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MEDICAL ASSOCIATIONS.

THIS may be said to be an age of Conventions. We have them of all kinds—religious, political, business, philanthropic, professional. The medical profession has not escaped the general tendency to form Associations or Conventions. In this country we have Dominion, Provincial, District and City Medical Associations. The question might well be asked, what is the practical utility of all these gatherings? It has seemed to us that the benefit to be derived by anyone attending these association meetings will depend primarily upon the the character of the work taken up at these meetings, and secondarily upon the individual himself. If the subjects presented for consideration are of a practical character and if the individual takes an intelligent interest in the proceedings he must of necessity be benefited thereby. If on the other hand the subjects under consideration are not of a practical nature or if the individual does not become personally interested in the proceedings, then assuredly his attendance at the meetings will be productive of very little good to him. But assuming that the subjects presented for consideration are of a practical nature and of interest to the general practitioner and assuming that the individual members of the association take an active and intelligent interest in the discussions what are the benefits to be derived? Speaking in general terms, we would say that the benefits to be derived from attendance at such associations are varied and may, perhaps, be classified as educational, professional, social and physical.

At these meetings papers are read and cases and specimens are presented. It is to be presumed that those reading papers or presenting cases have devoted special attention to the subjects they bring to the notice of the members. Thus the preparation of a paper becomes an educational stimulus to the individual preparing it and as the members are notified beforehand as to the questions which are to be up for consideration, they have ample opportunity of preparing themselves to take an intelligent part in the discussions. In the counsels of many, it has been said, there is much wisdom. However that may be, true it is that in our own profession, the best read and those of the greatest experience may often obtain newer and clearer views upon the subjects discussed at these meetings from those who have not had as great opportunities as they. To him who goes to an association meeting with the determination to obtain the greatest amount of information possible, whether he reads a paper, presents a case, takes part in a discussion or merely listens intelligently, educational benefits must accrue and for this reason, if for no other, such meetings are to be recommended and encouraged.

At these meetings, too, questions affecting the welfare and advancement of the profession are usually discussed. In fact it is at these meetings, as a rule, that the views of the profession upon questions of this nature first find utterance and the decisions which the profession arrives at upon such subjects at the meetings are afterwards embodied in the laws affecting and regulating the profession. As instances we might cite the course of studies necessary to be pursued in order to obtain a license, the law regarding actions for mal-practice, the standing of medical officers in the militia, Inter-provincial or Dominion registration. Any member of the profession who has any idea that the standing or efficiency of the profession could be improved in any particular has ample opportunity of bringing his views before his brethren, and if they meet with general approval he may rest assured that they will in the near future become embodied in the law of the land. But it is not only in this direct way that the standing of the profession is raised by the discussions which take place at these association meetings. All are brought into close contact. The younger and less experienced meet on an equal footing the older and more

experienced. We come to know personally the recognized leaders in our profession, for ours, like all other callings, has recognized leaders. New and more exalted ideas of the dignity and importance of our profession are insensibly acquired and the members go back to their labours with a determination to live up to the ideal they have formed and to become more and more worthy of the noble profession they have chosen.

Man has been described as a social being. Social recreation is to him a necessity. To the busy practitioner of medicine the opportunities for social recreation are very limited. He is liable at all hours to be called upon by some suffering member of his clientele. Many a time the doctor makes his arrangements to attend and take part in a social function and at the last moment his plans are all disarranged by some one who urgently requires his services. Not only so but even when he can, as it were, steal time for social enjoyment he is never free from the cares and responsibilities of his profession, and he knows full well that at any moment he may be hurried away from a scene of festivity to one of suffering and, perhaps, of death. When, however, he sets out for a meeting of his Association he lays aside his cares and has a delicious sense of freedom—a feeling that none but the busy practitioner can fully realize. He knows that his time is now his own—that no importunate patient is able to break in upon his enjoyment or rout him out in the middle of the night. It is true that such freedom from care may be obtained by simply taking a holiday trip but it has seemed to us that men, as a rule, can more fully realize the pleasures of social intercourse with those who are engaged in the same calling than they can with those whose interests are different. The Medical Association Meetings thus present all the advantages of a holiday trip together with those to be derived from social intercourse with those whose interests are similar.

Every practitioner knows that the life of a doctor is a laborious one—full of work—burdened with care—heavy with responsibilities—wearing upon the physical powers. To get clear for a few days each year from these cares and responsibilities is a necessity if one is to preserve his mental and physical powers in their full vigour. After such a vacation one feels that he has taken a new lease of life—that he has renewed his strength—that

he is able to resume the daily contest with disease with redoubled energy and with increased hope. Such a holiday has been good for the doctor and will be good for his patients.

These, it appears to us, are some of the advantages to be derived by the busy practitioner from attendance at a medical association, and it is, therefore, in our opinion, the duty of every practitioner to attend some such meetings—a duty to himself—a duty to his patients. Which of the many associations shall he attend? That will depend largely upon circumstances. The items of time and expense must be considered. Every practitioner is not so situated that he can afford much time or much expense. Having a limited amount of time at his disposal, the nearer the meeting to his home the better for him as less time will be consumed in travelling to and from the place of meeting, and more time will be left for the meetings themselves. By this standard the district association will be the best. But without disparaging these associations, we feel safe in asserting that the educational and professional benefits to be derived from attendance at these, are not comparable to those to be derived from attendance at the larger meetings, such as the Provincial or Dominion Associations. The time, however, required to travel to and from these association meetings, to say nothing of the expense, is a disadvantage. The Dominion Association endeavours to overcome these disadvantages by holding its meetings at a different centre each year. In this way, all may have the opportunity of attending the Dominion Association at least once every few years, without the loss of much time, or the outlay of much money. The Provincial Association, on the other hand, always holds its meetings in the same place. To those who live in, or near that place, this is a great boon, but to those at the extreme limits of the Province it is a great disadvantage. We believe that every doctor should attend his district association—we believe that every doctor should, if possible, attend the Provincial or Dominion Association, but we believe that such attendance should be made as easy as possible to all practitioners. This the Dominion Association attempts to do. Now, it has occurred to us that in a Province as extensive as Ontario, we might very well have two Provincial Associations, a Western and an Eastern. We also believe that these Associations, like the Dominion Association,

should each year meet at a different centre and thus periodically bring the Association as near as possible to the door of every practitioner. We believe that in this way a greater number of practitioners would attend the meetings and thus the benefit would accrue to a larger percentage of the profession.

We have expressed these views mainly in the hope that some of our readers will communicate through the columns of the QUARTERLY their opinions. We trust they will do so. We would also suggest that the formation of a separate Association for Eastern Ontario would be a proper subject for discussion at the meetings of the District Associations.

EXAMINATION OF THE PREPUCE IN CASES OF DEFERRED DIAGNOSIS.

ALTHOUGH limiting my practice to Diseases of the Eye, Ear, Nose and Throat, my first years were spent in administering to the public ills in general, and it was while thus engaged, many apparently minor points were forcibly impressed on my mind; among them I give first (?) place that which I have chosen for this article.

The practitioner is "a necessary evil" in the minds of most persons (outside of the profession) and, as a rule, when called, the case in hand is too obscure or has passed beyond the point where Teas and Patent Medicines render the necessary therapeutic action, and for once in the life of some wise friend or neighbor—failed to cure.

A thorough and careful examination on the part of the physician fails to bring out anything of value to aid in diagnosis; all he finds is possibly one of the following conditions or a combination, *e.g.*, the patient is suffering from a nervous condition, such as palpitation of the heart, a nervous chill, even a mental aberration, or has a fever which may reach to 104°, or is troubled with a pruritis, nocturnal enuresis, has had or is having con-

vulsions, has been gradually losing flesh, lacks ambition and is easily fatigued, due to the lack of physical development, any of which symtoms cannot be attributed to a discernible cause.

Such a case would seem a puzzler, but, if the physician will stop to think of the many cases of Reflex troubles, he can readily imagine why he should invariably defer diagnosis until he has examined the Prepuce.

We find the greater number of cases with symtoms above described in male children and I always made it a rule (when I had *something* for *nothing*) to examine the Penis, expecting to find at least one of the following conditions, viz.:—an Elongated Prepuce, possibly with very small opening, an adherence to the Glans, a short Frænum or a narrow Meatus.

To make clear the above and impress the importance of the subject of this article, I think I can do no better than to state some of the cases I had during the time I was engaged in general practice.

Case I.—C. R., age 5, of healthy parents and good surroundings, was taken suddenly with convulsions; on my arrival the little patient was just recovering from one; I made inquiry of the family in hopes of obtaining a clue; some corn that had been eaten two days before being the only *likely* cause, my diagnosis (to myself) was Intestinal Irritation; gave Calomel in small doses repeated often until the bowels moved and followed it with Salts; sure enough undigested corn was found in the stools. I ordered hot bath, to be repeated if another spasm was imminent; this with sedatives was the principle treatment. In about four hours I again visited the house and found my patient in the hot bath, convulsions still persistent; took him out of the bath and administered chloroform till he relaxed, continued with the chloroform from 8 a.m. till 12.30 p.m. Saw the patient frequently during that time.

On my way to the house after noon hour it occurred to me that my diagnosis was somewhat faulty. I determined to examine the Prepuce, which I did, finding an adherent condition which I broke up, removed several pieces of Smegma, cleaned and greased the parts, took away the chloroform; that was his last attack.

The prepuce needing some after-attention, I directed the parents how to care for it and left it in their charge; there has been no recurrence although several years have passed.

Case II.—R. A., age 45, came for consultation in July, 1893; he complained of being nervous and greatly debilitated, but thought otherwise was in a normal condition; his family history was good, no bad habits, married, had several children all healthy.

As nothing definite could be elicited from the subjective examination, the Prepuce was examined and found to be elongated to the extent of from one to one and a half inches, the opening small; I advised circumcision; patient at once objected, said he had been told by others never to take chloroform on account of his heart trouble for which he was drawing a U.S. Pension; examined his heart, found a nervous condition, so readily agreed to take the risk.

The operation was made the same day and patient went home, returned the fourth day and had the stitches removed, directed him as to diet (he complained of Stomach trouble) and told him to return in about a week, which he did; reported with confidence that he was much improved in every way. Some six months later he came to my office in a troubled state of mind—he had gained in weight, had no trouble with his Stomach, slept well, but was afraid he might lose his pension as his heart had not given him any trouble since.

