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SMALLPOX AND VACCINATION.

BY JOHN CAVEN, M.D., TORONTO.

Under the head Preventable Complications and Accidents of Vaccination, are included all such as have no necessary connection with cowpox, *i.e.*, are not due to either the essential qualities of vaccine lymph or the peculiarities of the individual affected. It is, perhaps, not customary to consider the acute infectious diseases—scarlatina, for example—during the incubation stage of which vaccination may have been performed, as *preventable* complications. In the strict sense, however, they are so. They are in no way related to vaccinia, except in time and individual, and no amount of vaccination, apart from an exposure to the specific infection of these diseases, could have any influence in causing their development. Fortunately, the results of vaccinating those sickening of infectious diseases are not disastrous, even though patients may be caused more discomfort and suffering thereby, and in some instances it may even be proper to proceed with the operation as the lesser of two evils. There are, however, other preventable complications which have a definite connection with vaccination and which may be serious enough in themselves. They call for a closer consideration, because of the fact that they can be almost certainly avoided by use of proper precautions on the part of physician and patient.

Infection with the diseases in question may come either at the time of vaccination or subsequent to it; it may come either at the hands of the operator—by instrument or lymph—or after the case is practically from under his control. Of these preventable complications of vaccination, syphilis, crsipelas,

septicemia, tetanus, leprosy and tuberculosis have been, or are, the most important.

Syphilis and Leprosy.—When arm-to-arm vaccination with humanized lymph was the prevailing practice, the danger of infection by syphilis was not an imaginary one, and we have records of not a few deplorable cases. At the present time no one would think of arm-to-arm work in the wide sense of the term. Some, still, after vaccination of one member of a family with bovine lymph, vaccinate others in the same family from the first. Even in so limited a use as this of the humanized lymph there may be danger, unless personal history of the vacciner be completely known. It is claimed that the results of this method are better than where bovine lymph alone is employed. The weight of opinion seems to be against this view. Cattle being immune to syphilis, bovine lymph cannot convey the disease. Syphilis may therefore be spoken of as a danger of the past, where modern methods are carried out. Leprosy falls into the same catalogue with syphilis, since cattle are absolutely immune to it also.

Tuberculosis.—Both clinical and experimental work prove that danger of transmission of tuberculosis in any degree to be so small—even where arm to arm vaccination was the custom—that Nothnagel is able to say there has been no well authenticated case recorded. C. Fox has seen lupus three times in scars of vaccination, whether due to it or not it is impossible to determine. The care taken in the choice of animals from which lymph is prepared by modern methods, effectually removes all risks of conveying disease by it, even should Koch's belief, that bovine tuberculosis cannot originate the human form, be found incorrect.

Erysipelas.—Erysipelas and septicemia, with its various localized manifestations (e.g., phlebitis, phlegmon, metastatic abscesses, etc., etc.), have been amongst the common and most fatal complications of vaccination, and they occur in all degrees of severity. So recently as in the ninth edition of the *Encyclopædia Britannica*, the statement is made in an article on vaccination that erysipelas, more or less marked, is a normal feature of its course. Were it not that the article is written by one who is evidently an anti-vaccinationist it would be difficult to understand his position. That the erythematous areola surrounding a typical vaccine pock is to be considered erysipelatous, is simply to arbitrarily extend the term so as to include whatever one wishes. Erysipelas, leaving the question of causation to one side, has a definite clinical history which distinguishes it from other infections, and this history is quite different from that of normal cowpox as seen in the human species. It would be strange, moreover, that a disease to which

calves, at any rate, are not susceptible, should be communicated by lymph, which is a product of a quite different affection in them.

Erysipelas and septicæmia should be thought of as in no wise different from the same infections when occurring apart from vaccination. Both diseases have been so largely banished from modern surgical practice that their presence causes the surgeon to revise carefully his technique. So it also ought to be in vaccination cases. It does not follow that all cases are the result of imperfect handling. In some, no doubt, the patient himself is solely responsible. The vaccinator, therefore, should make a practice, as far as lies in his power, of watching his cases until the pock has healed, and if a "sore" arm develops, handle it as he would any other infected member.

Tetanus.—One of the rarest complications of vaccinia in the human subject is tetanus, and, were it not for the fact that during the last twelve months a number of cases of this fatal disease have occurred in connection with vaccination and been attributed to it, any lengthy consideration of it would be out of place. But one case has been reported in Canada, and it, on account of legal proceedings resulting, obtained wide publicity.

Investigation of the case above mentioned shows that the death of the child, reputed to have suffered from tetanus, is in no fair way to be laid to vaccination. At the coroner's inquiry into the cause of death it was shown that the child had been vaccinated on or about the 25th of October, 1901, by a druggist, who claimed to have taken proper precautions in operating, *except washing the arm*; that the druggist saw the arm two weeks later and that the result was then perfect and no bad symptoms had developed; that on November 18th a physician was sent for, who says he then diagnosed tetanus, the diagnosis being made from the appearance of the wound and the symptoms. The physician further testified that, in his opinion, the child was inoculated with the disease at the time of vaccination and, presumably, by means of the lymph. The verdict of the coroner's jury was, in accordance with the evidence, to the effect that death was due to tetanus caused by vaccination. The firm whose lymph was blamed for the fatal mishap were not, however, content to let the matter rest, and it is easy to understand why. Further investigation brought out the fact that the physician in charge of the case understood that the tetanic symptoms had followed within two weeks of vaccination, whereas in reality twenty-four days had elapsed. No bacteriological examination had been made, and the diagnosis of tetanus rested entirely upon the symptoms and the fact of an open wound through which infection might have happened being found. Application having been made to the proper

court and the physician's affidavit as to what his evidence would be with more exact information placed before him, the judge *quashed* the finding of the coroner's jury and directed them to sit again. The following verdict was then returned: "That the deceased E. M. C. died of tetanus. The disease was not caused by the method of vaccination nor was due to the vaccine used." That the last part of the verdict which stands in this case was justified, is abundantly apparent. The best authorities are agreed that the symptoms of tetanus develop within from four to fifteen days after inoculation. Meningitis has been spoken of in connection with the case, with how much reason we do not know; in any event, to settle the question of diagnosis beyond dispute, a bacteriological examination of the wound discharges ought to have been made, and this was apparently not done. It may fairly be held that the diagnosis of tetanus has not been established beyond dispute. Moreover, the evidence goes to prove that the vaccination was not performed as it ought to have been. The operator was not a physician, and whilst he testifies to the cleanliness of the child, damages his own standing as a judge of what is properly called clean by also testifying that he did not wash the arm before vaccinating.

Admitting, however, for the sake of argument, that the diagnosis of tetanus in this case was correct, and that the incubation of the disease might extend over more than three weeks, and also taking as proven that the operation was done with all proper precautions, it is still impossible to believe that the tetanus germ was conveyed through the vaccine used. Before it was put upon the market, bacteriological and physiological tests failed to discover any pathogenic organisms in it. Many vaccinations must have been done from the same batch, and yet in one instance only does this rarest of complications follow. That such should be the case is inconceivable if the infection came through the lymph. A much more probable explanation of the accident is not far to seek. There is on the vaccinated arm a wound which, we have every reason to suppose, was not kept clean as it should be, from the fact that it appeared as a running sore at the time when the physician was called in twenty-four days after vaccination. Infection of this wound with tetanus germs is not surprising. The opportunities for entrance of the tetanus bacilli or spores into wounds must be very great, since, in the earth of many localities, and consequently in the dust, the organism is abundant. Why people who are not overly clean do not more frequently fall victims to the disease is the wonder.

Much has also been made by opponents of vaccination, of an outbreak of tetanus in Camden, New Jersey, in which nine out

of eleven cases died. All but one of them had been vaccinated a short time before the disease showed itself. Here again the evidence that the tetanic infection was not due to the lymph employed is complete. The following paragraphs are from the official report of the State Board of Health :

1. Samples of all the different makes of vaccine employed in Camden have been tested for tetanus germs by the State Bacteriologist of New Jersey, and have been found pure and entirely free from tetanus germs ; hence, tetanus could not have been caused by the virus employed.

2. The history of each case of tetanus has been carefully collected from the attending physician, and in every instance vaccination was practiced in a correct and cleanly manner : the infection of tetanus resulting from neglect on the part of the patients to present themselves to the attending physicians, so that their vaccination could receive proper attention.

3. One case of tetanus has occurred from gunshot wound, during the same period, in a boy who had not been vaccinated, proving that the tetanus germs were in the atmosphere.

4. The indisputable evidence of the fact that the tetanus germs were not introduced at the time of vaccination is that acute tetanus occurs in from five to nine days after the introduction of the germs, whereas in every case acute tetanus occurred in from three to four weeks after the vaccination. If the virus had been contaminated, tetanus would have ensued within nine days after vaccination. Tetanus developed irrespective of vaccine used.

5. Further proof of the purity of the virus exists in the reports of the physicians in Cooper Hospital, who tested on animals samples of all makes of vaccine employed in Camden. If the virus had been contaminated, the animals would have developed tetanus because of their extreme susceptibility to this disease. (Report.)

The whole question of tetanus as a complication of vaccination may be summed up as follows :

1. Infection of any wound, however trifling, with the germs of tetanus may occur.

2. When the widespread diffusion of the organism is considered the number of cases of tetanus from wounds of all varieties is extremely small, and the exposure resulting from vaccination has not appreciably increased it.

3. As lymph is now prepared it can be put upon the market *absolutely free from tetanus germs*, and the liability to infection in any given case can be no greater than the liability from any other wound ; as a matter of fact where ordinary cleanliness is practised it is very much less. If both physician and patient take *all* precautions the danger disappears.

4. With reference to the large number of cases in the Camden outbreak, it is to be remembered that epidemics of tetanus have occurred in the past.

Technique.—The technique of vaccination must aim at two results: the safety of the patient from infection during the operation, and his successful inoculation with cowpox virus.

Antisepsis in Relation to Patient.—A great deal has been said of late with regard to the use of antiseptic precautions in vaccinating, and whilst too much stress cannot be laid upon cleanliness, it is more than probable that many failures are due to over-zealous antisepsis. The germ of vaccinia is extremely sensitive, and even the feeblest antiseptics appear to be fatal to it. In the preparation of the field of operation, no germicide should be made use of the last trace of which cannot be removed with certainty before application of the lymph. Especially are mercurial salts to be avoided. The experience of many reliable observers is that soap and water, faithfully applied, answer every purpose. Some, cleansing first with soap and water, finish off with alcohol, which evaporates rapidly. If alcohol be used, it is worth noting that a dilute solution—50 to 75 per cent.—is more efficient as germicidal than the absolute. Let it be repeated, that a “take” must not be expected if antiseptics be left on the skin to come in contact with the lymph.

