCENT.

While the course and progress of acute lobar pneumonia is short, sharp and decisive, the impression made upon the general vitality is often profound, and apparently out of proportion to the duration of the disease. Even the robust, sthenic patient is likely to emerge from the deferescent period with an embarrassed heart and general prostration. In such cases the convalescent should be closely watched and the heart and general vitality should be strengthened and supported, and this is especially true as applied to the patient who was more or less devitalized before the invasion of the disease. For the purpose indicated, strychnia is a veritable prop upon which the embarrassed heart and circulation can lean for strength and support. As a general revitalizing agent is also needed at this time, it is an excellent plan to order Pepto-Mangan (Gude), to which should be added the appropriate does of strychnia, according to age, condition and indications. As a general tonic and bracer to the circulation, nervous system and the organism generally, this combination cannot be surpossed.