Case III.—P. N., age 8, only serious sickness was Cholera Infantum about five years previous; the parents had noticed him scratching the buttocks and pulling at the penis through his clothing, had punished him frequently for wetting the bed, as they supposed it was due to carelessness or was too much trouble to get up. This treatment failed to make any improvement in the case and as the child had not been feeling well the past few days I was sent for to fathom the mystery for them.

Finding no other symptoms than those already given I proceeded to examine and found an elongated, tight, adherent Prepuce; broke up the adhesions after dilating as much as possible, cleansed and replaced the foreskin, advising a circumcision, operated on him the following day, recovery took place quickly, all symptoms immediately disappeared; no recurrence.

Case IV.—J. S., age between 9 and 10, was taken ill with Fever. On my arrival I found his temperature to be 104⅕°, pulse rapid, high tension; somewhat inclined to nervousness, no other symptoms; I immediately examined the Prepuce, found it ad-

herent to the Glans, separated them with some difficulty, cleansed the parts and restored to former position; gave small doses of Potash Bromide, told the parents how to care for the case and left with instructions to let me hear from the case next day; the report next morning was, fever gone and patient all right.

Case V.—J. A., age 75, consulted me for a condition which he called "Nervous Chills"; said his feet were always cold, in fact could hardly judge the amount of heat in articles placed to them; body was well nourished and he was apparently healthy. I asked to examine the Penis when he said, "Doctor, I guess I am not just like other men," and although he had been married four times, imagine my surprise to find the Prepuce adherent almost to the Meatus; I explained to him that here was where his trouble lay and advised separating the parts. I easily gained his consent, and after about one hour's faithful labor with traction and a probe I was enabled to get a full retraction; the case required considerable after-attention but finally assumed a natural condition, giving the patient and myself the satisfactory knowledge of disappearance of nervousness and a better circulation—no more cold feet.

Case VI.—K., age 8 weeks, had been cross and nervous from time of birth, physical development seemed at a standstill. I gave sedatives, also employed systematic feeding with no improvement, finally concluded to make a circumcision; this was done with the result that the little one slowly but gradually grew better and is now a strong, healthy, appearing baby. In this case drugs seemed to have absolutely no effect.

Case VII.—A. W., age 52, had been confined in an asylum for two years, was home on furlough but a short time when his aberration assumed an aggravated form, required constant attention as his tendencies were both suicidal and homicidal; the family had about completed arrangements to have him retnrned to the asylum.

The attending physician asked for consultation with Dr. J. B. Greene of Mishawaka (this state). It was held, and patient's trouble was diagnosed reflex, as there was an elongated, adherent Prepuce with narrow opening; also a very small Meatus.

Dr. Greene advised an operation, at which I assisted some three days later; the Prepuce was loosened from the Glans, a circumcision made and the Meatus dilated to full extent.

On the following day the patient's mind was much brighter and continued to improve; he left the hospital with a perfectly clear mind.

About seven or eight months later he came into my office "simply to call" as he was in town looking up men to assist him in caring for his harvest; this occurred in 1893; he is still managing his farm.

Many more such cases might be cited, but as I have already taken up much valuable space suffice it to say, that although the above relates to the male Prepuce only, the same is true of the female Prepuce as corroborated by Dr. Greene, who has for many years given special attention to Abdominal and Pelvic surgery. He assures me that he has relieved and cured many cases of a Neurasthænic nature, and gives as a proof, the case of a young lady twenty-six years of age who had been confined in an asylum for over five years, who was completely restored to a "Compos Mentis" by a circumcision aided by suitable tonic after-treatment.

A. E. BARBER, South Bend, Ind.

CLINICAL DEMONSTRATION IN OPERATIVE GYNECOLOGY.

GENTLEMEN:—This patient comes to us for treatment, with a history of pain and disability gradually increasing, so that for the past few months she has not been able to do any work. She is a married woman has had four children, the youngest is two years old. She tells us that she did not make a good recovery after her last labor, and that she has since been suffering from pain in her back—severe headaches—an irritable weak stomach and a more or less continual vaginal discharge. The patient has had liquid diet only for 24 hours; the intestinal tract has been thoroughly cleared; she has had a full bath and vaginal douches. We will now complete the preparation by scrubbing the external genitals and vagina with green soap and sterile water.

Under full anaesthesia we make a bi-manual examination and find the uterus in normal position—somewhat enlarged and

freely movable. The tubes and ovaries are apparently healthy. With an Edebohls'-Speculum we retract the perineum and expose an hypertrophied and congested cervix. You will note that it is deeply lacerated on both sides of the os. The mucous membrane is everted and eroded. There is a whitish purulent discharge through the cervical canal. Evidently this is a case of chronic endometritis, depending no doubt in some measure on the laceration. To relieve these conditions we must curette the uterus and repair the cervix. The case is of special interest, because it is characteristic of what you will frequently be called upon to treat and you will derive more benefit from the study of these matters of every day occurrence than from those of great rarity.

If we catch the anterior lip of the cervix with a vulsellum, we can draw the uterus down and steady it; before using the dilator it is well to pass the uterine sound to determine the direction of the cervical canal and the length of the uterine cavity; in this case you see the canal is normal in direction, but the cavity of the uterus is longer than it should be. With a small Wylie's dilator we will stretch the cervical canal sufficiently to allow us to use this large Goodell dilator, the blades of which are corrugated and parallel when open. You will please note that, *first*:—we hold the cervix and the dilator firmly to prevent the blades slipping backward; *second*:—we change the position of the dilator turning it from side to side so as to dilate equally in all directions; *third*:—we apply the force intermittently as nature does. Having dilated to the requisite calibre, say an half inch, we select a medium sized sharp curette and beginning with the anterior surface we scrape away the granulations and diseased endometrium down to the firm healthy tissue; in the same way we go over the fundus and posterior surfaces. Next we take this small sized sharp curette and clear out the cornua—the lateral sulci—the granulations around the interal os and the cervical canal. Care must be exercised not to let any portion of the endometrium escape the curette. This part of the operation being complete, we proceed to wash out the cavity of the uterus with sterile water—for this purpose I have found this dull douche curette very useful as it breaks up clots, loosens up the debris and at the same time irrigates. For this case we will use no astringent or caustic rem-

edies. Our chief purpose in curetting is to uncover and open up the diseased utricular glands so that the purulent contents may be freely drained away, and a healthy reaction induced. The effect of astringent and caustic applications would be to close up and cap over these glands, shutting in their contents.

Our next duty is to repair the cervix. By grasping the anterior and posterior lips with tenacula, the cervix may be drawn well down into view. The cicatrized tissues to be cut away, from the edges and angles of the lacerations are marked out by an incision with a scalpel and removed by curved scissors. The edges of the laceration are now brought together by means of cumol cat-gut ligatures, the suture at the angle being placed first, and passed deeply through the tissues to prevent the possibility of hemorrhage from the circular artery of the cervix. Three or four sutures are usually sufficient for each side. We expect these lacerations to heal and these sutures to absorb within two weeks. To keep the endometrium clear and encourage free drainage of its glands, we will pack the uterine cavity with long, narrow strips of iodoform gauze. The end of each strip is brought down into the vagina to ensure patency of the cervical canal and to facilitate removal of the gauze. The vagina may now be loosely packed with gauze, an occlusion pad applied held in place by a T bandage.

The after treatmen is simple; the vaginal dressing must be removed daily. The uterine packing may remain from 4 to 6 days, provided the temperature continues normal, when removed the cavity should be irrigated and repacked if the discharge be at all purulent.

Some of you will remember that in a recent clinic we curretted a case of puerperal endometritis, due to sapraemic infection, after abortion. It will be interesting for you to contrast the treatment of that *acute puerperal case* with the treatment of this *chronic non-puerperal case*, and in doing so I would ask you to note the following:—

1st.—In the puerperal case dilatation was not necessary, the canal being as it usually is quite patent; in this non-puerperal case forcible dilatation was necessary and somewhat difficult.

2nd.—In the puerperal case we used a dull curette passing it lightly over the surface. In this non-puerperal case we have used

a sharp curette actually cutting away the diseased surface of the endometrium.

3rd.—In the puerperal infective case we used antiseptic irrigation, followed by caustic applications to the endometrium; to-day we have used sterile irrigation only, and no astringent or caustic medication.

4th.—In the puerperal case we used no gauze for either packing or drainage; to-day we have packed the uterus firmly with gauze.

ISAAC WOOD.

THE COMPLICATIONS OF SCARLET FEVER AND THEIR TREATMENT.

Read at the Kingston Medical Association.

IN considering the complications of scarlet fever, we will refer not so much to those cases of the disease, often rapidly fatal, and due rather to excessive quantity or virulency of the poison introduced, as to the various organs and tissues of the body implicated during the progress of the disease or the period of convalescence.

Some cases of scarlet fever are so rapid in their onset, and so malignant in their nature, that little or no time is allowed for diagnosis, and specially is this the case if the eruption be delayed or if it be modified by associated circumstances. These cases are due mainly to the introduction into the system of an intensely malignant virus or excessive quantity of the poison. The vital processes are as it were overwhelmed and paralyzed either by direct action upon those organs or through the nerve centres.

The complications of scarlet fever are associated with either streptococcus infection, or the action of the toxines produced during the progress of the disease; and these complications are best considered in relation to the various organs and tissues which suffer fro. . the interference with their functions. Almost every case of scarlet fever, if not every case, is associated with changes in the throat, usually called either primary or secondary.

The primary sore throat occurs about the first week of the onset of the disease.

The secondary angina shows itself about the second or third week, and is undoubtedly a true complication, due to growth and development of the streptococcus. Either the primary or the secondary angina may be but a simple erythema, local, in no way causing alarm and occasioning but little inconvenience to the patient; or the inflammation may be so severe as to produce ulceration and sloughing of the parts, and in some cases may produce fatal results; and, in fact, all degrees of inflammation may be met with, from the simple characteristic erythema to necrosis of the parts affected, depending upon the virulency of the disease. It is usual in throat complication of scarlet fever to divide the angina into three stages, corresponding to the degree of inflammation :— I. Erythematous, II. Membranous, III. Gangrenous.

The erythematous scarcely comes under the head of a complication, being only an aggravated condition of the usual angina found in scarlet fever.

The membranous or pseudo-membranous usually shows itself first upon the tonsils, grey in color and glistening in appearance and resembling very much true diphtheritic membrane, and like it leaving a raw, bleeding surface when brushed forcibly off.

In many cases this membrane is confined to the tonsils alone, but in others it may spread to pharynx, larynx, posterior nares, soft palate and other adjacent structures and under these conditions may readily be mistaken for diphtheria, the absence of the diphtheria bacillus and the presence of the streptococcus serving as the basis of diagnosis.