Scarification.—In making the scarification, two points are of special importance, namely, that the area scarified be small and that no blood be drawn. As perfect a pock results from inoculation through a small surface as a large, and the smaller the area denuded the less the chance of subsequent infection with pyogenic or septic organisms. It has been found in practice that very sore arms are much more common in the experience of certain physicians than others, and investigation seems to show clearly that this result is just as often due to a too extensive denudation of surface as to surgical uncleanness. Then as to the drawing of blood, it has to be said that even a very small effusion may, and often does, prevent success. It appears that the drying of the blood upon the surface hinders absorption, or that the contact of blood cells with the vaccine germ is detrimental to it. Perhaps both factors are at work. The instrument chosen for scarifying should be such that the epithelium can be removed, leaving a moist, shiny surface without escape of blood. An edged instrument, such as a scalpel or lancet, is better than any pointed one and can be handled with more delicacy and certainty.

A very common proceeding in baring the arm for vaccination, is to roll up the sleeve to the shoulder. Too often the result is practically the ligating of the arm more or less tightly

above the site of scarification. This tells against absorption and may be sufficient to determine a "miss" instead of a "take."

Application of Glycerinized Lymph.—The potency of the lymph depends upon the presence in it of the pulp from the vesicle. It seems to be practically certain that the germ of vaccinia lies in the epithelial cells, and a large part of the pulp is made up of these cells. Inspection of tubes containing properly ripened glycerinized lymph will always show one end of the filled part to be relatively much more cloudy and opaque than the rest of it. If the contents be expelled so that this cloudy part—the pulp in other words—reach the scarification first, the number of successes in a given series will be appreciably greater. If, on the other hand, this precaution be not taken, the greater part of the pulp may go to line the tube wall.

Absorption.—The time required for a sufficient absorption of glycerinized lymph varies. Some samples, for unknown reasons, are taken up very rapidly, and in five minutes from the application the scarified surface may be dry. In others, glycerine is still seen half an hour or more after applying. Fifteen to twenty minutes is generally considered ample time. A gentle rubbing in of the lymph for a few minutes tends to promote rapid absorption. The scalpel blade or slip of wood supplied by some manufacturers may be employed for this purpose.

There is much difference of opinion as to the propriety of covering the vaccinated area with a shield. No harm can come from making use of one for a few hours immediately after the operation, and by so doing the chances of a "take" are increased, since the lymph cannot then be accidentally removed too soon.

In the last place, too much stress cannot be laid upon the fact that the physician should regard vaccination in the light of a surgical operation, a relatively trifling one, indeed, but still an operation. In the majority of cases of surgical wound infections, the infective material is conveyed to the wound by those handling it, or by implements and materials made use of. The most striking examples of blood poisoning are those in which the door of entrance is small, even microscopic. Theoretically, the operator ought to use as much care in regard to his own hands, his scalpel or needle, or whatever instruments he requires, as in any other surgical procedure, and practice should be governed by theory.

Lymph.—A lymph which, while potent as vaccine, would offer the smallest chance of systemic or serious local infection with anything else than the virus of vaccinia has always been a desideratum. We qualify local infection with "serious"

because there are still those who believe that, as in tetanus, infection with the cowpox germ is rendered much more certain (perhaps, even possible only) when the resistance of the tissues is lowered by the action of auxiliary organisms. Whatever the truth may be in regard to that point much time and money are being spent to-day with the object of providing a lymph which shall contain no pathogenic germs which we recognize as such except those of vaccinia itself. The early history of vaccination demonstrates that Jenner's great merit lay in his observation that cowpox could be passed from one human being to another directly, and so introducing arm to arm inoculation. It was comparatively seldom that vaccinia in cattle was discovered and apparently purposive propagation from animal to animal was not thought of seriously, if at all. Moreover, the effects of bovine virus came to be considered much more severe than those of the humanized. Practically the same steps which we see in the evolution of inoculation with variola appear in that of vaccination. The Chinese inoculated with crusts or scabs of smallpox inserted in the nostrils; the Turks with matter from the pustules, and it remained for Sutton to show that by taking fluid from the vesicle at an earlier stage in its development, the disease might be communicated with less danger of severe infection. Scabs and pus were both used in vaccination, to be replaced later with clear lymph taken from the infant's arm at a definite time after the operation. Quills, ivory points and glass capillary tubes, were all made the vehicles of its carriage, and the scab done away with. The chief advantage which humanized lymph possesses over bovine is the easiness with which it may be obtained. Its great disadvantage lies in the fact that it may convey disease, *e.g.*, syphilis, which the well prepared bovine cannot. Both lymphs give protections against smallpox.

The credit of establishing animal vaccination on a sure footing is due to Italy. "After this method had been temporarily tried by Galbiati and Feola, it was brought to a high grade of technical perfection by Negri, of Naples, 1849. Pure bovine vaccination, *i.e.*, the employment of a vaccine virus that has been obtained from a case of original cowpox and transmitted artificially from cow to cow, is consequently still known to many by the historic name of the Neapolitan Method." (Nothnagel.)

At the present day there are in all civilized countries establishments, some private, some under government auspices, for the propagation and supply of cowpox lymph obtained from cattle-directly. In Germany, since 1885, vaccination with bovine lymph has been the only legal method.

On the American continent there are now many establishments turning out vaccine, and these are chiefly private. So far as known promiscuous vaccination from arm to arm is no longer a recognized practice. The names of Martin, of Boston, Walsh, of Washington, and Foster of New York, should be mentioned amongst those who earliest undertook to supply a bovine lymph in America.

A minute description of the technique employed in charging the various lymph carriers made use of some years ago with bovine lymph is not necessary. It is enough to note that with only ordinary measures of cleanliness (perhaps in some cases not even those), the points, quills, etc., were charged directly from the animal, nothing being done to counteract the effects of contamination incidental to the process. Points so charged even in the specially constructed stables and laboratories of to-day are found to carry a variety of organisms—some pyogenic—as well as the necessary one. Plate cultivations made from these—I speak from actual experiment—commonly exhibit colonies in very large, almost countless, numbers. Smears show streptococci, staphylococci and bacilli. Doubtless the virulence of these is greatly reduced by desiccation, and more or less exposure to light before they reach the patient's arm, but the fact remains that they are not surgically clean.

In 1891 Monckton Copeman introduced his plan of purifying vaccine lymph by mixing it with glycerine, the effect being the gradual starving out of germs other than those of vaccinia, and glycerinized lymph has gradually won its way and proven itself till now there can be little excuse for the use of any other kind.

- Through the enterprise of the CANADIAN PRACTITIONER the writer has recently had an opportunity of seeing the methods employed in a number of the leading vaccine establishments of the east, and what follows may be taken, not simply as the results of reading up the subject, but of actual observation of a somewhat extended character. The establishments visited were those of the H. K. Mulford Co., Philadelphia, Penn.; the National Vaccine Farm, Washington, D.C.; Slee's Vaccine Farm, Mount Pocono, Penn.; Parke, Davis & Co.'s Laboratory, Detroit, Mich.; the Ontario Vaccine Farm, Palmerston, Ont., and Stearn's Laboratory, Detroit, Mich. In all of these every facility was given for inspection, and the greatest possible courtesy extended. The Alexander Vaccine Farm at Marietta, Penn., was also visited, but permission to inspect it, unfortunately, could not be obtained. Of its methods the writer has no knowledge.

The proprietors of all the laboratories visited are undoubtedly attempting more or less perfectly to meet the demands

modern science in respect of vaccine production, but most of them are hampered by the conservatism and laziness of the physicians, that is to say, the demand for an inferior article by the medical profession renders it commercially impossible to supply only that which is best.

The evidence that glycerinized lymph is in all desirable qualities equal to that conveyed on dry points—which is non-glycerinized—and that in respect of the number of adventitious organism, contained, it is incomparably better, is irrefutable. In spite of this we are informed that a large part of our profession, objecting to the time necessary for vaccination with the glycerinized material, insist on having dry points as more convenient to use. It is not creditable to us as a profession that we should be behind the producer in supporting a forward movement. In what follows we shall attempt to describe modern methods of securing vaccine, and also demonstrate that the conclusions reached are correct.

(a) *Animals*.—The practice in regard to animals selected for propagation of vaccinia varies. Whilst in all of the institutions mentioned above as having been visited by the writer, young animals only are seen, the age limits run from five or six weeks to twelve months or more. In two of these places milk fed calves are made use of, in one of them the milk is sterilized before feeding. The lymph secured from any of these animals is undoubtedly potent. Practical experience has proved this. It is argued that milk fed calves only should be employed in propagating vaccine, because

1st. They can be more easily handled than larger animals.

2nd. They are less likely to suffer from tuberculosis.

3rd. Being fed on milk only there is not the risk of tetanus germs reaching the lymph that there may be in hay fed animals.

With the first statement we have no concern; it is a matter for the producer only, but the second and third touch matters of importance to everyone.

The natural and strong reply to these arguments is that neither tuberculosis nor tetanus has ever been proven to have followed the use of lymph, from animals either large or small, and that quite sufficient guarantee against them is afforded by the use of tuberculin in testing the cattle and in the subsequent bacteriological and physiological tests of the lymph before marketing it. In deciding the question, it seems to us that we must keep in sight not merely the production of a sound lymph but also the interests of vaccination itself. If any steps seem theoretically to place the manufacture of any product on a more perfect footing, and we believe that product to be necessary for the well-being of the community, then we ought to take

these steps in order to commend it to the community. In other words, the people have a right to the best that science can do for them in respect of vaccination when it is made compulsory, as it practically is with us.

Tetanus germs are not uncommon in stables where hay fed animals are kept; they have been isolated from the faces of calves to which hay had been fed (Huddleston, N. Y. Health Board); milk if sterilized can contain no tetanus germs; therefore calves fed upon milk and kept in stables from which hay and straw are excluded should afford a lymph in which tetanus germs are less likely to be found than that from hay fed cattle. The inference is plain and we should do everything in our power to cut the ground from under the anti-vaccinationists' feet.

Animals which are apparently healthy having been chosen, there are two ways in common use of deciding that they are free from tuberculosis, viz.: by the tuberculin test and by post mortem examination after taking lymph from them and before putting it out. Tuberculin is relied upon by most producers; some follow the test by post mortem. If one test only is to be trusted to, the post mortem is probably best. Lymph ought not to be supplied which comes from animals having *any* demonstrable defect, even though it cannot be shown that such defect would influence it.

(b) *Vaccination of Animals.*—The steps preliminary to vaccination look to a clean, if not aseptic operation. Some scarify on both sides of the spine behind the ilia, others upon the belly and inside of upper parts of thighs, either in a series of parallel lines one quarter to one half inch apart if in a solid patch form. After shaving and washing with appropriate solutions the scarifications are made, little or no blood being drawn; the "seed" is then rubbed in and the animals stabled till the incubation period of five or six days has passed.

(c) *Collecting the Vaccine.*—When the vesicular eruption has reached the proper stage of development it is washed with sterile water, and any crust which has formed removed. In the old process of dry point making, the vesicle and its contents were scraped clean away and the points dipped into or brushed with the serum exuding from the raw surface after it had been washed with clean water. Of course the proportion of any number of points so prepared that will be found active cannot be so great as if they were charged with the vesicle "pulp," that is to say the material scraped from the vesicle. In this the germ chiefly lies. The true lymph exuding from the base of the emptied vesicle carries just what virus it picks up in passing. Probably if dry points are to be allowed in use at all this is the better mode of preparation since they are less likely

to carry harmful organism than if smeared with unglycerinized pulp, and the difficulty of drying glycerinized pulp is very great. One firm of those visited is making at present a point covered with glycerinized lymph and dried by the use of blood serum. Its efficiency remains to be proven. Another is putting out what are called aseptic dry points, made by a special, secret process.