This membrane lasts between five and ten days, when it gradually peels off, leaving the parts swollen and congested, and resuming in about two weeks their normal appearance.

When this membranous complication arises, its development is usually associated with increase in temperature and rapid pulse and all the signs of infection, the involvement of the glands in the vicinity : sub-maxillary, parotid and cervical chain being a characteristic feature. They become enlarged, swollen, tender, either terminating in resolution in a few days or passing on to abscess, and should the pus-forming elements penetrate the abscess wall, they are liable to set up extensive cellulitis with

involvement of important and even vital structures by the subsequent burrowing.

Of course the conditions just mentioned are in direct proportion to the severity of the disease and in grave cases may result in intense septic intoxication.

Now, while these conditions may be and are present in the absence of the diptheria bacillus, yet it does not follow that diphtheria is never found complicated with scarlet fever. On the contrary they are frequently associated with one another.

The tendency for the membrane to spread, as also the erythematous condition, gives rise to the involvement of adjacent organs and structures. For example, the ears are very frequently affected both in the erythematous and membranous varities. All degrees of inflammation may exist, from a simple catarrhal condition of the Eustachian tube with or without occlusion, purulent or otherwise, of the internal ear, and in some cases may even extend to the brain through the meninges or cause thrombosis of the large veins.

Deafness is so common a sequela of scarlet fever, due to extension of inflammation along the eustachian tube, that in every case of scarlet fever, be it ever so mild, special attention should be directed to any symptom pointing to involvement of the auditory apparatus, and treated accordingly.

Occasionally we find that the inflammatory condition has spread to the posterior nares, giving rise to symptoms so well known that we will not dwell upon them here.

The gangrenous form is very rare happily and consists in the rapid death of the parts.

The lymphatic glands are among the most frequently involved structures during the course of scarlet fever. The inflammation of these glands may be due to either primary or secondary infection.

In almost every case of scarlet fever and in all cases where the throat is involved we have inflammation of the lymphatic glands in the vicinity, differing in degree with the intensity and virulency of the disease.

The secondary inflammation is undoubtedly due to streptococcus infection or the toxines produced during the course of the disease, and here as in the throat any degree of inflammation

may be met with, from some enlargment with tenderness to abscess and even interstitial destruction, often terminating fatally.

The glands most commonly affected are parotid submaxillary, cervical chain and the glands at the angle of the jaw.

The primary infection of the lymphatic glands, that associated with the onset of the disease, is as a rule not serious. But great care must be taken when secondary infection arises. This usually occurs between the third and fourth weeks. In fact, careful, timely and judicious antiseptic treatment of throat complications should largely if not entirely prevent secondary infection of the lymphatic glands at least. Of course when secondary infection does occur, it is naturally associated with the usual signs of sepsis, elevation of temperature, rapid pulse and other symptoms corresponding with the degree of involvement. The affected glands consist of hard movable masses, swollen, enlarged and tender, either passing on to resolution in two or three days, with decline of temperature and slowing of pulse and return to normal, or passing on to abscess, with possibly rupture into the surrounding tissues, resulting in septic absorption and intoxication, sometimes leading even to fatal processes, accompanied by, the usual symptoms of this condition, rapid weak pulse, variable temperature, chills, profuse sweating, delirium, convulsions, coma, albuminuria with toxic nephritis, these being associated with much enlarged and tender glands rapidly forming into abscesses, often compressing and involving the large vessels and nerves in the vicinity, or the larnyx or other vital parts. In these grave cases death is the usual result.

We find that the kidneys are by no means the least frequently involved in cases of scarlet fever and, in fact, of all the zymotic diseases scarlet fever is the one most frequently complicated by nephritis. So much so is this the case, that no matter how mild the case, the kidneys should require careful and constant attention throughout the disease, for much more can be done in the initial than in the later stages of this insidious complication. The occurrence of nephritis in scarlet fever seems to differ in different cases and in different epidemics, and the degree of intensity or the malignity of the virus does not in all, though in a great number of cases, seem to be in direct proportion to the number of cases associated with nephritis.

Usually, however, a severe and prolonged attack of scarlet fever will include involvement of the kidneys. Where there is intensity and malignity of the virus and elimination of toxines, there are bound to be changes in the kidney, and many severe cases apparently free from nephritis would show this complication, mild though it may be, on careful clinical and microscopical examination. On the other hand, many very mild cases have developed nephritis when the very innocent character of the epidemic would lead us least to expect. But it is not a safe or reliable rule to lay down that mild cases are more liable to nephritic complications than severe. The epidemic we are now passing through, though very mild and widespread, is associated with but very few cases of nephritis.

While we have no lesion in the kidney characteristic of scarlet fever, yet glomeruli seem to be the parts most constantly and frequently involved. Many causes are at work to produce nephritis and among these may be mentioned the following :

1. The elimination by the kidneys of the scarlatinal virus or infection, the introduction of which into the system produced the disease.

2. The elimination by the kidneys of toxic products, produced during the progress of the disease.

3. The increased functional activity thrown upon the kidneys by deficient or absent elimination by the skin. For the swollen, hardened and harsh condition of the skin points to feeble elimination.

4. Probably an involvement of the lining membrane of the uriniferous tubules, similar to that upon the lining membrane of gastro-intestinal and respiratory tracts.

The theory has been advanced, that as nephritis is a complication rather of convalescence than of the disease proper, it is more frequently due to catching cold, thus producing congestion and the associated phenomena. No doubt mild cases are much more exposed to atmospheric changes and changes in the body heat than the severer ones, and this may account for the frequency of occurrences of nephritis in mild cases. There is no doubt that catching cold at a time when the kidneys are weakened down by over work, or it may be by disease, will either produce a nephritis or unmask an obscure one. So also

any patient with weak kidneys, or the victim of diseased kidneys, is more prone to this complication than one whose renal system is active and unimpaired.

Scarlatinal Nephritis is most commonly noticed about the third week, though the physician should examine the urine from time to time from the very onset of the disease. Sometimes the renal involvement is ushered in by an abnormal increase in the amount of urine, due to excessive secretion caused by irritation of the poison being eliminated, but most frequently this complication is announced by a gradual diminution in the amount of urine, while at the same time the quantity of urates and the amount of albumin are increased, and an examination of a sample of urine will show besides the abundant urates and albumin, red blood cells and casts of epithelium, fat and blood. The color is heightened due to concentration, and smoky from the presence of altered hemoglobin; the gradual diminution in the amount of urine may terminate in complete suppression or the gradual return to normal amount, the kidneys regaining their usual tone. Often the presence of albumin is associated with increased temperature and rapid pulse, though this is not the rule, for the temperature is usually low. To recapitulate: the gradual diminution of urine, the gradual increase in the amount of urates and albumin, the smoky, high-colored urine and the presence of blood casts on the one hand, and the pain in the back, the frequent and painful micturition on the other are conditions leading to but one conclusion, and that is nephritis.

Associated with the diminution in the amount of urine we have the still further complication of uræmia, the symptoms of which all are familiar with. The diminution of urine is later on associated with œdema, local at first in ankles and under eyes, but very rapidly becoming general. In no disease is the œdema so abundant and widespread as in scatlatinal nephritis, no cavity escaping.

Under certain circumstances we may have instead of the smoky urine, a urine red in color and consisting almost entirely of blood; this hematuria is a grave complication and must call for a guarded prognosis.

In nephritis, cure is the rule, though, as has been mentioned before, if the poison to be eliminated is abundant and the kidneys are weak, then the prognosis becomes very grave.

The heart is the seat of frequent complications during the course of scarlet fever. Associated with the nephritis we have enlargement of the right side of the heart with Tachycardia and diminished tension of the blood vessels, and this enlargement exists in all cases of nephritis. If the case is of short duration, then this enlargement disappears and the heart resumes its normal size and tone. If the disease be prolonged, then compensatory hypertrophy results with permanent enlargement and other changes which necessarily follow in its train. Often in scarlet fever an endocarditis, a pericarditis, or myocarditis may be found, but these are rare, and many cases of endocarditis are due rather to rheumatism than to true complications of scarlet fever.

This condition (rheumatism) so frequently follows scarlet fever that it is held that scarlet fever directly pre-disposes to rheumatism, probably through the lowered tone of the joints from blood and nutritious changes. Other bone diseases may also show themselves. If patient be phthisical then tubercular disease of the joints may follow; this and septic joint disease are common sequelae following severe cases of scarlet fever.

As another complication of scarlet fever might be mentioned the condition of purpura hemorrhagica, sometimes met with, modifying the ordinary erythema. Here we find patches of ecchymoses varying in size and color, the hemorrhage often being excessive and the patches large. The prognosis in these cases is grave in proportion to the extent and severity of the hemorrhage.

As the gastro-intestinal tract is involved in the same way as the skin, we find disturbances of this tract quite common, so that nausea, vomiting, gastritis, diarrhœa, dysentery and even enteritis may show themselves, depending of course in their severity upon the degree of inflammation.

Catarrhal conditions of the respiratory tract also are met with, producing laryngitis, bronchitis, and not uncommonly catarrhal pneumonia. Any involvement of the respiratory tract calling upon the heart for increased energy is a dangerous complication. Already the heart muscle and centre has been weakened by the virus, and the toxines, and the diminished nutrition, so that it is in no condition to respond to the increased labor of sending the usual supply of blood to the congested pulmonary apparatus, and collapse may be looked for.

Lastly, among the complications of scarlet fever may be mentioned the occurrence of this disease in combination with other of the exanthemata, as measles, typhoid fever, chicken pox and even small pox. Here the grouping of characteristic symptoms of both diseases and the modified conditions of skin make the diagnosis in many cases extremely difficult and it is only on careful study and close clinical watching that the condition of affairs is realized.

TREATMENT OF COMPLICATIONS.

If *fever* be above 102° F. and the pulse strong and full and patient healthy, then the coal tar products may be employed, always however in combination with some cardiac stimulant, as caffeine or strychnine. These coal tar products are well known heart depressants and are always more or less dangerous. After the onset of the disease, when the toxines are liable to affect the heart and specially if the heart be weak, then they are to be avoided.

A much safer and more effectual method of lowering the temperature in private practice is by means of the sponge bath, using tepid water and alcohol, sponging one part at a time, rubbing well and covering with flannel, thus encouraging active, cutaneous circulation and loss of heat by both conduction and radiation.

In *throat* complication antiseptic applications should be used from the onset of the disease even in the very mild forms. Sprays, swabs, gargles, washes all have their advantages and disadvantages, though probably in children the best results follow the use of the spray and in adults that of the swab when lightly and thoroughly applied. Many substances are recommended in the angina of scarlet fever; among the most efficient are peroxide of hydrogen, pot. chlor., pot. permang., boracic acid and any alkaline anti-septic preparation.

If the throat be very irritable the previous application of a 2-4 per cent. solution of cocaine will relieve the distress to the advantage of both physician and patient.

If the diphtheria bacillus be found then anti-toxin is indicated as well as the local and constitutional remedies usually employed.

If streptococcus infection, then the anti-streptococcus serum

may be employed though, so far, results from the use of this substance have not been as good as anticipated.

In extension to the *nose* the use of the above remedies by means of either spray or douche are indicated and to be treated in same way as in the throat.

As the *ear* is so frequently the seat of inflammation constant attention should be directed to this organ throughout the disease. If painful, use hot antiseptic and anodyne solutions. If bulging of the drum, use the lance and wash out very gently and cautiously with very mild unirritating solutions, such as a saturated solution of boracic acid, peroxide of hydrogen, &c.

If involvement of mastoid cells, then open and drain and use an anti-septic wash.

Should the glands (lymph.) become enlarged, swollen, and tender, use cold application of liquor plumbi subacetatis and Tincture of opium, in combination to promote resolution. If signs of suppuration present themselves, open at once, thoroughly drain and use anti-septic wash, 1-1000 Bichloride followed by sterile water. Keep open and aseptic.

When suppuration exists in any part give sulphide of calcium, ¼ grain every 3 hours until system becomes saturated, and open freely.

When *nephritis* appears give a strictly milk diet and enforce rest in bed. If anæmia give Tincture of Ferri Mur. with appropriate tonics.

Diuretics are almost useless, the only one and the best being large quantities of water to flush out the kidneys, diluting the toxines and thus diminishing their severity upon the tissues of the kidneys.

Lemonade is cooling and grateful and aids elimination. Encourage activity of the intestine by rochelle salt, seidlitz powders or other salines.

Should *uraemic* symptons show themselves, then attention should be directed to improve the embarrassed elimination from the skin.

Pilocarpine hypodermically is of great value in causing diaphoresis, but must be cautiously used as it is very depressing to the cardiac muscle and centre. Correct this depressant action by using strychnine with it or giving acohol by the mouth just before or

Caffeine, spirits of chloroform, or aromatic spirits of ammonia.

If bronchitis or broncho-pneumonia be a complication then hesitate to give pilocarpine, as much of the action of the drug is spent on the respiratory apparatus, greatly increasing secretion.

Give patient hot bath ten to fifteen minutes in duration, rub well to redness, wrap in blankets and apply artificial heat and thus promote free diaphoresis and the elimination of the waste products and poisonous substances which are causing the uræmia.

If the skin does not respond readily promote free catharsis by the exhibition of elaterium, croton oil, salines, &c.

At the same time, with the view of modifying the disease, the following drugs have their advocates: veratrum viride, chloral, Morphine, chloroform, &c.

In oedema where the cavities are filled to the great discomfort and danger of the patient, aspiration is indicated

In heart complications the ordinary remedies are indicated. For simple enlargement in a case of short duration no remedy is required.

Should the heart become irregular, weak and rapid, use digitalis, or better still digitalin. As the digitalis is slowly absorbed and of a variable strength and action, Strophanthus may be employed.

If surface of the body show diminished peripheral circulation, with contraction of the blood vessels, then use nitro-glycerine to increase the peripheral circulation, and relieve the strain on the heart and other organs.

In all cases of weakness of the heart, we should use strychnine, depending on the degree of weakness and involvement, for effect it should be pushed, $\frac{1}{30}$ of a grain every three or four hours, till the physiological effect is produced. In some severe cases it may even be given oftener. It is a dangerous drug, and must be closely watched.

Alcohol as a general stimulant is contra-indicated in scarlatinal nephritis. As the great part of the weight of the disease is thrown on the kidneys, and as alcohol is eliminated largely by the kidneys and irritates them, it would be but aggravating an already existing inflammation.

Endocarditis calls for ice bags to chest, rest in bed, and the above remedies as already indicated.

In rheumatism, soda salicylate, soda bicarb., lilthium citrate, wine of colchicum are to be used, as in ordinary cases of rheumatism

For *vomiting* pieces of ice swallowed gives great relief. Milk and limewater often control the irritabili'y. Bismuth salicylate and subgallate are frequently employed.

For diarrhœa, if moderate, no medicinal agent is required; if excessive, give chalk mixture, bismuth, catechu, and other mild astringents. These are often greatly aided by the combination with them of the sulpho-carbolates or salol.

For gastro-intestinal and respiratory involvement the treatment is the same as in ordinary cases, and calls for no special remedy only as symptoms show themselves.

For general infection, it has been lately suggested that much of the harm in the system produced by the virus and toxines might be much lessened by introduction into the system of large quantities of normal salt solution (sterile), either by injection into the serous cavities or by intravenous injection. In those grave cases where the system seems to be, as it were, overwhelmed, it would be worthy of a trial. J. W. CAMPBELL.

EXTRACT OF SUPRA-RENAL CAPSULE.

THE first preparation of supra-renal capsule with which I experimented was quite inert, so far as any local action on the conjunctiva or nasal mucus membrane was concerned. Afterwards I secured some of Armour's dessicated supra-renal capsules, and the extract made with this has proved to be very active, and quite remarkable in its local effects. Taking five grains of the dessicated gland to each drachm of water, I shake the solution well and allow it to stand for ten minutes, and then filter through filter paper, pouring the solution back to pass through the powder for a second and a third time. The result is a clear amber colored fluid, which decomposes rapidly, unless glycerine be added to make at least 25%. The glycerinated ex-

tract is, however, not so active as the freshly prepared aqueous solution. When a few drops of the aqueous solution are put into the conjunctival sac, it causes slight smarting for a moment. The astringent effect comes slowly in five or six minutes, and the conjunctiva assumes a peculiar lustreless color. The blood is almost entirely driven out of the superficial vessels so that an operation for pterygium or for strabismus may be done without a drop of blood coming from the conjunctional vessels. It has little or no anaesthetic effect, so that I employ cocaine with it. If any hyperaemia or inflammation is present the effect comes less rapidly and the bleaching is the less noticeable, the more intense the congestion. The deep ciliary vessels are influenced by it to some extent. In a mild iritis the ciliary congestion disappears entirely, while in the very intense conditions of the ciliary region no effect whatever is to be seen. It is, however, as a haemostatic in the minor surgery of the nasal cavity that I find it specially useful. The chief trouble in operations for removal of spurs and outgrowths from the septum and in turbinotomy is the hemorrhage. It seems scarcely credible that these can be rendered absolutely bloodless and at the same time the danger of secondary hemorrhage overcome; and yet this is accomplished by a thorough application of the extract of the supra-renals. I apply the solution either by swab or by a saturated plug of absorbent cotton and this may be done either before or after the cocaine is used or the cocaine and supra-renal solution may be combined. It is difficult to realize how effective this method really is unless one has tried it with a good extract. I have also used it to a limited extent in the pharynx and larynx, mainly for the relief of congestive conditions, and the results so far go to establish its value. There is no doubt whatever that the extract of supra-renal capsules is a valuable addition to pharmacopœia.

J. C. CONNELL.

TUBERCULOSIS PROPHYLAXIS.

THE prophylaxis of Tuberculosis is a question which at the present time is engaging the attention not only of leading Medical men, but of the humanitarians and scientists the world over. When we consider that 1-7 of all deaths are due to Tuberculosis some idea of the importance of the subject may be formed. Nearly every Medical Journal at which we look, contains either the reports of societies formed for the stamping out of the disease, or the opinions of learned Medical men on the subject. Every gathering of Medical men contributes its quota of literature on the prevention of Tuberculosis, and Boards of Health, wherever formed, are bending their energies in the same direction. The knowledge thus obtained must be carried further, for the work will not be complete until the laity are fully seized with the importance of how valuable their assistance must be in stamping out this terrible scourge.

We all know that Tuberculosis is not inherent in the constitution, but is derived from pre-existing causes. It is contagious, communicable from man to man and from animal to man. If it is contagious, there must be some means of preventing it and if preventable, why not try and prevent it? As long as the prevention of this wide-spread disease is left to a few only, no progress, worthy of the name, can be assured. But when the movement becomes general, when the laity understand that in self-defence they must lend their assistance and work hand in hand with the medical profession, then only can we expect any appreciable degree of success.

What then can we do to prevent the spread of the disease?

(1). We must educate the public in the way of preventing the spread of the disease and avoiding the sources of its contagion.

(2). We must strive to extinguish the disease in cattle.

(3). We must advocate the isolation of Tuberculous patients, either in Hospitals, sanatoria or by some other means.

Thanks to measures already taken, the mortality has already been reduced between the periods '51—'60 and '91—'95 by thirty

per cent. This decrease has been due chiefly to the steps taken to stamp out the disease in cattle. From this it can be seen what a great decrease must take place if we successfully fulfil the other measures, viz.: the education of the laity, and the erection of Sanatoria.

The education of the laity on the subject will be the most difficult and the most important to be attended to. Means should be taken at once to inform the public of the sources of danger. This can be done by pamphlets, through the columns of the daily press, which should be constantly invoked, and by public lectures. I hold, too, that our children should be taught in our public schools, the danger and frequency of this disease, and the means adopted for its extermination. It should be made clear to all that the sources of this disease are :—persons suffering from Tuberculosis, infected air, infected milk, infected meat.

Since the sputum is the chief distributing agent of the germ, afflicted persons should be warned of the danger of spitting promiscuously about cars, carriages, pavements, or in their own homes. A little care exercised in this way would be the means of saving numberless lives. In fact, it is a question if the time has not come when compulsory care should be exercised.

Persons suffering from Tuberculosis, should carry some one of the numerous receptacles now on the market. These, when necessary, should be either emptied into a furnace, or left until the contents are thoroughly disinfected before being emptied. While indoors, too, Tuberculous patients should expectorate into a receptacle containing a disinfectant—5% carbolic acid. Consumptives should avoid the too common habit of spitting on a handkerchief, which is then carried in the pocket, or placed under the pillow. This is a most pernicious habit.