(d) *Glycerinized or Glycerinated Vaccine.*—In the preparation of glycerinized vaccine the "pulp" taken by a Volkmann's spoon, as already described, is ground up with glycerine and stored until the useless and harmful organisms in it have died of starvation. Two parts by weight of a fifty per cent. watery solution of pure glycerine and one part of pulp are ground together between glass rollers, or other form of mill, until a very fine emulsion is made. The finer the emulsion the better the result. In Japan it is tested as to fineness by suspending a loopful in distilled water from time to time during the process of triturating. The pulp thus prepared is now stored in refrigerators for a sufficient period to permit of the death of all pathogenic organisms except those of vaccinia, the period necessary being determined by plate cultures made from time to time. When this point has been reached the freedom of the glycerinized pulp from pathogens is further tested by inoculation into animals and its physiological activity in the same way. The last step in the manufacture is that of sealing the capillary tubes, and various methods have been devised to accomplish this without exposing the pulp to danger of contamination.

An effort has been made to meet the demand for points, and also supply glycerinized lymph by means of a specially prepared point. Although somewhat better than the ordinary dry point, inasmuch as the lymph has been glycerinized, still the defects of this method of putting up are obvious when compared with the capillary tubes. The exposure to contamination is of necessity much greater.

In deciding between dry points and glycerinized lymph in practice, the following questions must be asked and answered:

1. Does glycerinized lymph convey cowpox to the vaccinated individual? The experience of such countries as Germany may be pointed to. In England also there is no doubt in the minds of the public vaccinators—men who have had an almost unlimited experience of the use of all kinds of vaccine—that the glycerinized is effective. In Japan smallpox is not regarded with any serious dread, since vaccination has been made general (compulsory): glycerinized lymph is employed.

Two years ago the Provincial Health Board of Ontario passed a resolution to the effect that glycerinized lymph ought in all cases to be used, and instructing local Boards to that

effect. The Provincial Board's own inspectors have employed it extensively in Northern Ontario during the present epidemic of smallpox and are satisfied with the results. Many lumbermen who were vaccinated in 1901 have been exposed to smallpox in the camps since then and protection appears to have been perfect.

The experience of individual physicians in our own midst (Toronto) is almost unanimously in favor of glycerinized lymph. The writer has been favored with the opinions and statistics of many in large practice, and has yet to hear a doubt expressed with regard to its efficiency. In the last place nearly all propagators of vaccine use glycerinized lymph as seed for infecting the animals from which their marketed vaccine is to be taken. As a matter of fact the majority of dry points on the market are charged from animals so vaccinated. To argue then—as some do—that dry points are superior to the glycerinized lymph in conveying cowpox is absurd.

2. Does bacteriological examination demonstrate that there are fewer micro-organisms of all kinds in glycerinized lymph than upon dry points? If the glycerinized lymph be allowed a sufficient length of time to "ripen," it does. From four weeks to two months from the time of mixing pulp and glycerine should be allowed to elapse before vaccinating with it.

Rosenau, of the U. S. Marine Hospital Service made a series of tests of dry points and tube lymph, buying upon the open market the products of eight different manufacturers. His plates from dry points gave an average of twice as many colonies as the tubes. From none of these did he find pathogenic results upon animals. He concluded, however, that some of the tubes must have been issued whilst still green, because so many colonies appeared.

The writer's experience with plate cultures is generally corroborative of that of Rosenau, but Rosenau's average of colonies per plate from glycerinized tubes was very considerably greater. In the tube lymph of one manufacturer only was the number of colonies so great as to make it probable that it had been issued too early. The difference between dry points and tubes in the number of colonies developed was so marked that they should not be classed together at all; if relative freedom from bacteria be a proof of superiority, then there is no doubt that properly aged glycerinized lymph is better than that upon dry points.

VAGINAL SECTION—EXPLORATORY AND OPERATIVE.*

By T. SHAW WEBSTER, M.B., M.D.C.M., TORONTO.

This paper is intended to bring before your notice for discussion two quite different surgical operations for the relief of pelvic diseases exterior to the uterus.

1. The opening of the abdomen through the cul-de-sac of Douglas.

2. An extra-peritoneal method, dissection from the vagina upward between the folds of the broad ligament to the seat of the disease.

In discussing these operations a comparison between the abdominal and the vaginal routes to the pelvic organs is forced upon us, and I am convinced that as we become better diagnosticians of gynecological ailments, and as we develop the "tactus eruditus," we shall have a greater preference for opening from below rather than above the pelvic organs.

The opening of the cul-de-sac, the method which has been associated with the name of Dr. W. R. Pryor, is safe and simple, and enables the surgeon after palpation and inspection of the contents of the pelvic cavity to operate in a large proportion of cases for whatever abnormal conditions may be found.

In those rare cases in which a vaginal opening must be supplemented by an abdominal one, it provides thorough drainage from that portion of the peritoneum to which all fluids therein contained gravitate through a tract that does not absorb infection. It also gives opportunities for conservative surgery upon pus-tubes, cystic ovaries, etc., unattempted yet by the abdominal route.

For two days before operation the vagina should be subjected to a sterilizing process. At the same time the patient is prepared for abdominal section, so that it can be done immediately should it be found necessary owing to the complex nature of the lesions. In such a case it is preferable to continue the removal of the diseased organs by the vaginal route with the assistance of one hand, or part of it passed through the abdominal incision rather than to lift viscera from an infected pelvis through a normal abdomen, and an incision easily made septic. After the patient is anesthetised the external genitals and vagina receive a final cleansing, and the endometrium is gone over with a dull curette, and with a sharp one afterwards if indications are present necessitating the use of it. The

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

cavity of the uterus is now irrigated with warm salt solution, and mopped out with sterile gauze, and the vagina is washed with warm bichloride solution, 1-5000, and wiped dry. The double volsella is fastened into both lips of the cervix, and it is drawn downward and forward.

The mucus membrane of the vagina, half an inch posterior to its reflector from the cervix, is picked up with long forceps, and a horizontal incision an inch long made with scissors, cutting through the mucus membrane only and not entering the peritoneal cavity, while making downward traction upon the cervix the index finger is pushed upward through the cellular tissue until the peritoneum is reached. This fact is readily recognized by the presence of a little fluid fluctuating in the cul-de-sac, or by the smooth anterior and posterior surfaces of the cul-de-sac gliding over each other when the examining finger is pressed forward and moved up and down. The peritoneum is opened by catching a fold of it with forceps and making a small cut with scissors, as in laparotomy. This opening is dilated with the fingers as wide as may be necessary. Should the tissues resist the tearing, the scissors may be used with care to enlarge the opening.

Adhesions can now be broken up, the pelvic organs palpated and drawn through the incision into the vagina. The uterus being held down with the forceps in the cervix, the fingers are hooked over the tube or ovary to be removed. While these are drawn gently downward and backward the cervix is pushed upward and forward. These movements combined retrovert the uterus so that it is turned nearly upside down, and allows the adnexa to be drawn into the vagina.

The insertion of Howard Kelly's broad retractors will now give ample opportunity for inspection and manipulation. Conservative operations, such as opening and draining tubes, incising and evacuating cysts, enucleating fibroids, etc., can now be done and radical removal effected if advisable. The intestines are kept out of the pelvic cavity with gauze pads. This is the method I have followed usually. Dr. Pryor places the patient in the Trendelenburg position, and uses an anterior retractor shaped like a trowel, with which he forces the uterus upward and forward out of the way, and with a short Jackson's speculum retracts the perineum. After the cul-de-sac and vagina are mopped clean and the pads removed, a loose plug of iodoform gauze is inserted just within the incision to prevent the protrusion of the intestines and to provide drainage. The uterus is now pushed back into position and the vagina packed loosely with iodoform gauze; the patient is catheterized for three days. On the third day the gauze is removed without irrigation. The peritoneum will usually be found closed, a

slit remaining in the vaginal mucus membrane. The vagina is repacked every three days until healed. Many patients may be allowed out of bed in a week, and return home in ten to fourteen days, when the opening is usually closed entirely.

Abdominal section is frequently followed by stitch abscess hernia and troublesome adhesions, and always has an ugly scar to fret nervous patients. The vaginal method is followed by no untoward sequelæ.

The extra-peritoneal method of relieving pelvic inflammations.—When an infecting organism enters a Fallopian tube it usually sets up a reactionary inflammation which tends to close the fimbriated end and thicken the tube. In some cases it invades the intra-ligamentary cellular tissue and the peritoneum, especially that part forming the folds of the broad ligament becomes hypertrophied. In most cases pus accumulates in the tube, and as it is distended it tends to separate the folds of the ligament so that a considerable space is found between them, and the tube may eventually rupture into the ligament. Not infrequently tubal pregnancy works outward into the broad ligament and ruptures into it. In cases where these pathological processes occur, and we are called upon to operate either before or after rupture, an extra-peritoneal dissection gives the best results. Since 1896 I have practised the following method in such cases:

The patient is prepared for vaginal, and also for abdominal section, as in the cul-de-sac operation. The uterine artery is located, and the mucus membrane beneath it is opened with forceps and scissors and a dissection made with the fingers through the cellular tissue toward the seat of disease. If one keeps close to the uterine artery there is little danger of puncturing the folds of the broad ligament and opening the abdominal cavity. In this way I have exposed the under surface of pus-tubes, and an ectopic gestation. A small electric light, such as is used with the male urethroscope, can be inserted and a visual inspection made, but "finger sight" is all that is needed to recognize the under surface of the tube. When the tube is reached an assistant holds the tumor down by pressure from above, and the index finger is inserted so that the tip touches the tube. Along this finger, as a guide a long sharp pointed scissors is passed to the tube, and by gentle pressure is forced into it. When the tube is punctured that fact is recognized by sudden diminished resistance. The scissors are opened in the tube and withdrawn, tearing the opening wide enough for drainage. After the contents have been forced out by pressure upon the lower abdominal wall and irrigation used if necessary, a gauze packer is introduced and an iodoform gauze drain put in. This is changed as

required until the opening is closed from the tubal end. As soon as the patient has recovered from the anæsthetic she may be allowed to go about without danger.

I have relieved a tubal pregnancy by this method and sent the patient home in three days. Eight days after she walked half a mile to church, two and a half years after she gave birth to a healthy baby, having had perfect health in the interval.

This extra-peritoneal operation differs from "vaginal section and drainage," as practiced by Dr. H. A. Kelly and others. Their plan is to force long sharp-pointed scissors through the vaginal mucus membrane upward in the axis of the pelvis to the focus of inflammation or centre of the tumor. In doing so the ureter or rectum may be punctured, or the scissors may transfix the abscess cavity and pass into the abdomen.

The plan I have outlined has been practiced without mishaps. In ruptured tube cases the finger does all the work after the mucus membrane of the vagina has been opened. Intra-ligamentary cysts and a ligature abscess after abdominal section can be relieved by this method without danger and with the same rapid convalescence.

CASE I. Mrs. F. W., Crawford Street, Toronto, aged 43 years, mother of seven children, the youngest being seven years of age. No miscarriages. Had complained of pelvic pains for about two years, especially on walking a distance. Examination on May 29th, 1901, showed a great tenderness of both sides of the pelvis. Patient gave a history of irregular flowing, never very profuse, with occasional cramping pains, lasting about two weeks and beginning about the usual time of the month. As she could not bear the pain of a thorough examination I returned the next day with an anæsthetist, and under chloroform both tubes were found enlarged; the right globular and firm; the left ovoid and fluctuating. Diagnosis of pus-tubes or tubal pregnancy was made and patient removed to the hospital on June 5th. Two days later the cul-de-sac was opened and a right ectopic gestation and left pyosalpinx removed. Patient was allowed to get up on the eighth day and returned home on the tenth, taking a pleasure drive to Mimico and back the same afternoon. No subsequent symptoms of disease. Drs. Clouse and Carveth were associated with me in this case. Specimens presented.

CASE II. Mrs. McL., aged 35 years. Has never been ill since childhood. Married in Baltimore, Md., July 12th, 1898. Consultation on August 17th elicited the following facts: No menstruation for six weeks, when an irregular flow began and had continued for about ten days with occasional pain, not severe, but followed by profuse flow. Examination on August

23rd revealed a tumor as large as a hazel nut in right tube, excessively tender, which had increased to the dimensions of a small walnut by September 10th, when she was examined by Dr. W. J. Wilson and the writer. Pain was of a severe cramping character and brought on attacks of faintness. Tubal pregnancy was suspected and the patient removed to the Western Hospital to await developments. She was kept constantly prepared for abdominal and also vaginal section. During the next week she suffered intensely, although morphine was given twice daily, and ate nothing. The temperature continued normal and the pulse fluctuated with the pains. One week after admission to the hospital she was taken to the operating room, and under anesthesia it was found that the tumor was now as large as a duck's egg and slight fluctuation could be detected *per vaginam*.

The extra-peritoneal dissection described above was begun and completed in about ten minutes. When the tube was opened fluid blood and dark-colored clots came away with small pieces of placental tissue. A narrow strip of iodoform gauze was inserted for drainage. The following night she slept ten hours. The next day she was free from pain and ate light diet heartily. Three days after operation she wrote several letters and went home in a cab in the evening. I induced her to stay in bed the next day but after that she was up and about the house, and on the eighth day after the operation she walked half a mile to church. The sinus closed in about two weeks. Pregnancy and childbirth two and half years after gave no reminder of previous illness.

CASE III. Miss S., aged 28 years. Seamstress. For four years suffered from dysmenorrhea and leucorrhœa. Was unable to work about two weeks in each month. Being consulted on September 13th, owing to the chronicity and severity of symptoms, I advised examination, which discovered a small tumor on left side of uterus not adherent to it. Entered hospital September 19th, and the following day under chloroform tubo-ovarium cyst was diagnosed and the vagina widely dilated preparatory to operation, which was done on October 2nd. Ten days after she walked home half a mile and has not been indisposed since. Specimen presented.

CASE IV. Mrs. G., aged 28 years. Married four years. Suffered from dysmenorrhea before marriage and became worse after. In July, 1900, she became pregnant for the first time and suffered from agonizing pain day and night, accompanied by severe vomiting. In November she was greatly emaciated and a nervous wreck, and Dr. J. Noble, her attendant, after consultation emptied the uterus which he describes as an irregular mass before delivery and afterward presenting an enlargement

on the right side. Partial relief followed delivery, but she did not regain strength.

Dr. Noble asked me to operate and she was taken to the hospital on January 17th, 1901. On January 21st she was ready and under chloroform. A hard tumor attached to the anterior surface of the right cornu could be palpated. The cul-de-sac was opened and the mass forced backward and downward into view, then seized by tenaculum forceps and removed. It proved to be a fibroid as large as a medium-sized orange. The margins of the site of attachment were drawn together by sutures and the uterus replaced. She had no further discomfort and gained very rapidly in strength leaving the hospital in two weeks from day of operation. Specimen presented.

Clinical Note.

TWO CASES OF CONTRACTED PELVIS.

REPORTED BY

K. C. McILWRAITH, M.B., TOR., F.O.S., EDIN.

CASE I. Mrs. B., age 24, primipara. Admitted to the Burnside, November 19th, 1901. Examined November 20th. Height 5 feet 1 inch, a slight, delicate-looking woman. Pelvic measurement: Interspinous 21 cm., intercrystal 27 cm., external conjugal 18 cm., transverse at the outlet 11 cm., pubo-coccygeal 10 cm., diagonal conjugate 11.5 cm.; the posterior superior spines more than usually prominent, distance between them 12 cm. The abdominal diagnosis was: Position O. D. A., child small, head freely movable above the brim; diagnosis, simple flat pelvis. Labor commenced on the afternoon of January 4th, position O. L. A., head not engaged. Kept in bed.

January 5th, 4 p.m. The patient had now been in labor for twenty-four hours. The cervix was reached with much difficulty. The os was a little larger than a silver dollar, soft and dilatable. The membranes were intact. The head was not fixed. The pains had not been very severe, but the patient was becoming exhausted. Chloroform was given, the os manually dilated and version proceeded with by the Baraxton Hicks' method. (Drs. A. H. Wright and K. C. McIlwraith.) The membranes ruptured before this was completed, a hand was introduced into the uterus, a foot brought down, and extraction proceeded with. The head was brought through the brim by traction with the fingers of one hand in the child's mouth and the other over its shoulders, aided by firm pressure by an assistant on the head through the abdominal wall. The arms were extended and were brought down, the posterior first. The final extraction was difficult owing to rigidity of the perineum. The child was resuscitated by removal of the mucus from the larynx by means of a long silver male catheter, followed by Sylvester's method of artificial respiration, with tongue traction and alternate hot and cold tubs. There was a slight laceration of the pelvic floor and perineum, which was repaired next day. Union was good by the eighth day. There was a slight rise of temperature at the end of the first week, when an offensive clot was expelled. By the twelfth day inoculation had so far advanced that the height of the fundus uteri above the symphysis could not be measured; the child, a boy, weighed 8½ lbs

Mother and child left the hospital in perfect health at the end of the third week of the puerperium.

CASE II. J. F., age 25, primipara. Examined December 5th, 1901. Height 4 feet 8 inches, a small but strong woman. Pelvic measurement: Interspinous 22 cm., intercrystal 26 cm., external conjugate 18 cm., diagonal conjugate 10 cm. The abdominal diagnosis was, position O. L. A., head not fixed. The vaginal canal was very small, a considerable part of the hymen remaining. January 5th (the same day on which case I. was delivered) labor commenced with the painless escape of the water. 10.30 p.m., patient in labor ten hours, head not fixed in the brim, large caput succedaneum present. Version done comparatively easy by the internal method, and extraction proceeded with. The head caught at the brim and could not be extracted as in case I. Parter Mathew's axis-traction forceps were then applied. Traction advanced the head slightly, and delivery was then completed by manual efforts. Child weighed $6\frac{1}{2}$ lbs. Heart beat for half an hour after delivery, but no efforts at respiration could be excited. There was a severe laceration of the pelvic floor as well as of the perineum, which was repaired next day. The union was good in the internal tear at the end of eight days, but the external tear failed to unite. The edges were freshened and re-united, and union was good at the end of the sixth day. The uterus could not be measured after the eleventh day. The puerperium was afebrile throughout, and the patient discharged in good health at the end of the third week. In this case the transverse diameter was contracted also.

Society Reports.

TORONTO CLINICAL SOCIETY.

STATED MEETING, FEBRUARY 5TH, 1902.

Dr. Edmund E. King, the Vice-President, in the chair.

Fellows present: King, Aikins, Primrose, Peters, Hamilton, Orr, Trow, W. P. Caven, Pepler, Anderson, Stark, Small, McIlwraith, Boyd, Oldright, Ryerson, Parsons, Fenton, Silverthorn, Thistle, Bingham, Garrett, Dwyer, Cameron, Parsons and Elliott.

Visitors: Drs. A. J. McKenzie, Goldie, Lowry, Chisholm and Rutherford.

APPOINTMENTS ON THE SANITARY COMMITTEE OF THE INDUSTRIAL EXHIBITION.

Dr. Orr moved, seconded by Dr. Trow, that the same two Fellows be appointed by this Society as were appointed last year, viz., Drs. W. H. B. Aikins and H. J. Hamilton. Carried.

Notice of motion by Dr. Aikins: "That any resident Fellow absenting himself from all the meetings of the Society for one year, shall at the discretion of the Executive Committee have his name struck from the roll of members."

Election of Fellows: Dr. C. J. O. Hastings was elected a Fellow of the Society.

PRESENTATION OF CASES.

Fracture of Spine—Two cases.

Dr. E. E. King presented these two patients and recorded the histories of each. The first occurred eight years ago. Patient was a blacksmith. While working under a waggon wrenching off a nut the waggon fell on him and crushed him beneath it. Fracture of the spine resulted at the eighth and ninth dorsal vertebræ, and also dislocation of the clavicle at the sternum. He was paralyzed below the point of fracture and remained so for four months. Recovery was gradual, and he resumed work within two years from the time of the injury. The patients were here presented. In the blacksmith, kyphosis is exceedingly well marked. He has comparatively natural use of all parts of his body. Sensations are now nearly normal. With reference to the second case. This was an

elevator accident. The force was great, and it bent him laterally as well as forward, throwing him on the floor. Dr. King saw him six and a half hours after the accident, and found him paralyzed in both limbs and total absence of sensation. During the day sensation returned to the man entirely again. The right leg recovered first and then the left gradually. At the present time, which is now eight months after the accident, the reflexes are exceedingly exaggerated in both legs. In this case there was a considerable amount of bladder trouble. The muscular system is now gradually recovering, but he has not been able to resume his work yet.

Dr. Peters discussed the cases. He said there was dislocation as well as fracture in the blacksmith. The eleventh vertebra and parts below are carried forwards. Most of these cases result in complete laceration of the cord, and if that occurs there is absolutely no hope for them.

Clonic Ending in Tonic Convulsions.

Dr. Pepler was permitted to show a case, a lad of seventeen years of age, who had come to him only a few days ago. About six years ago he had had an attack of localized convulsions beginning in the left hand.

This affected gradually the whole of one side, beginning in the left hand. Now there is a good deal of atrophy with spastic gait. The attacks end in loss of consciousness. There is no history of hemiplegia in this case. The patient was presented to the Fellows. The reflexes are exaggerated on that side, but the sensations are apparently normal.

Dr. Anderson thought that the case showed the characteristics of cerebral palsy, but the cause of it is not very apparent from the history. Dr. Pepler states that there is no cardiac lesion. Evidently some irritation in the cortical region is producing the convulsions.

Dr. Boyd: The boy says he had some sort of stroke, probably a sunstroke. A fall might have had something to do with it.

Dr. Pepler stated that there was no history of either shock or injury of any kind.

Piece of Steel Removed from Eye.