Eating utensils which have been used by phthisical patients should be thoroughly disinfected before being used by others. Likewise, all bed clothes, soiled linen, and other articles of dress should be thoroughly disinfected. The public should also be warned of the danger of over-crowding, bad air, intemperance, darkness, dampness, colds, sore throats. These refer particularly to those predisposed to the disease, for they weaken the constitution, render the tissue-resistance less, and thus a suitable nidus for the germ of Tuberculosis is formed. We cannot be too

careful in impressing upon hereditarily predisposed, the absolute necessity of their avoiding the sources of the disease, and of keeping their constitution in the best possible condition. Consumptive patients should sleep alone. Nurses hereditarily predisposed to phthisis, should not attend Tuberculous patients. After death from Tuberculosis there should be a thorough disinfection of all bedding, linen, and furniture which have been used by the patient, and also of the rooms occupied by the patient previous to death. There should be a regular sanitary inspection of prisons and asylums, and phthisical patients should be isolated therein. Those affected with phthisis should not be permitted to work in factories, or crowded workshops of any kind, and periodical disinfection of such places should be carried out. Marriage should be discouraged in consumptives, as where there is such close relationship there is grave danger that the disease will be communicated. Cities and corporations should enforce compulsory notification in fatal cases.

With regard to the stamping out of the disease in cattle we have only to enforce more rigidly the laws already passed in most countries. Infected cattle are one of the chief sources of infection in man and have long been recognized as such. The greater part of the measures already taken have been aimed at stamping out the disease in cattle.

If we could secure the thorough disinfection of all tuberculous sputa and the killing of all tuberculous cattle the disease could be practically annihilated. All dairy cattle should be regularly inspected and subjected to the tuberculin test; all cattle found to be affected should be killed. In order to encourage the carrying out of these measures, compensation should be paid to the owners of diseased cattle. The laws regarding the cleanliness, cubic space, etc., of cow sheds should be rigidly enforced. Milk from tuberculous cows, especially if the udder be affected, is such a common source of contagion that all milk should be boiled before being used. The nourishing quality of the milk is in no wise altered by being boiled. Tuberculous meat is highly dangerous and should not be eaten. I think there should be no exception to this rule.

The establishment of Sanatoria has been proved to be the most successful form of isolation and prophylaxis. If it were

possible all cases of Tuberculosis should be placed therein. We would then be in sight of the end of this great scourge.

Isolation wards should, at all events, be set apart in our hospitals and all advanced cases should as far as possible be treated there. It is only in such places that the proper prophylaris can be carried out. E. RYAN.

SOME CLINICAL NOTES OF SURGICAL CASES.

DISEASE OF CARTILAGES FOLLOWING TYPHOID FEVER.

ATTENTION has lately been directed to the surgical complications and sequelae of typhoid through the works of Keen, Park, Parsons, and others, and, according to these authorities, one striking feature of the bone lesions is the length of time that often elapses after typhoid, before they manifest themselves.

The bacillus of Eberth has a special affinity for the marrow of bones, and, just as it has wonderful longevity outside the body, so it may remain latent in the tissues for an indefinite time, as seen in a case reported by Van Durgern, where the typhoid bacillus was found in the gall bladder 14½ years after an attack, and in the case of Sultan, who noted the bacilli in a sinus leading down to the clavicle 6 years after typhoid. Granted the presence of the bacilli in the bones, an injury received months or even years after an attack may start into activity the dormant organism; (hence the importance of warning patients against too early resumption of occupation after typhoid fever).

Witzel claims that the cases reported are more numerous now than formerly, and ascribes the increase to injuries received during the bath treatment.

As to the pathology, some of the cases may be due to a mixed infection, (typhoid bacilli and pyogenic cocci); but, the majority depend on the action of the Eberth bacillus alone. In 51 cases examined bacteriologically, 13 contained pyogenic organisms, and 38 pure typhoid. Bone sequelae occur twice as often in the male as in the female, probably from the greater risk of traumatism in the former than in the latter; and the bones

of the extremities are more often attacked in the young, whereas the ribs and cartilages are the favourite seat of the disease in the adult. Keen states that, "out of 216 cases of bone disease, 40 were confined to the ribs and cartilages, and of the 40 cases, 35 were over the age of 35, and 5 under." The part of the bones attacked is shown by the same author to be "out of 237 cases, periostitis was present in 110, caries in 13, necrosis in 85," and he also notes that whereas, in tubercular osteitis, the general health suffers, in typhoid osteitis, on the other hand, the patient may enjoy first class health.

Chronicity, indolence and a tendency to recurrence are the three striking peculiarities, as pointed out by Osler and Parsons (Johns Hopkins' Reports), and Paget has reported a case in which five operations were done and Keen one in which he operated four times, the disease recurring each time, and in which he removed a considerable portion of the sternum and of the ribs of right side.

During the last two years we have had under our care three cases following typhoid—two having disease of the costal cartilages and one, the lower end of tibia. In one patient, æt. 35, there was disease of the sixth left costal cartilage; this was partly removed but recurring, required a second operation removing the 6th and 7th and part of the 8th cartilage before final cure. The tibial case involved the outer third of the lower end of tibia and the thorough removal of this demanded opening up the ankle joint, from which, however, the patient recovered without untoward symptoms and returned home entirely well. The last case was kindly referred to me by Dr. Tovell of Sydenham, who supplied the following history :—"Wm.——,aged 38, enjoyed good health up to Oct. 1897, when he contracted typhoid fever. After four weeks illness he had a severe pain at junction of 8th rib of right side and cartilage which continued until about Jan. '98, when a slight swelling appeared. Under treatment the swelling and soreness improved so much that during the spring and summer he was able to follow his occupation of farming, but in Oct. '98, a soft area formed in the centre of the swelling which on opening yielded a small quantity of a thin purulent fluid."

He was sent to me about March 1st and on examination I found a sinus which at operation led down to a small spot in upper border of eighth cartilage, about the size of a pea. This was

thoroughly curetted but the wound not healing, a more extensive operation was done May 16th, ult. I then found the whole of the eighth cartilage diseased, which I removed, along with portions of the ninth and seventh—the disease, central necosis, having involved the articulations between these cartilages.

EMPYAEMA.

Our method of procedure in this condition is, after using a large hypodermic needle, to have a culture made of the pus. Should it be due to the pneumococcus or tubercule bacillus then aspiration, repeated if necessary, will frequently cure. Should, however, the effusion be due to pyogenic organisms, we prefer thoracotomy, or exsection of the ribs if needed. Along with this we generally advise lung gymnastics (blowing water out of a bottle, the cork of which contains two glass tubes with rubber attachment, into another bottle), as there is always possibility of permanent compression of the lung. When this occurs, as the lung cannot expand to the chest wall, removal of some of the ribs is necessary, as in two recent cases where I had to do a partial Esthlander operation for the above condition of collapsed lung.

HEMORRHOIDS.

I generally employ the silk ligature by transfixion for hemorrhoids, and in using this method there are two essentials to the successful carrying out of the operation: first, as perfect asepsis as can be secured in this region, and secondly, the proper use of the ligature. As to the latter, there is danger of opening up a venous sinus in the transfixion by the needle, and then, when the divided ligature is tied, the bleeding would be free, since each half would hold open the sinus. To prevent this it is advisable before tying the one ligature, to include one of the ends of the other ligature in the first loop, thus closing the sinus.

INGUINAL HERNIA.

In a recent case of inguinal hernia in a female on whom I did Bassini's operation for radical cure, there were very few symptoms of rupture, and even these were poorly marked. There

was no decided protrusion, though there was a slight feeling of enlargement as compared with the other side, and somewhat more appreciable on coughing. There was complaint of almost constant pain, however, sufficient to justify an exploratory incision. On operation I found an unobliterated canal of Nûck, about as thick as a lead pencil, and four inches long. On incising it the inner opening was found to be of the same calibre as the rest of the sac, but there was no intestine in it. It seemed to me that the explanation of the pain was that of a condition approaching that rare form of hernia-Littre's, where only a small margin of the bowel engages in the sac. She made a perfect recovery, and has since been free from suffering.

D. E. MUNDELL.

HAY FEVER.

THIS is the season of the year when the victims of this annoying trouble present themselves for relief. In the cold season they are few and far between. In the majority of cases the treatment I adopt either checks the condition or keeps it under control. Those that prove intractable are such as have been neglected at the onset. A close study of my cases confirms the belief that there are three distinct factors in each case. First, there is the predisposing neurotic condition with diminished vasomotor control; second, there is a hyperaemia of the nasal mucus membrane; and third, there is the exciting agent which varies with the individual and locality. These three factors are present in varying proportion in different cases, and I find that if treatment be effective in over-coming any one of the three factors the combination is destroyed and the patient has relief. The neurotic condition should be looked after for some time previous to the date of the annual attack. There are patients who have an annual attack which comes on a certain day of a certain month, and they tell me this has been so for years past. Others expect the attack to come during a certain week, and still others, during a certain month. The usual story is that for a few years

the attack was limited to a definite time, varying from a few days to a few weeks, but as the time passed the period has become prolonged. These are the patients who get relief from medicinal treatment carried on for a month or six weeks before the expected attack. Many of these patients are slightly anaemic and iron and arsenic are of great benefit to them. Where this indication is absent I prescribe a tonic mixture of strychnia, or valerianate of zinc or sometimes a simple bitter, while for all of them I order lithia in tablet form. This, in a fair percentage of the cases, has prevented the attack, while in a larger proportion it has greatly modified its severity.

As to the second factor, the local condition, everything possible should be done to remove any focus of irritation from the nose. This may be no more than a simple hyperæmia of the nasal mucus membrane or it may be a hypertrophic rhinitis, a polypus, a spur on the septum, or a deviation of the latter.

The third factor, the exciting agent, varies with the individual and locality, and it is not by any means always pollen of grass or flower, though it is sometimes impossible to determine its nature. City patients who are shut up in offices all day get better as soon as sent out to the country, and have a recurrence when they return to the dust and odor of the office. Two patients have an attack whenever they drive behind a horse or enter a stable. When an attack comes on I depend mainly on two remedies—one for internal use, the other for local application. The former is ammonol, (ammoniated-phenylacetamide,) of which I give eight grains in powder once or twice a day. A few get ample relief from one powder taken each morning, but usually a second powder is taken in the evening. The other preparation is stearate of zinc with aristol as prepared by McKesson & Robbins. This is used as a dusting powder in the nose, where it is perfectly non-irritating. This may be used as a snuff if the nostrils are patent; and when they are not, it is to be introduced by a powder-blower of any convenient form. In this way my patients are made comfortable and the attack is shortened.