Card specimen presented by Dr. Trow. Especially presented to show how well the X-rays help in locating a small foreign object in the eye. Occurred in a healthy young man, a mechanic, who got hit by a piece of steel. Seen by Dr. Trow some days after the accident and a wound was found in the cornea. The iris was torn, also the lens. Could not see the vitreous on account of blood and opacity of the lens. Introduced the point of a magnet into the wound, but it was possibly

not strong enough to attract it. Also employed forceps, but could not find the foreign body. Then the X-ray was used and could at once make out very clearly that the steel was in the eye. Could tell the distance back and also the size. It was a half inch back on a line with the lower lid. With a magnet then the foreign body was brought to the edge of the wound through which it finally came without causing any tearing, bleeding or any injury whatever.

Drs. Ryerson and King discussed this case.

Capsular Nephrotomy. BY DRs. W. P. CAVEN AND GEORGE A. PETERS.

The notes of this case were read by Dr. W. P. Caven. A. W., male, aged 34 years. Suffered from magraïne from childhood. In the summer of 1899 he was first told that he had Bright's disease. The kidneys were known to be sound in 1892, when he passed for life insurance. In 1896 he had had a great deal of worry and traces the commencement of his ill-health from that time. He came under Dr. Caven's observation in 1901, and the diagnosis was suffering from Bright's disease. The quantity of urine passed varied from 60 to 80 ounces in the twenty-four hours, and three to seven grammes to the litre, albumin. Hyalin, granular and fatty casts present in great abundance; urea from one and a half to two per cent. On January 3rd, 1902, under chloroform, Dr. Peters performed encapsulation of both kidneys at one sitting. Before operation there was a gradually increasing number of casts in the urine; none now found in the twenty-four hours. A chart was presented and Dr. Caven stated that it could be seen by the record that there was no material change in the albumin or total quantity of urine passed nor in the excretion of urea. The patient was very ill for some days after the operation, general health lately commencing to improve. Dr. Caven then referred to Dr. Edebohls' paper on the subject.

Dr. Peters, in continuation of Dr. Caven's remarks, stated that the operation was performed on the 3rd of January, 1902. He referred to the presence of a small abscess on the neck, which seemed to him might have some bearing on the case. Before commencing these operations there should be a preliminary preparation of about a week, regulating the bowels, diet and skin. He did not use the incision as recommended by Edebohls, but the incision Reginald Harrison uses, Edebohls being certainly receded by Harrison, who employed it in cases of the acute disease. Dr. Peters did not deliver the kidney through the wound. Such traction cannot do good and may do harm. Edebohls delivers the kidney right out of the wound on to the surface of the body. Dr. Peters does not see any

reason for this procedure. You can easily strip off the capsule from the surface of the kidney. The operation was done first on the right and afterwards on the left side at the same sitting. The right kidney was considerably enlarged. Drainage tubes were inserted on both sides. Dr. Peters stated that Edebohls had not drained except in one case. After the operation on the kidneys the abscess on the neck was scraped out and packed with gauze; this healed readily. Suppuration occurred in both wounds, but it had almost subsided at the date of reporting the case.

Capsular Nephrotomy. DR. A. PRIMROSE.

The first operation performed by Dr. Primrose was done before Edebohls' paper was published. His first operation was done on the right kidney, and the second on the left. A boy ten years of age, who for six months had general anasarca and ascites. Photographs were presented showing the child before and after the operation. A chart illustrating the course of the case was also shown. He had general edema over the body, particularly well marked in the face and extremities, and a very greatly distended abdomen. Before coming under Dr. Primrose's care, paracentesis abdominis had been performed seventeen times. Albumin was present in the urine; the urine contained 1.6 per cent. of albumin. On November 20th last he cut down upon the right kidney in the line following Harrison's incision, and drained for a fortnight. As a result of this operation the urine gradually increased from twenty to forty ounces, and the albumin diminished. On December 20th, forty-two days after he came into the hospital, Dr. Primrose cut down upon the left kidney, and removed the kidney capsule entirely. In this instance he followed Edebohls' suggestion and brought the kidney out of the wound. After this operation the child was critically ill for some days, but gradual recovery set in and the renal symptoms underwent a remarkable recrudescence. The amount of urine excreted was now forty-four ounces; the albumin diminished to 0.3 per cent., general edema has disappeared.

Discussion on these two cases was begun by Dr. H. B. Anderson and continued by Dr. Bingham, Mr. Cameron, Dr. McKenzie, Dr. Silverthorne, Dr. Fenton, Dr. Goldie, Drs. Caven, Peters and Primrose replying.

GEORGE ELLIOTT,

Recording Secretary.

STATED MEETING, MARCH 5TH, 1902.

Dr. W. H. B. Aikins in the chair.

Fellows present: Aikins, Small, Pingham, Bruce, Hamilton, McIlwraith, Thorburn, Hastings, Garratt, C. A. Temple, Greig, Lehman, Anderson, Ryerson, Rudolf, Parsons, Oldright, Wright.

Visitors: Drs. Rogers, Ingersoll, Sutherland, Embro, Bruce L. Riordan, McGillivray, Hooper and Bray.

Election of Fellows: Drs. B. Z. Milner and William Goldie.

Presentation of patient by Dr. Garrett.

Ten years ago the father of the boy consulted Dr. Reeve for eye trouble, and six years afterwards this boy was born. Up to last July the child had been perfectly healthy, at about which time he was taken with the first convulsion. His left arm is powerless, and he has constant twitching in it. There was ptosis and also inability to walk. He was unable to use the left arm or hand at all. In Dr. Garratt's opinion the child was the subject of hereditary syphilis, although he had been born six years after it was present in the father.

Tubal Abortion—Specimen.—By DR. GEORGE A. BINGHAM. Carcinoma of the Rectum—Specimen. A Case of Intussusception.

The first specimen presented by Dr. Bingham was one of carcinoma of the rectum, which he had operated on in May of 1891, by the so-called Kraske method, but which was really a modification, in which the coccyx and lower two or three pieces of the sacrum were removed. The case of tubal abortion occurred in a woman of thirty-two years of age. She last menstruated in November, 1901. She was ill at that time for one week as usual. She should have been ill again on December 5th, but passed her time, and on the 13th, eight days after, a whitish discharge, tinged slightly with blood, began. This also contained some small pieces of membrane. She consulted Dr. Bingham on the 24th of December. With the history he diagnosed tubal gestation, unruptured, and advised operation. Dr. Temple confirmed the diagnosis. When Dr. Bingham opened the abdomen he expected to find no blood. He, however, found a large amount of clots in the peritoneal cavity. Looking for the explanation of the blood he noticed that it was dripping through the extremity of the tube, so he believed he had a case of tubal abortion. The patient had shown no evidence of loss of blood prior to the operation. Case number 3 occurred in a baby of fourteen months, on January 1st of the present year. There was diarrhea with tenesmus, but no bloody mucus—absolutely none. On the fourth there were no evacuations at all. In the evening of this day the patient was given an enema, when for the first time a limited amount of bloody mucus was passed. Dr. Bingham

saw the child on the fifth in consultation with Dr. Harrington. Her pulse was weak and thready, and she was retching pretty constantly. Colic was intermittent. The abdomen was distended. The diagnosis was intussusception and operation advised. There was one very large gangrenous opening in the bowel, showing how rapidly this takes place. The intussusciens was the portion which was gangrenous. The cause of this case was a fairly large polypus. The child died of shock some twelve hours after operation.

A Case of Perforation of the Bowel in Typhoid Fever, Operation and Recovery—followed by Sub-Phrenic Abscess. Operation and Recovery.—Reported by DR. HERBERT A. BRUCE.

This case, which was fully reported in the March number of the *Canadian Practitioner and Review*, occurred in a young medical practitioner of twenty-eight years of age. It is the first case recorded in Canada of full and complete recovery after operation for perforation in typhoid fever.

MEDICAL ITEMS.

NEW buildings have recently been erected at Grosse Isle Quarantine Station at a cost of \$60,000.

The next meeting of the British Medical Association will be held in Manchester, commencing Tuesday, July 29th.

The meeting of the International Association of the Medical Press was held April 7th, 1902, at Monte Carlo, under the protection of his highness, the Prince of Monaco.

The American Congress of Tuberculosis will hold its third annual meeting May 14th, 15th and 16th, 1902, at the Hotel Majestic, 72nd Street and Central Park, West, in the City of New York.

The American Association of Pathologists and Bacteriologists held its second annual meeting at Cleveland, Friday and Saturday, March 28th and 29th, 1902, under the presidency of Dr. William T. Councilman, of Baltimore.

Among the laryngologists who have agreed to contribute articles upon diseases of the larynx for the new edition of the "Reference Handbook of the Medical Sciences," we might mention the following: Bryson Delavan, on Fractures and Dislocations; Carl Seiler, on New Growths; J. N. Mackenzie, on Leprosy; Birkett, on Syphilis; Casselberry, on Perichondrites; Price-Brown, on Stenoses, etc., etc.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIRKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Masked Epilepsy with a Criminal Complication.

The case reported is one of epilepsy of a very unusual character. A young man 21 years of age was an inmate of the Milwaukee Sanitarium for three months. An indictment for burglary had been returned against him, but the circumstances were so peculiar as to raise a doubt of the patient's mental integrity. There was no question but that he had broken into a dry goods store in the night, where he had been captured by an officer. At the time he had two pairs of socks in his possession, the price of which was a nickel a pair. The patient had previously borne a good reputation.

The mother of the patient was in early life migrainous. The father was of an irritable disposition, and had been a sleep-walker in youth.

The patient stated that ever since he could remember he would have spells, when he would have to lie down; sometimes these attacks were accompanied by a blank period. When five years old he would often give up play, seem sick, and go to bed, being dull and indifferent for four or five days, not answering when spoken to. Something of this nature has taken place every six weeks or so up to date. These attacks have come on at night occasionally, as the patient would often be heard groaning, and the "spell" would show itself in the morning, the patient failing to get up as usual. These attacks interrupted school work. On the night when he was arrested he had been engaged in driving an omnibus, meeting the midnight train as usual, but four hours later was found in the store into which he had broken. When accosted by the officer he made no attempt to escape. When he was told of his act he seemed indifferent and denied all knowledge of it.

The patient stated that in the "spells" he was never unconscious except on one occasion, when he was driving, and, nine miles from home, all knowledge left him, and the next thing he knew he was putting out the team at home. The last thing he could recollect he was approaching a railroad crossing nine miles distant.

The three months' residence in the sanitarium revealed no vicious tendencies, though he was allowed to go about freely,

not knowing that he was under careful observation. He never took liquor in any form, and while at the sanitarium gave up the use of tobacco, in which he had indulged, the deprivation costing him a severe struggle.

The physical examination showed a high-arched palate, muddy complexion, constant sweating of hands and feet, tongue coated, appetite good with an excessive fondness for meat, digestion impaired, constipation, and gaseous distention. The knee-jerks were exaggerated, vision and pupils were normal, there was a tremor of eyelids and tongue, the voice was tremulous, sleep disturbed. The urine was negative, and the pulse 80.