NOTE ON SOZOIODOL OF ZINC.

Sozoiodol, or di-iodo-para-phenol sulphonic acid is composed of 54 per cent. iodine, 7 per cent. sulphur and 20 per cent. phenol.

It has been combined with potassium, zinc, sodium, ammonium, lead and mercury. These are all suggested by Merck as odorless substitutes for iodoform. The zinc salt is particularly useful as a non-irritating astringent and antiseptic. Where an astringent is required in the nose and throat it answers admirably in solution varying from 2 to 10 per cent. The potassium salt I have also used in the same porportion with stearate of zinc as a dusting powder in atrophic rhinitis.

J. C. CONNELL.

FÆCES AND THEIR EXAMINATION.

ALL physicians in their routine of clinical work examine more or less cursorily the stools of their patients, particularly those suffering from lesions localized in the intestinal tract and acute in character. It would be advisable for the physicians to study more carefully faeces in all vague or well defined lesions localized in the abdomen, including gastric, hepatic and renal derangements. Take those very vague and common disorders of children classed as "Worms:" would it not be advisable to demonstrate the parasites or their ova before deluging the patient with vermifuges, for when parasites are present their ova at least will be found in the stools.

No definite plan of examination can be laid down to follow as physiological stools differ so much in their composition and character, both macroscopically and microscopically, varying with age, amount and character of the food taken, the exhibition of medicines and like factors. With these variations it is essential that the physician be acquainted so that he may more readily determine pathological characters in a stool. Naturally for the majority of physicians the macroscopic examination is all that can be attempted. This examination includes such points as the *formation* of the fæces, (scybalous, firm, ribbon like, pultaceous, watery, etc.); the *presence of mucus*, and if so, is it present in flakes, shreds, or cylinders? the *odor*, whether more offensive than usual, as in

gangrenous dysentery; the *color* which varies greatly in pathological conditions depending on absence or excess of bile, presence of blood, exhibition of such medicines as Bismuth and Iron, etc.; the presence of masses of *undigested food*, particularly fats, starches, and curdled milk; and lastly, the presence of *blood* or *pus*.

While these are the general characters which are to be noted in all cases, other methods of examination are required for special cases.

In all attacks of colic in adults, more particularly when localized in the hepatic region, the stools should be broken up and passed through a fine sieve so as to secure any biliary calculi that may have passed. At times enteroliths may be mistaken for such calculi, but a chemical test for cholesterin will at once clear up this point.

The passage of shreds of mucus points to a catarrhal condition of the lower bowel. Complete casts of parts of the lower bowel, consisting of mucus are at times seen without serious intestinal disturbance, but more commonly the passage of such means a severe colitis. Casts of the bowel are also seen in gangrenous dysentery, but are here accompanied with blood and pus, and are made up of the gangrenous portions of mucous membrane, together with the fibrinous exudate upon its surface. In cases of suspected amoebic dysentery the mucous flakes and shreds should be at once examined, for the living amoebia coli (dysenteriae). But our sporadic dysentery of this section is only exceptionally due to this parasite.

In examining for the ova of the animal parasites, it is best to select any mucus shreds for examination first. Or break up the faeces in a .5 per cent. formaldehyde solution and allow to sediment in a urine glass. Examine this sediment after two hours. Tape worm segments can be readily detected with the eye, but in all cases the ova of these parasites make their appearance in the stools before these ripe segments themselves. The formalin destroys the odor and preserves the faeces very effectively.

Amongst the vegetable parasites which may appear pathologically in the intestine Cholera spirillum, Bacillus typhosus and Tubercle bacillus are the chief ones of interest. For the former parasite we fortunately have no occasion here to examine. The Tubercle bacillus is thus the main parasite of interest. It may

be found in intestinal tuberculosis or it may be demonstrated in the faeces as the result of swallowing the sputum in pulmonary tuberculosis. Practically, however, its presence is diagnostic of the intestinal lesions of tubercle. It is at times hard to demonstrate it even in true cases as might be expected from the nature of the lesions, so that more than one examination is needed before we can positively exclude these parasites.

In examining for the Tubercle bacillus the stool should be received in 1-40 carbolic acid, or 1 per cent. formalin solution and thoroughly broken up. The solution may then be allowed to sediment or may be centrifuged. Films are prepared from the sediments and stained in the usual manner.

The presence of either blood or pus is always pathological. Blood may be suspected from the coloring of the faeces, but when the haemorrhage is high up in the bowel, only rarely can blood cells themselves be detected. It is only in severe haemorrhage (as in Typhoid) or when the bleeding is low down as from the sigmoid or rectum that the corpuscles are seen. A certain test can be made by examining the watery extract for blood pigment and demonstrating haemin crystals.

Pus (dead lencocytes) is found in all forms of inflammation of the bowels. When pure its presence usually signifies rupture of an abscess or some suppurative condition low down in the bowel.

Regarding the presence of particles of undigested (and digestible) food, minute amounts of such food may be found normally, particularly meat fibres, starch granules, and fat, (crystalline forms). When these are present in larger amount than traces, then we must consider the condition pathological, (unless excessive amounts of such foods continue to be eaten.)

Excess of starch means a disturbance in the digestive functions of the small bowel, the so-called amylaceous dyspepsia. Commonly we find a catarrhal condition of the small intestine, but occasionally the condition is associated with lesions in the pancreas, or obstruction of its ducts.

Fat, either in crystalline form, or more rarely in globules, may be present in excess. Fat is seen most commonly in biliary obstruction, the stools being clay-colored. Fatty stools are also seen in diabetes, and rarely in disease of the pancreas. Starch,

fatty acids, muscle fibres, and milk globules (fat), are readily examined for, by spreading out the faeces, if watery, on a slide; if not watery, break up in a little water and examine under the low and high dry lenses.

No attempt has been made to treat of the character of the stools in the various diseases. They differ as much in the course of these diseases as do normal stools in character. While certain stools are most commonly seen during the course of certain diseases there are no essentially diagnostic characters, *e.g.*, the so called "typhoid stool" may be seen typically in some protracted diarrhœas or in intestinal tuberculosis. Rice water like stools, are seen not only in cholera asiaticae, but in cholera nostras some cases of ptomaine poisoning and in poisoning by arsenic or antimony. This list might very readily be widely extended.

W. T. CONNELL.

TO THE EDITOR OF THE KINGSTON MEDICAL QUARTERLY.

DEAR Sir,—I was much interested in Doctor Mylks' able article—"Pathology of Acute Pneumonia"—in the April Quarterly. The Doctor's pathological evidence seems to sustain an opinion that I have held for a numbers of years, viz.—that acute pneumonia is a much more common disease, particularly in children, than generally supposed by the profession at large.

Had Doctor Mylks not put the cases which, "presented throughout somewhat misleading clinical signs" to the microscopical investigation, he, as many others have done, might have arrived at an erroneous diagnosis, or had the doctor been positive as to the nature of the disease, a consultant possibly would have differed with him. It is sometimes difficult to convince even members of our own profession, that the seat of an obscure ailment is located in a certain organ, because such viscus is supposed when affected to exhibit a strictly conventional list of clinical manifestations.

Doctor Mylks points out a truth, however, when he says,

"Variations in clinical signs obviously depend upon differences in the pathology, either as to situation, or kind of lesion."

In my experience I have not found acute pneumonia, by any means, a self-limited disease, except where a large portion of lung becomes suddenly involved. Under such conditions, if a fatal result is prevented the disease usually terminates in crisis. But such is not the case, even when the initial ailment is pulmonary; if the disease manifests itself throughout the lung, or lungs, in widely disseminated patches. There is no doubt but acute pneumonias possess and exhibit distinctive clinical signs that vary but little in different subjects; but if an entire lobe or more of a lung be affected the signs are not the same as when pathological lesions are minute and scattered, no matter whether they are deep seated or peripheral, or whether they finally coalesce or not.

This patchy form of pneumonia was prevalent here a few months ago during an epidemic of La Grippe, and was entirely independent of whether there was or had been any bronchial difficulty or not. In many subjects there was almost an entire absence of cough except at rare intervals, then only sufficient to enable the patient to raise a small amount of characteristic pneumonic sputum.

In children I have many times found this same patchy form of pneumonia when there was no history or other evidence of an antecedent disease.

In little ones of tender years there is of course no expectoration to guide in diagnosis and sometimes less cough than we often find in simpler ailments entirely independent of the lungs. In such cases as these if the physician has not pneumonia in mind he is in danger of overlooking it, and his results may not be as satisfactory as if he had promptly recognised the difficulty with which he had to deal. After a somewhat extensive experience in treating children, I feel sure that acute pneumonia is not an uncommon disease amongst them. It frequently remains undetected because it does not exhibit the stereotyped signs we have been taught to base our diagnosis upon.

My practice is to examine the chests, both back and front, of all children who present the slightest symptoms of a lung ailment. Usually if there is any trouble it can be detected by the

ear better than in any other way with which I am familiar. It must be remembered that pneumonia is sometimes complicated, as well as being a common complication of other diseases.

I think habits and environment may have something to do with this, still I believe the disease will be much more frequently found everywhere if carefully looked for, and the finding of it will remove an unpleasant element of doubt in the mind of the attending physician.

It will also be a mighty solace to the members of the family and all the curious old ladies, who are so anxious to know "exactly what's the matter with the child."

Thanking you for the use of your columns.

I am, yours truly,

J. D. DUNLOP, Alpena, Mich.

KINGSTON MEDICAL AND SURGICAL SOCIETY.

THE regular May meeting was held May 9th. Dr. Herald, President, in the chair and 15 members present.

Drs. E. C. Watson, A. R. B. Williamson, A. W. Richardson, and Robert Hanley were elected members of the society.

Dr. Oliver then opened the discussion on small-pox giving a clinical description of the disease and its diagnostic characteristics. He gave a resume of the cases he had seen in the past 42 years of practice in Kingston and elsewhere. As these cases are interesting as showing something of the history of small-pox in Kingston over that period they are appended.

In 1857 one case was in the General Hospital—one in 1858-1859, two cases; 1860, one; 1861 two.

In 1862 and 1863 Dr. Oliver was attached to the Federal Army as surgeon and saw over 900 cases of small-pox, chiefly in hospitals about Washington.

In 1864, four cases were attended; 1865 three. In 1866 there were upward of 40 cases (epidemic year). 1867 eighteen cases; 1868, three cases; 1869, free; 1870, 1871, 1872, each one.

From 1873 to 1887 there were from one to three cases annually in the hospital. Since 1889 the only cases were an "A" Battery-man in 1894, referred to Dr. Oliver by the Board of Health, and the recent case which occurred here in April.

The disease had never spread here except in 1866, as in all cases isolation was strict, and the community was guarded by vaccination. When death occurred it was almost without exception in the unvaccinated. In 1875, a child was born in the Hospital, of a mother who had just previously nursed a small-pox case. This child was still-born and covered with pustules (? vesicles) when born, though the mother was unaffected. The mother had had small-pox some years before. Speaking with regard to the recent case, Dr. Oliver had diagnosed small-pox (discrete) from the character of the vesicular eruption, the headache, pain in limbs, temperature, and the peculiar odor.

Hon. Dr. Sullivan had seen the case and diagnosed varicella. There had been no lumbar pain, the eruption was typically vesicular, there was almost no maturation as only 3 vesicles had had become pustular, there was certainly no fever of maturation, and the vesicles had dried and crumpled away.

Dr. Wood had had charge of the case previously, and had carried the child and a younger member of the same family through a typical attack of scarlet fever. Seven days after he had given over visiting the cases, he was again called and found the child with headache, pain in the limbs (feet), temperature of 102° F. and covered with a vesicular eruption. This eruption had not to him the characters of a varicella, but was more like that of small-pox. Dr. Oliver was called in and pronounced the case one of the latter disease. It was at once transferred to the medical health officer.

Dr. Herald had seen the recent case by Dr. Wood's permission. At the time of his visit, which was after that of Dr. Oliver, he had found the child with a temperature of $102\frac{2}{5}$° F. complaining of no pain, nor headache. There was no odor. The vesicles were unilocular, being readily evacuated, and when so, did not refill. There was no umbilication of the vesicles. Several were becoming pustular on the forehead, evidently from being scratched. Dr. Herald was certain this case did not conform to small-pox as he had seen it.

N.B.—The after history of the case seems to prove clearly that the case was not one of small-pox. There was no maturation, but vesicles dried and crumbled away. None of the other members of the house, including children freely exposed, and unprotected by vaccination, acquired the disease. Again, there was no history of exposure in any possible way, either to varicella, or small-pox, and as these diseases do not generate *sui generis*, it is reasonable to suppose that the case was a vesicular eruption the probable result of the action of scarlet fever toxin. For it is well known that in this fever the kidneys are often attacked during convalescence, and why not in like manner the skin which is also an emunctory. Clifford Allbut recognizes an impetiginous eczema as one of the complications and as a sequela of scarlet fever. This eruption would not come in the category however.

The regular June meeting was held on the 6th. Dr. Herald, President, in the chair, and 11 members present. Dr. Platt, warden of the Kingston Penitentiary was unaminously elected an honorary member of the society.

Dr. W. T. Connell shewed microscopic specimens of the blood from a cow dying of Splenic Fever; the blood containing large numbers of bacillus anthracis. The cow was from a stock farm near the city. Dr. Jas. Campbell then read a paper on "Some of the complications of scarlet fever, and their treatment." This paper is found elsewhere in this issue.

Dr. J. C. Connell spoke of the necessity of treatment of the naso-pharynx, as a preventive measure against middle ear complications. He advised the use of the ordinary medicine dropper, and mild antiseptic lotions, as weak permanganate of potash solutions for treatment, via the nose. Dr. Connell spoke of the necessity of early and rapid treatment of the middle ear complications, which when untreated often assumed a necrotic form.

Dr. Oliver referred to the mildness of the present epidemic, and the small number of complications presenting. The other members present joined in the discussion.

This meeting being the Annual one, the elections of officers for the ensuing year was next proceeded with, and resulted as follows:—Dr. Herald, re-elected President, unanimously, Dr. Ryan, Vice-President, Dr. W. T. Connell, re-elected Secretary-Treasurer.

The meetings were adjourned till September.

NO. 16. DISTRICT MEDICAL SOCIETY.

We are pleased to note that District, No. 16, comprising the Counties of Leeds, Grenville and Dundas, has organized a Medical Society at a meeting called by the district representtative, Dr. Lane, at Brockville, on June 8th. Most of the day was taken up with organization including election of officers, drafting of by-laws, etc. The officers selected were:

President, Dr. J. W. Lane, Mallorytown; 1st Vice-President, Dr. W. Young, Prescott; 2nd Vice-President, Dr. Brown, Chesterville; Secretary, Dr. Moles, Brockville; Treasurer, Dr. Horton, Brockville.

Under the energetic management of these officials there is no doubt but that this District Society will prove a live organization. The first meeting is to occur early in November, and will be held at Brockville.

Drs. Herald and W. T. Connell of Kingston were visitors at this organization meeting and were honored by being elected Honorary members.

In the evening the newly organized Society sat down to dinner at the Revere House where after full justice had been done to the excellent menu provided, speeches and stories concluded the day's work.

The speeches were mainly on the pros and cons of the fifth year course, and the lengthening of the session, and also on the subject of Interprovincial or Federal registration.

On the former question, there were as many opinions as speakers, but the general opinion, so far as could be judged, was toward the retention of the shorter (six months) session, and the fifth year.

It would be well for the other districts of our Province to follow the lead of District No. 16. Outside our larger cities, and several districts, no local societies exist. Their benefit will be manifest to those acquainted with their workings, and is more fully referred to by our editor elsewhere.

A TYPICAL OPERATION FOR THE RADICAL CURE OF OBLIQUE INGUINAL HERNIA.

LAST October, when visiting Chicago, it was my privilege to see a good deal of the surgical work of a distinguished Canadian, who, by virtue of his undoubted skill and enthusiastic devotion to his profession, is rapidly attaining the front rank among the surgeons of the West. I refer to Dr. Alexander Hugh Ferguson, (M.D., C.M., Trinity), Professor of Surgery, Chicago Post-Graduate Medical School.

Among other suggestions as to new procedures in surgical operations, Dr. Ferguson very kindly detailed to me the steps of a new operation for the radical cure of inguinal hernia, and I have very much pleasure in giving the readers of the Quarterly the author's description of the various steps.

Dr. Ferguson says: "In investigating several relapses of the rupture after different methods of operating, the first important observation I made was that the return hernial protrusion began at the upper and outer portion of the seat of operation above the cord, and usually near Poupart's ligament. This I recollected had been referred to by other surgeons. While operating on these relapses I found a slit in the aponeurosis of the external abdominal muscle through which the sac and usually some fat protruded. Determining upon a search for the causes of these failures, it was thought advisable to make a semi-lunar incision and raise a flap of skin, fascia and aponeurosis of the external oblique muscle, in order to bring into view the whole sac, and deeper structures with their relations. To my astonishment, I found an angle between the lower border of the internal abdominal oblique muscle and inner aspect of Poupart's ligament wholly unprotected by the internal oblique and transversalis muscles. In the sixth case the unprotected angle extended upward and outward to the anterior superior spine of the ilium, there being no connection whatever between Poupart's ligament and these muscles, the space being occupied by some fat and a hernial sac. This is how I made the important discovery that a *deficient origin of the internal abdominal oblique* and of the trans-

versalis muscles *at Poupart's ligament* is a direct cause of the rupture returning in this angle after operation for the radical cure. I then (January, 1898) began the semi-lunar incision in every hernial operation, and to look for the deficient origin of the internal oblique and transversalis muscles. They were always deficient in origin.

FIRST STEP. *Semi-lunar Skin Incision.* Begin the incision over Poupart's ligament, one and a half inches below the anterior superior spinous process of the ilium; extend inwards and downwards in a semi-lunar manner, circumventing the internal abdominal ring, and terminate it over the conjoined tendon near the pubic bone. Cut carefully backwards with a very sharp knife and expose the vessels and pick them up with forceps before severing them, and thus prevent blood-staining of the tissues. Having passed through the skin, two layers of superficial fascia, fat between them and superficial epigastric vessels down to the aponeurosis of the external oblique muscle, it will be noticed that it is not necessary to cut the superficial circumflex iliac, nor the superficial pudic vessels. Take a pledget of gauze and with it turn the flap of skin, subjacent fat and fascia downwards and outwards over the thigh. This procedure brings into view the aponeurosis of the external oblique muscle, the external abdominal ring, with its pillars and intercolumnar fascia, the hernial sac, if it has descended through the external ring, external surface of Poupart's ligament, the under surface of the flap covered by the deep layer of superficial fascia, and the superficial vessels.

SECOND STEP. Cut through the external abdominal ring and intercolumnar fascia; separate the longitudinal fibres of the aponeurosis of the external oblique muscle directly over the inguinal canal, far beyond the internal ring, over the surface of the internal abdominal oblique muscle, and up under the skin, to a point nearly opposite the anterior superior spine of the ilium. Delicate transverse fibres are encountered and severed. Retract the aponeurosis of the external oblique muscle and thereby bring into sight the deep structures, viz., the contents of the inguinal canal, the whole sac, with its adhesions, the spermatic cord, ilio-inguinal nerve, internal abdominal ring usually enlarged, frequently an accumulation of subserous fat, the cremasteric muscle, conjoined tendon, internal oblique muscle, and its deficient origin

at Poupart's ligament, transversalis fascia, and the internal surface of Poupart's ligament. I consider the *congenital deficient origin of the internal oblique* and transversalis muscles one of the most frequent and important causes of oblique inguinal hernia. Inspect these structures carefully, and now determine whether the operation is to be typical or atypical. When the structures are well defined and not too much weakened by pressure atrophy, a typical operation can be proceeded with.

THIRD STEP. *This step deals with the sac and its contents; the cord, cremasteric muscle, and subserous lipomata.*

Sac. The sac is carefully dissected from the cord and internal ring; it is always opened, contents inspected and dealt with, and ligated high up over the inserted finger, cut off, and the stump dropped. In atypical operations the sac is usually preserved, as recommended by Macewen. If the sac be congenital, divide it in two, the distal half to form a tunic for testicle, and the proximal to be treated as above mentioned.

Omentum. When omentum is found within the sac it is liberally withdrawn, tied *en masse*, cut off, stump covered with its own peritoneum, and returned within the abdomen. This decreases the intra-abdominal pressure and lessens the tendency to a return of the hernia. At the stage of the operation when the sac is opened, it is frequently found advantageous to place the patient in the Trendelenburg position to prevent protrusion of and injury to the intestines.