Shortly after his admission, while playing cards in the hall outside of his room with his attendant, the patient suddenly and unexpectedly put down the cards, got up and went to his room, put on his overcoat and cap, and started downstairs without saying anything, and went to the village. The attendant spoke to him repeatedly, but received no reply. The attendant finally turned him about, and they returned to the sanitarium, the patient not speaking. He seemed dull and confused, and the attendant helped him to undress. At about 12.30 the same night he got up, dressed, and extracted the keys from underneath the pillow of the attendant. He opened a locked window screen, and went down on the fire escape; at 3 a.m. he found himself lying in the snow near the sidewalk in the main street in the village. He thinks he had fallen down, slipping on the snow, and that this woke him. He got up and returned to the sanitarium. He seemed dazed, but went to bed and slept until noon. On awakening, he had no recollection of what had happened to him after he stopped playing cards until he found himself lying in the snow in the village. Under bromides the patient steadily improved, gaining in weight and in physical and mental activity.

The writer regards the case as one of larvated epilepsy, and the attacks of unconsciousness and automatism as psychological equivalents.—DEWEY, RICHARD. *Milwaukee Medical Journal*.

The High Value of Normal Salt Solution.

Even at the expense of reiteration the importance of the use of normal salt solution in certain major conditions may be emphasized. Experience has abundantly shown that it is safe to employ hypodermically, and that its effect is prompt and more decided than possible to obtain by other means. Six drams of sterilized salt dissolved in one gallon of sterilized water is the proportion that may be readily used, and this solution, at a temperature of from 110 degrees to 120 degrees F. may be injected into the loose subcutaneous tissue in varying amounts and at varying intervals, according to the demands of the case.

Normal salt solution is thus indicated in shock, hemorrhage and in acute toxic and septic conditions.—*The Clinical Review.*

Skin Eruptions in Bright's Disease.

Prengle (*Practitioner*, London,) gives Thursfield's classification as follows: (1) The affections which characterize (or may arise in) the early stages of renal disease: pruritus, urticaria, eczema; (2) those which occur in the final stage and in uremic conditions—the universal erythematous, bullous and desquamative eruptions; (3) purpura and other hemorrhagic eruptions; (4) those affections which are seen only with marked edema. The author states that the process is probably similar to that by which eruptions are caused in septicemic or ptomain poisoning, *i.e.*, toxins acting through the vasomotor and tropic nerve systems. It is certain that neither urea nor uric acid is the toxic substance at work, and it has been suggested that substances of aromatic group which reduce Fehling's solution and which are frequently present may be the active agents; but no cogent evidence has been adduced on this point.—*The Charlotte Med. Jour.*

The Character of the Cerebro-spinal Fluid in Mental Diseases.

Louis Duflos (*Thèse de Paris*) has an important contribution which attempts to establish the practical value of lumbar puncture and examination of the cerebro-spinal fluid in the differential diagnosis of certain mental affections—especially the alcoholic insanities, subacute varieties of general paralysis, and senile dementia. The procedure has a practical value also in offering relief in cases of tuberculous meningitis attended with convulsions, acute gastric crisis of tabetic origin, and threatening apoplexy of Bright's disease. Its value in diagnosis has been maintained by Babinski and Nagrotte, who in a report at the Société Médicale des Hôpitaux in May, 1901, gave an account of 120 cases of nervous disorders—hysteria, tabes dorsalis, general paralysis, polyneuritis, chorea and epilepsy—showing that lymphocytes were present in the fluid withdrawn in all cases of general paralysis and tabes dorsalis, and that "permanent lymphocytosis, when it was not due to tuberculous meningitis, indicated generally the presence of diffuse syphilis." Duflos points out that patients with delusions and with melancholic or hypochondriacal depression are not suitable for lumbar puncture, as the operation might form the starting point of further delusions. Paranoiacs in the second stage of their disease are also unsuitable subjects. Examination of the fluid examined by lumbar puncture gave the following results in various forms of insanity: In an old man of 70 years with organic dementia the results were negative, as also in two

young men who were the subjects of dementia precox. In a chronic melancholiac of alcoholic habits a few scattered lymphocytes were found; in a puerperal woman with depressive delirium and mutism the results were negative, as also in two cases of delusional melancholia. In chronic alcoholic subjects lymphocytes were present in small numbers; but in subacute alcoholism with delirium and hallucinations the proportion of lymphocytes were high. From careful study of nine cases Duflos concludes that the presence of lymphocytes indicated the occurrence of a chronic or subacute inflammatory process in the cerebro-spinal system, and that the presence of polynuclear leucocytes pointed to an acute inflammatory condition, as in tuberculous meningitis, erysipelas, etc. In general paralysis lymphocytes were seen in abundance, and this served to differentiate this disease from the insanities of chronic alcoholism and some forms of senile dementia, both of which at times closely simulated general paralysis as regards symptoms.—*British Medical Journal*.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD
AND K. McILWRAITH.

Anesthesia in Obstetrics.

Partridge lays down the following rules in the *Providence Medical Journal* as to the use of anesthetics in obstetrics:

The anesthetic should be given during the latter part of the second stage. If its administration is begun during the latter part of the first stage and the beginning of the second, altogether too much would in many cases be given, for these two periods may last for hours. When the head is well down, nearly or quite upon the perineum, the pains become more frequent and more severe. Now is the time for the anesthetic. It should be given with pain.

Chloroform may be given on a handkerchief or napkin, folded and held at some distance from the face.

One fact worthy of notice in connection with the whole subject of anesthesia in labor is that whether the anesthetic has been given to the obstetrical degree only or pushed to the surgical degree, vomiting almost never occurs. So rare is it that when seen it always attracts attention and suggests some complication.

Besides the use of anesthetics in labor, and for obstetrical operations as already mentioned, their employment is usually recommended in cases of eclampsia to control the convulsions.

Experience, however, would indicate that anaesthesia fails in these cases unless it is continuous, because during the convulsion respiration ceases, only to begin when the patient is coming out of the seizure. None of the anesthetic vapor is inhaled, and no cessation of the convulsion can therefore result from the exhibition of an anesthetic. In order to control the seizures the chloroform must be given in the period of quiet between the attacks, and this is hardly advisable until the anaesthesia is to be made complete for operative interference.

Certain other agents have some anesthetic power. Among these chloral holds the highest place, and is lauded highly in many of the text-books, although the writer's use of it has been disappointing. It is usually recommended to give it during the first stage, to relieve the nagging pains and to relax the rigid cervix, which often delays progress. The dose usually given is 15 grains every twenty or thirty minutes for three doses. The writer has given it in this way in a number of cases, and has found that it was often vomited, and when retained seemed to have no analgesic or relaxing effect.

In the cases of rigid cervix, nothing acts as well as a hypodermic of $\frac{1}{4}$ grain of morphine with 1-150 atropine. The patient usually sleeps two or three hours, and when she awakens and the pains begin, the cervix relaxes and the labor proceeds satisfactorily. No ill effects seem to follow this treatment.—*Abstract Therapeutic Gazette.*

Can a Fetus Cry in Utero?

Before the days of scientific obstetrics midwives declared the fetus might cry out audibly in the womb. Reidhaar, of Båle (*Centralblatt f. Gynäk.*, No. 6, 1902), claims to have had recent experience of a case of the kind, noting how within the last ten years several instances of "vagitus uterinus" have been reported by well-known authorities. Thorn, six years ago, recorded that he heard three cries after using Barne's dilator, and Schaller speaks of an inexperienced operator who attempted to turn, and during the process the fetus was heard to cry out for over fifteen seconds. The question has been raised whether there is true inspiration and expiration when the voice is heard. Reidhaar's patient was a woman aged 21, who suffered from a severe attack of enteric fever in August, 1900, followed by septic endocarditis and hepatic, pulmonary and renal embolism. She was pregnant, and her general health grew worse and worse. Induction of labor was therefore decided upon on November 23rd, 1900. There was cardiac hypertrophy, pulmonary regurgitation, and albuminuria, but the fetal heart sounds were clearly audible. At 10 a.m. Reidhaar introduced his metreurynter or dilator, the waters escaped at

once. One hour later, as no pains had set in, he removed the instrument and introduced a larger size, but he found this manoeuvre very difficult. The attempt set up crampy pains in the uterus, and the debilitated patient became excited, then seven distinct cries were heard in rapid succession, and though not very shrill they were audible in the room adjacent to the patient's apartment. Two minutes later Reidhaar caught up the anterior lip of the cervix with a volsella, cries were heard again very distinctly. The fetal heart beats had fallen from 140 to 100, the mother's pulse rose from 100 before the introduction of the first dilator to 130. At length the second dilator was slipped in, and uterine contractions began. The bag was introduced in the afternoon; it was expelled at 7 p.m.; it was reintroduced, then pains became strong, and at 3 a.m., on November 24th, it was once more expelled. The fetal head lay in the first position, and delivery was promptly effected by the forceps. The child was asphyxiated, but revived after a little assistance, and was saved; it weighed close upon 5 lbs. The mother's condition greatly improved during the puerperium. This case is certainly of much interest. Cries, audibly in an adjacent room, emanated from the uterus, and the child was born alive sixteen hours later. It is hard to understand how the fetal voice, never very strong, can be heard when uttered inside the uterus, where there can be very little air, even when an instrument has been pushed in or the os opened widely. All happened an hour after the escape of the waters, when the uterus must have firmly gripped the fetus. The physiology of the cries remains obscure. If truly respiratory, the lungs must have filled out more or less when they were uttered. Then the fetus, nourished by its placenta, was able to live for sixteen hours in the uterus with its lungs more or less filled. The theories of Schwarz and Zuntz about intra-uterine and extrauterine stimulation of the fetal skin as setting up respiratory movements do not settle the main question whether intrauterine cries have been heard, which seems true, and if so, how they are produced, which is more problematical.

Prochownik's Prophylactic Diet against Dystocia.

M. R. Romne (*Presse médicale*) says that under this régime, which harms neither mother or child, a mother can go to term and deliver herself of a healthy, small infant, which thereafter thrives well. It is especially applicable to uses of contracted pelvis, and to those in which the fetus has, at previous labors, been too large for easy, unassisted birth. In women over thirty years of age, to be confined for the first time, the diminished size of the fetus renders their usually difficult labors safe and easier.

Prochownik's diet consists in allowing the woman during the last three months of her pregnancy, wasted and boiled meats, without sauces, fish, green vegetables, salads, cheese, butter if desired, and a very small quantity of bread. Water, soups, potatoes, the farinaceous foods and beer, are proscribed, and sugar is to be replaced by saccharin.—*N. Y. Medical Journal*.

New Treatment of Continuous Vomiting of Pregnancy.

M. R. Condamin (*Lyon médical*) advises absolute rest of the stomach with complete suppression of all liquid and solid nourishment for from eight to ten days. During this time, three or four quarts of artificial serum are injected daily, preferably into the rectum. If intolerance should appear on the part of the rectum, a few drops of laudanum may be added to the serum, or it may be administered subcutaneously. About the tenth or twelfth day, a few swallows of fluids may be allowed, and the ordinary diet may be gradually resumed. The author reports one typical case, and believes that many cases may be carried to term in this way, in which, otherwise, abortion would result or would have to be induced.—*N. Y. Medical Journal*.

The Cause of Fetal Death in Premature Loosening of the Placenta.

Schultze by placing a placenta just separated from the uterus in a basin of warm water with the uterine surface above, and filling the open vein of the excised cord with warm fluid by means of a syringe, demonstrates that pressure on the fetal vessels may be raised very greatly without a drop of the fluid flowing from the uterine surface of the placenta. So one can separate the cotyledons of the placenta without any blood escaping from the distended vessels. But if a cotyledon is cut only slightly with a knife, the blood gushes forth. Thus he proves that the loosening of the placenta from the uterine wall causes no injury to the fetal vessels; that, therefore, upon the premature separation of the placenta the fetus loses no blood and does not die of anemia. Its pallid appearance is through death from asphyxiation while its internal organs are still filled with blood. If, through contraction of the uterus, the placenta is thrown into the maternal abdominal cavity, the child cannot lose a drop of blood.—*American Medicine*.

Artificial Serum Enemata in Hyperesis Gravidarum.

Condamin (*Lyon Medical*, February 2nd, 1902) on the strength of seven or eight highly successful cases, strongly advocates

the treatment of uncontrollable vomiting in pregnancy by saline enemata. The more or less general intoxication of the organism under certain circumstances in pregnancy is the cause of hyperemesis gravidarum. The offending toxins must be expelled from the organism by subcutaneous injections, or, better still, enemata of artificial serum, which effect a true *lavage* of the blood, the stomach being kept in absolute rest for a week or a fortnight. A young woman came under his care quite prostrated by hyperemesis; emaciation was extreme, and she could not stand upright even if supported. For three weeks she had been unable to keep down any liquid or solid food, and all medical agents had failed. The temperature was low, and cerebral symptoms were suspected. Condamin judged that she was too ill to allow of the induction of abortion. He therefore tried the injection of three or four litres (about five to seven pints) daily of artificial serum in enemata of 300 grammes (a little over half a pint) frequently repeated, just as though it were a case of an anemic patient to be strengthened before an operation. Nothing was given by the mouth. Next day the urine was excreted much more freely, and the patient revived from her previously apathetic condition. For six days the treatment was continued, then a little broth was prescribed, but the patient refused to take it, dreading the vomiting and painful pyloric spasms which followed the injection of the least drop of fluid. The saline enemata gave her great comfort. On the eleventh day she felt so well as to accept a little nourishment, which was easily tolerated. Gradually the appetite came back, and she at length returned home quite cured. Since this case occurred a few years since, Condamin has never had to induce abortion in hyperemesis gravidarum. It is necessary to be thorough and to keep the stomach absolutely empty for at least a week, or, better still, better twelve days, relying on the saline enemata to sustain life. In subsequent early cases he tried feeding by the stomach at the end of four or five days, when it happened that the patient had an appetite, but the vomiting returned. After twelve days a few small draughts of liquid may be taken by the mouth and gradually increased, the enemata being for a while continued. When the rectum is intolerant a few drops of tincture of opium should be added to each enema, and if then the enemata are not well retained, subcutaneous injections will be needed.—*Journal of Obstet. and Gyn. of Brit. Emp.*

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Congenital Cysts of the Tongue.

John Ward Cousins (*Brit. Med. Jour.*, March 1st, 1902) gives the history of two cases of this exceedingly rare affection. They usually occur in the middle line between the genio-hyoglossus muscles: or between the genio-hyoglossus and the myo-hyoid, and remain small, unnoticed and unchanged for years. Their contents consist of soft sebaceous matter, and occasionally they contain hair and masses of dental tissue. The cyst wall is lined with squamous epithelium. To the touch they feel dense and elastic. They rarely come under observation until early adult life, as they are painless, and the increase in size is so gradual as to remain unnoticed. When irritation occurs, however, inflammatory changes take place and they suddenly grow larger. Cousins' first case occurred in a woman aged 40. Shortly after birth her mother had noticed a small swelling on the tongue. At the age of 10 it was the size of a marble, at 30 the size of a small egg. When first seen by him it almost filled the mouth. On the wearing of a plate of artificial teeth the condition became unbearable. On incising the growth thick yellow material escaped. The incision was made long, and the contents being scooped out the dense cyst wall was dissected away. The patient made a complete recovery.

Cousins' second case occurred in a woman aged 36. The cyst was sublingual, extending below the thyroid region. It required two operations to remove the growth. The second was very extensive, the whole sac being completely excised by external central incision. The operation was successful, and a photograph taken seven years later exhibits the long linear scar in the centre of the neck.

Correction of Saddleback Nose by Subcutaneous injection of Paraffin.

Harmon Smith (*Laryngoscope*, February, 1902) presented three cases at the section on laryngology, New York Academy of Medicine, to illustrate the effects of subcutaneous injections of paraffin in the correction of nasal deformities. This method was first tried by Gersuny, of Vienna, in 1900. Harmon Smith first experimented on the cadaver after raising the temperature to that of the body. He also injected it into the peritoneal cavity of a rabbit without reaction. In clinical work he injected a 4 per cent. solution of cocaine before injecting the paraffin. The latter being sterilized, was heated

slightly above the melting point of 110 degree Fah. The instrument was an aspirating syringe with a large needle; and being filled, was submerged in hot sterile water until ready for use. The point of the needle was carried into the tissues well beyond the point of greatest deformity. The paraffin after injection remained plastic for about half a minute, and during this time required to be moulded into shape. The results so far were encouraging, although not attended with perfect restoration of form.

Imperforate Right Nostril.

Boulai (*Archiv. Internat. de Laryngologie*, December, 1901) gives the history of two cases of this previously unrecorded affection. Both cases were almost exactly alike; both occurred in girls of the age of fourteen. The cause is not given, but is said to be identical in each.

Rhinolith.

Bishop (*Laryngoscope*, January, 1902) adds one more to the long list of rhinoliths which have been reported. His case occurred in a woman aged 59, who was likewise troubled with chronic non-suppurative otitis media upon both sides. The rhinolith was too large and hard to be removed without crushing. The combined fragments weighed seventy-one grams. After the nasal operation the aural symptoms entirely abated under treatment.

Anomalies of the Nasal Accessory Cavities.

Max. Scheier (*Archiv. Internat. de Laryngologie*, October, 1901). The sphenoidal sinus may be double, or single, or dilated. Sometimes, though rarely, the sphenoidal may be as large as the maxillary. The frontal sinus may be double or single, and when double the size of the two may vary greatly. In one hundred skulls examined, there was complete absence of the frontal sinus in two.

Medical Treatment of Adenoids.

Lapeyre (*La Medecine Moderne*, October, 1901) reports twenty-eight cases of adenoids in which he gave tincture of iodine internally, in doses of from 18 to 60 minims per day. The patients' ages ranged from five to nine years. Iodism was rarely produced. The adenoid symptoms disappeared rapidly.

Malignant Growth of the Uvula.

F. C. Raynor (*Laryngoscope*, February, 1902). This disease is so rare that in 14,000 throat cases occurring in the Eye, Ear and Throat Hospital of Brooklyn, not one of cancer of the

uvula is reported. Hence the history of a single case is interesting. This occurred in a man aged 66. In January he had an attack of grip, of catarrhal form, the throat not being seriously affected. In March the throat became troublesome. In June he was seen by Raynor. On examination the uvula was edematous and elongated. Attached to it on the posterior surface, and terminating on a line with the velum was a nodular mass one inch long, three-fourths of an inch wide, and half an inch thick. It was slightly eroded at the end. There was no interference with deglutition or phonation. The parts were very irritable. The nose was not involved. There was no history of syphilis. The growth was removed by galvano-cautery snare. From inadvertence there was no microscopical examination. For a while the case progressed favorably, but six months later a fungous growth had recurred upon the side of the first operation.

Cicatricial Stenosis of the Pharynx.

J. J. Concanon (*Laryngoscope*, January, 1902) reports the history of a case occurring in a woman aged 35 years. She breathed with a hissing sound and articulated very feebly. For two months she had been able to swallow only fluids. The pharyngeal tissues were replaced by a cicatrix attaching the hard palate to the base of the tongue, producing a small ring in which the epiglottis was imprisoned. The velum had been destroyed. She had been under hospital treatment for years, bougies and iodide of potassium being used. The history of the case proves it to be one of hereditary syphilis. Notwithstanding this, she is a married woman, and has five living, healthy children.

Tubercular Ulceration of the Epiglottis.

W. K. Simpson (*Laryngoscope*, January, 1902). In this case a man who had suffered from tuberculosis for two years had been hoarse for several months. This culminated in intense dyspnea, for the relief of which tracheotomy was performed, without the use of an anesthetic. Dyspnea was at once relieved, and the patient made much more comfortable.

Laryngeal Tuberculosis.

Richard Lake (*Journal of Laryngology and Rhinology*, February, 1902). This is a very exhaustive article, comprising three lectures given by Mr. Lake at the Post-Graduate College, London, during the present year. Tuberculosis of the larynx is usually secondary to pulmonary disease; and in these cases a previous inflammatory condition of the larynx is a strong predisposing factor in its development. When the laryngeal

tissues are inflamed their resistance is lessened, and the tubercle bacilli more likely to find a lodgment. Chronic laryngitis, too, in a tuberculous patient is one likely to be followed by the entrance of the bacilli into the underlying tissues. Hypertrophies in the larynx frequently take on the form of mild pachydermia laryngis, affecting chiefly the intra-arytenoid commissure, and it is over this tract that the germ laden sputum passes out from the lungs. In doing so, portions of the sputum often become lodged in the rugæ of the pachydermia, and the mucous membrane being diseased and weakened, the bacilli readily find an entrance through it into the submucous tissues. The fact that in a comparatively large number of cases, tubercle bacilli have been found in adenoids removed from children, proves that they have found an entry into the organism through the anterior nares. Further still, Lake believes, from cases already recorded, that primary infection within the nasal cavity sometimes occurs as the result of traumatism. Among the diagnostic symptoms in laryngeal tuberculosis, very rarely observed in any other disease, is the sudden alteration in the pitch of the voice, from bass to tenor, or the reverse, due to sudden swelling of a cord interfering with vibration, or catching between the cords from temporary obstruction. When the epiglottis is the part involved, ingestion of solid matter becomes difficult and painful. But when the arytenoids are the seat of trouble, deglutition of fluids produces pain, and they sometimes find their way into the larynx. Subglottic swelling in laryngeal tuberculosis is usually due to involvement of the cricoid perichondrium, producing stenosis. After dealing exhaustively with the various symptoms, and the many lesions which occur in connection with this disease, he enlarges upon the treatment, medical and surgical. Local treatment should be done, if possible, three hours after meals. All pigments should be applied on cotton wool mops, never by the brush. The two best pigments are lactic acid and formalin—the first from 5 per cent. upwards, the latter from 1 per cent. upwards. Either may be gradually increased in strength; the limit being reached when swelling is produced by the application. Lake likes a combination of the two, of the formula: formalin, 7 per cent.; lactic acid, 50 per cent.; glycerine, 20 per cent.; water to 100 per cent. Fresh preparations are always the most reliable, as the formalin evaporates. Of powders for insufflation orthoform is the best. Intra-tracheal injections of a temperature of 90 degrees give excellent results. The amount should be about half an ounce. The preparation he uses now contains 3 per cent. of naphthalin, and half per cent. of oil of cinnamon in hydro-carbon oil.