Cord. The cord is not disturbed. I have never been satisfied with the raising and transplantation of the cord. In more cases than have been recorded the testicle has come to grief by this unnecessary procedure. Tearing the cord out of its bed is without an anatomic reason to recommend it, a physiological act to suggest it, an eitiologic factor in hernia, congenital or acquired, to indicate it, nor brilliant surgical results to justify its continuance. Leave the cord alone, for it is the sacred highway along which travel vital elements indispensable to the perpetuity of our race. The veins in the cord are not disturbed, unless a varicocele complicates the hernia. If the cremasteric fibres are unduly thickening the cord, they had better be removed along with adventitious tissue that is not unfrequently present.

Lipomata. An abnormal quantity of subserous adipose tissue

is so often deposited around the sac and cord and along Poupart's ligament that are etiologic factors in hernia, and if not removed tends to cause a return of the hernia. A systematic search should be made for fatty aggregations and remove them. (See "Adipose Tissue an Etiologic Factor Hernia," May, 1899, Illinois State Med. Soc., by the author.)

FOURTH STEP. *Restore the structures to their normal positions.*

Transversalis Fascia. It forms the internal ring. In hernia its fibres have become more or less stretched above and around the cord. The ring in consequence is abnormally large and the fascia bulges outwards. To rectify this condition take up the slack in the fascia and make an accurately fitting ring for the cord by means of a suture interrupted or continuous. Do not injure the deep epigastric vessels, nor pass the needle too deeply in the direction of the large iliac vessels.

Internal Abdominal Oblique and Transversalis Muscles. Suture these muscles to the internal aspect of Poupart's ligament, and restore their normal origin. I usually freshen the lower border of the muscles and scarify the surface of Poupart's ligament to insure firm union, and extend the sewing fully two-thirds down Poupart's ligament, which is the normal origin of this muscle in the female. Take care not to split Poupart's ligament by grasping with the needle the same longitudinal fibres each time. It is surprising how easily these two structures come together without the least discernible tension, and it is gratifying to observe how perfectly these muscles cover and protect the internal abdominal ring and inguinal canal.

Aponeurosis of the External Oblique Muscle. Bring together the separated edges of the aponeurosis of this muscle. Restore the external abdominal ring.

Flap. In bringing the skin flap into a normal position be sure and coapt all its structures, like to like, especially the deep layer of the superficial fascia.

COMMENDABLE FEATURES.

I. The different structures in the abdominal wall are placed in their normal relationship. (1) The tying of the sac restores the normal rotundity of the peritoneum. (2) The suturing of

the transversalis fascia forming a new internal ring at the same time obliterates the hernial infundibliform process. (3) Sewing the internal oblique and transversalis muscles to Poupart's ligament secures a normal origin for them and they can find perfect protection to the internal ring cord and canal. (4) The suturing of the separated fibres of the aponeurosis of the external oblique protects the underlying muscles and cord, while the skin flap covers all.

II. The four lines of suture are not opposite each other thus securing an overlapping of the weak parts (lines of repair) by normal tissues.

III. The semi-lunar incision has great advantages. (1) The hernial area is uncovered as in no other way, thus affording an accurate observation of structural relationship, etiologic factors and pathologic conditions. (2) There is less tendency of skin infection, extending to the deeper structures. (3) Should, unhappily, a return of the rupture occur, there is no scar over it and a truss can be better borne.

IV. Of all the operations that I have performed, it is the simplest and easiest to execute. There is a good scientific reason furnished for every step in the operation.

V. Results are excellent. The eighteen months I have performed my 'Typical Operation' 64 times, counting each case of double hernia as two operations. There have been no relapses so far. I do not wish to say that recurrence cannot take place. The ages of my patients varied from 5 to 76 years; station in life, from poorhouse cases to the most affluent. Seven hernias in four men were complicated with enlarged prostate, where at the same time I performed gonangiotomy; 4 were strangulated; 1 (double) had chronic gonorrhœa; 3 cases had non-descending testicle; 4 had varicocele; 2 had a femoral and umbilical hernia; 1 case had an epigastric and a femoral hernia as well, all three operated at the same time; and 1 had oblique inguinal congenital, and on the same side an acquired direct hernia.

There was one death on the fourth day after the operation—an old man, 74 years old. He had enlarged prostate chronic cystitis, diseased kidneys, etc., etc. The effect of the anæsthetic was most likely the cause of death. Three cases suppurated. Two had chronic gonorrhoea and the third had chronic cystitis.

In 61 out of 64 cases primary union occured. All the strangulated cases healed by first intention. Rubber gloves were used in 3 cases only (6 operations). In doing the rest of these operations with bare hands, the fingers were not allowed to touch the tissues, but as little as possible.

Wound usually cleansed with salt solution and skin with bichloride solution (1-2000). In about half the cases chromoform catgut (No. 0, 1, 2, and 3) was used in skin (as well as in deeper structures). The last six months I have discarded No. 2 and 3. If additional strength is deemed necessary the catgut is used double. Horse-hair and silk worm gut were the other materials used for the skin. Different stitching methods had been employed, viz., interrupted and continuing in the deeper structures, and for skin I used external interrupted, subcutaneous interrupted; external continuous and subcutaneous continuous. Half the stitches were removed on sixth or seventh day, and rest removed within ten to twelve days. The patients were kept in bed from twenty-one to twenty-eight days, enjoined not to assume any work for six weeks after operation, and advised to wear a broad support (no truss) for three or four months.

Measurements. With a special, flat, ruled probe accurate measurements were made on the operating table to ascertain:

1. The length of Poupart's ligament.

2. The length of origin of the internal oblique muscle from Poupart's ligament.

3. Size of 'Ferguson angle' and position of internal ring.

In the sixty-four operations the origin of the internal abdominal oblique and transversalis muscles was deficient in every case. To differentiate between the border of the internal oblique and the fibres of the cremasteric muscle a blunt dissector or protected finger is passed underneath the conjoined tendon and made to travel rapidly to Poupart's ligament, well under the border of the muscle, thus sending the cremasteric downwards and hugging the main muscle to its origin, and then the measurements are taken. The origin (which is the main thing) of these two muscles was deficient in every case, the average length being $1\frac{3}{8}$ inch. It was rare to find an origin of 2 inches; $\frac{1}{2}$ inch and 1 inch was more common." W. G. ANGLIN.

ONTARIO MEDICAL COUNCIL EXAMINATIONS.

The following students of Queen's University have passed the examinations of the Ontario Medical Council:—

PRIMARY EXAMINATION.

I. G. Bogart, H. M. Cowen, F. F. Carr-Harris, W. S. Grimshaw, A. D. MacIntyre, H. .V Malone, J. McCulloch, E. Richardson, C. de St. Remy, E. C. Watson.

INTERMEDIATE EXAMINATION.

C. H. Amys, E. G. Cooper, W. S. Fadden, H. V. Malone, E. C. Watson, A. R. B. Williamson.

FINAL EXAMINATION.

C. C. Armstrong, E. G. Cooper, W. N. Condell, H. H. Elliott, W. S. Fadden, R. Hanley, R. D. Menzies, C. A. Morrison, C. E. O'Connor, E. C. Watson, A. R. B. Williamson.

The QUARTERLY extends its congratulations to these gentlemen, and trusts that they will one and all be as successful in the future as they have been on this occasion.

BOOK REVIEWS.

Practical Bacteriology: Dr. W. T. Connell, M.D., M.R.C.S., Eng., British Whig, publishers.

THIS little work designed by the author as a guide to the student in the laboratory, is admirably adapted for the purpose. Part I. consists of XX demonstrations of how to prepare specimens for examination, including the formulae for various staining fluids, the methods of examination and the use of the incubator. Part II. deals with the preparation of culture media, the sterilization of bacteriological utensils and the examination of water and milk. Part III. is the practical application of bacteriological examination to diagnosis of disease. Under this

heading we find the methods of examining sputum, stomach contents and the blood and urine. While the work was designed by the author as an aid to his students in their work in the laboratory during their college course, it will be found to be of great value to the general practitioner. Especially is this true of the third part. While, it is true, a diagnosis of such disease, as pneumonia, tuberculosis, diphtheria, gastric ulcer or cancer and many others may be made by the clinical history and physical examination, even in well marked cases this diagnosis may be confirmed by bacteriological examination and in doubtful cases the doubt may thus be removed and the nature of the diseased confidently affirmed. The author does not pretend to give an exhaustive treatise upon bacteriology and the application of bacteriological methods to the diagnosis of disease, but merely an outline of how to conduct those examinations and of the use that may be made of them in the diagnosis of many diseases. In this we would say he has succeeded, and his work will be found to be of great value as a guide to the student and as an aid to the general practitioner.

Diseases of the Skin :—Prof. Dr. Franz Mracek, Vienna—W. B. Saunders, Philadelphia, Publishers.—J. A. Caveth & Co., Toronto, Canadian Agents.

This work consists of two parts. The first part contains the text, and includes an outline of the anatomy and physiology of the skin, a consideration of the etiology of the diseases of the skin, the general therapeutics of such disease together with the internal and external treatment. The classification adopted is that of Hebra modified. The second part of the work consists of 60 coloured plates, and 39 full-page, half tone illustrations. Each illustration is accompanied by a short clinical history of the case from which the illustration was taken. This to the student is a most valuable aid in the study of diseases of the skin. While, no doubt, the best way to study these diseases is from actual cases, yet in the absence of such facilities, coloured plates taken from life make a fairly good substitute. Of the work in general we feel like saying we wish there was more of it. We would have preferred to find more upon the anatomy and physiology of the skin, more upon the etiology of skin diseases, and a fuller description of the primary

and secondary lesions of the skin. The author, however, apparently felt that a full consideration of these would unduly enlarge the scope of his work. Notwithstanding these defects, if defects they be, we most heartly endorse the work and unhesitatingly recommend it to the student or practitioner who desires to make himself conversant with diseases of the skin and their rational and successful treatment.

Forest Lilly: James Donald Dunlop, M.D.; F. Tennyson Neely, publishers, London and New York :—

We do not intend as a rule to call our readers' attention to works of fiction, but we feel that in this case we will be pardoned for so doing as the work is by a gentleman of our own profession, a Canadian by birth and education. Dr. Dunlop is not the only medical practitioner who has sought and won fame in the realms of literature outside the purely professional field. The story is Canadian in its scene and character. The author deals with the early days of the north-western part of our Province of Ontario, when the pioneers of civilization were pushing their way into the primeval forest. The aboriginal inhabitant of this country plays an important and conspicuous part in the story and the author gives us an insight into the character of the Indian before he was contaminated by contact with the advance guard of the conquering white man. Throughout the book the author keeps the readers interested by the exciting scenes through which he makes his hero and heroine pass.

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