In surgical treatment the cutting forceps and curettes of

Heryng, Krause, Gougenheim and Lake are used. The epiglottis is removed by galvano-cautery snare. After any of the operative measures, the lactic acid and formalin pigment should be applied. The ventricular bands can be treated by galvano-cautery puncture and curette. Tracheotomy is sometimes required for relief of stenosis. The prognosis for curing the laryngeal tuberculosis, even when the pulmonary disease is incurable, is not by any means hopeless. Many cases have been cured, in which, although the patients died ultimately of pulmonary tuberculosis, the laryngeal trouble did not recur.

Six Cases of Excision of the Larynx.

F. G. Harvey (*Lancet*, September, 1901). Details are given of the six cases. The first has remained well after operation for six years. The second survived some weeks. The third died a few days after operation. The fourth was only a partial removal, and the patient lived five months. The fifth died of pneumonia twelve months later, without any recurrence. The sixth had an enlarged gland six months after operation. This was removed, and at time of writing his health was satisfactory.

Christian Science Condemned in Germany.

Much satisfaction is expressed in Germany over the Emperor's opposition to the spread of Christian Science and similar movements, which were beginning to find support, especially in court society and among the wealthy classes. The *North German Gazette* says: "On the strength of the most authentic information his Majesty summoned President Von Windheim, of the police, and Dr. Faber, superintendent of the Lutheran Church, to tell them his opinion in regard to a nuisance which, he said, was equally disgraceful to our time and the capital of the empire. The Emperor left it beyond doubt that persons taking part in the doings of spiritualists, faith healers, Christian scientists, and similar occultists shall not be admitted at the Imperial Court." The disciples of Mrs. Eddy were not admitted to the Victoria Lyceum recently, and were told that they would never be admitted again. Herr Windheim says that when he dined with the Emperor on Thursday, his Majesty asked for suggestions for measures to check the spread of the various cults. Herr Windheim deprecated repressive measures, on the ground that they would prove merely an advertisement. The Emperor, while expressing disapproval of such morbid tendencies in emphatic terms, agreed that it would be a mistake to make martyrs of the followers of the different cults, and said that other means must be found for dealing with them.—*N. Y. Medical Journal*.

Editorials.

ONTARIO MEDICAL ASSOCIATION.

The next meeting of the Ontario Medical Association will be held in Toronto, Wednesday and Thursday, June 4th and 5th. The two important committees were formed some time ago, and have already done a large amount of work. The Committee of Arrangements, under the chairmanship of Dr. J. Milton Cotton, have got permission from the Government to hold the meeting in the Normal School building in St. James' Square, and have nearly completed their plans for the general conduct of the meeting.

Dr. John Fotheringham has been appointed chairman of the Committee on Papers and Business. We understand that this committee has had several meetings. Several papers have been promised by physicians in various parts of Ontario. Several men from Montreal, and some of the American cities, are expected, but we are not in a position at present to give details. The President, Dr. N. A. Powell, of Toronto, is working with his usual energy, and is determined to do all in his power to make the meeting a success.

ADVERTISEMENTS OF QUACK NOSTRUMS.

Dr. Palmer Burrows calls attention to the pollution of medical journals and the public press by the publication of disgusting advertisements which are illustrated by cuts and photographs of various kinds. We believe that there was a time in this country when the evils referred to existed in a most offensive form.

It appears rather strange to some of us to notice how hysterical certain of our clerical friends become at the sight of "high kickers," and other objectionable things, while at the same time they can go to their peaceful homes and read with perfect tranquillity glowing descriptions of decayed manhood, seminal loss, diseases of the womb, etc., with pictures which make such descriptions still more abominable. We fear that

neither doctors nor medical journals can do much to stop this sort of thing as long as the free and enlightened public of this great and free country continue to like it.

Dr. Burrows proposes that laws be enacted compelling the manufacturers of all proprietary medicine to print in plain type on the outside wrappers of all bottles and boxes the formula, showing the exact contents. We are not sure, however, that this would suit our enlightened public before mentioned. Such procedures might spoil the charm of the mystery of the great unknown manhood restorer. It would be too much like asking a man to take Epsom salts and castor oil instead of *magnesii sulphas* and *ricini oleum*. However, such legislation has come into existence in other countries, and may possibly in time become less distasteful to the *masses* of Canada.

BLACKMAILER ATTACKS PHYSICIANS.

One of the rarest and most diabolical attacks upon physicians which it has ever been our lot to record was inaugurated in Toronto a few weeks ago by Thomas McKibbon, and a woman whom he claimed as wife as an accomplice. The blackmailer had plied his vocation before to some extent successfully, but finally he fell captive through a cleverly devised scheme in the office of Dr. John S. King, Jarvis Street. The *modus operandi* of the blackmailer, as illustrated in the cases of Dr. Hawke and Dr. King, briefly stated, was to send for the doctor to visit the wife or young child at their apartments; or the wife would call at the doctor's office. After the lapse of a few days McKibbon would wait upon the doctor and charge him with having had improper or criminal connection with Mrs. McKibbon, and threaten him with criminal action, and a civil suit for \$5,000, in fact threaten him with moral assassination, unless the doctor was prepared at once to make a satisfactory settlement. Dr. King placed himself in connection with the Crown authorities, and meanwhile, in a cool, level-headed manner, planned the capture and conviction of the villain by drawing evidence from him while in his office, in the hearing of a secreted witness, sufficient

to amply prove the criminality of the attempt, after which he was arrested on 30th January, held without bail, till committed by Col. Denison on the 12th March, for trial at the Sessions. On the 20th March, when his time for trial arrived, he pleaded guilty and asked for mercy. Sentence was deferred until the 29th March, when Judge McDougall sentenced him to serve two years less one day in the Central Prison; and in doing so said, "No man is safe from the blackmailer." "I regard it as one of the most despicable crimes that could be committed." "The next blackmailer that comes before me will get the longest term the law imposes." Every member of the medical profession is equally and constantly exposed to the danger of blackmailing, and Dr. King has conferred a benefit upon his professional brethren by his courageous conflict and capture of McKibbon, the audacious blackmailer.

We understand the authorities of the Toronto General Hospital have decided to place a woman doctor on the regular visiting staff, and also to appoint two woman doctors as registrars.

THE SOUTHERN MEDICAL ASSOCIATION OF MANITOBA.—This association met at Brandon on February 26th, nearly sixty physicians of the province being present. The following officers were elected: President, Dr. L. M. More, Brandon; Secretary, Dr. Little, Alexander; Executive Council, Dr. Poole, of Neepawa, Dr. Goodwin of Elkhorn, Dr. Thompson of Douglas, and Drs. Macdonald and McDiarmid of Brandon.

CANADIAN MEDICAL ASSOCIATION.—The annual meeting of the Canadian Medical Association will be held in Montreal on the 16th, 17th and 18th days of September, 1902. The President is Dr. Francis J. Shepherd, 152 Mansfield Street, Montreal, the Local Secretary, Dr. C. F. Martin, 33 Durocher Street, Montreal, and the General Secretary, Dr. George Elliott, 129 John Street, Toronto. Dr. William Osler, Professor of Medicine in Johns Hopkins University, will deliver the Address in Medicine, and Dr. John Stewart, Halifax, Nova Scotia, the address in surgery. Arrangements are already well in hand for a very large meeting.

THE PROPOSED CONVENTION HALL.

BY SIR WILLIAM MEREDITH, CHANCELLOR OF THE UNIVERSITY OF TORONTO.

A movement has been recently organized by the Alumni Association to provide the University with a hall sufficiently large to afford accommodation for the annual commencement exercises, and for the various other meetings of an academic or social character which are held from time to time in connection with the work of the institution. The advantages of possessing such a building are obvious, and the necessity for making some adequate provision for these larger meetings is now felt with increasing force, on account of the great expansion of the University in recent years.

In the reconstruction of the buildings after the fire of 1890, the authorities found that the state of the finances did not warrant the restoration of the old Convocation Hall. Since that time the claims of the teaching departments have been so urgent as to tax to the utmost the resources of the University, and the authorities see no immediate prospect of providing a public hall out of the endowments or revenues. It would appear that, if such a building is to be erected in the near future, it must be done through private benefaction.

The Alumni Association has issued an appeal to the graduates, undergraduates and friends of the University to provide the necessary funds by subscription, and I take the liberty of warmly commending the project to your favorable consideration, and of urging you to aid in its realization by your personal contributions as well as by enlisting the interest and liberality of friends of the University.

It is a project in which the graduates of all faculties are interested, and with a united effort on the part of all it should not be difficult to collect the sum required, which has been estimated at \$50,000. I understand that the graduate members of the faculties have already subscribed \$6,000 of this amount, and I venture to hope that the generosity and self-sacrifice represented by this subscription will be appreciated and imitated by the graduates in general.

I trust that the movement may be crowned with abundant success, and that we may have, as its result, an edifice which will not only serve a most useful purpose, but will also stand as a monument to the loyalty and affection of our graduates.—
Univ. of Tor. Monthly.

Personals.

Dr. Frederick Winnett, Toronto, will sail for England early in May.

Dr. W. A. Mearns, Hanover, spent the Easter holidays in Toronto.

Dr. George A. Bingham spent a portion of his Easter holidays in Kingston.

Dr. J. Fennell McKee (Tor. '94), of Petrolia, was in London, Eng., in March.

Dr. Frederick C. Hood, of Toronto, will sail for England the last week in April.

Dr. G. L. Milne, of Victoria, B.C., spent a few days in Toronto in the early part of April.

Dr. R. Montgomery, of Chicago, spent a few days in Toronto in the latter part of March.

Dr. Charles Carter, of Grand Valley, was married, April 2nd to Miss Ambrose, of Hamilton.

Dr. Friend R. Eccles, of London, Ont., was married to Miss Jessie Dusty, St. Mary's, April 7th.

Dr. Jas. F. D. Ross, of Toronto, has returned from the Bahama Islands, and resumed practice.

Dr. Harry B. Anderson, of Toronto, is still in New York, working at clinical medicine and pathology.

Dr. J. O. Orr, of Toronto, has been elected Second Vice-President of the Toronto Industrial Exhibition.

Dr. Harvey McKnaught (Trin. '97), of Los Angeles, California, paid a visit last month to his friends in Toronto.

Professor William Osler came to Toronto, March 15th, to attend the funeral of his sister-in-law, the wife of Mr. Justice Osler.

Dr. L. F. Miller, Toronto, is away on an extended trip to St. Augustine, Florida, Charleston, South Carolina, and Atlantic City, New Jersey.

Dr. A. S. McCaig, of Sault Ste. Marie, has been appointed Associate Coroner for Algoma; Dr. J. W. S. McCullough, Alliston, Associate Coroner for the County of Simcoe; and Dr. D. Fraser, Lakefield, Associate Coroner for the County of Peterboro'.

Dr. R. J. Dwyer, of this city, leaves for Europe early in May and expects to return in September.

Dr. Adam H. Wright is expected to return from a visit to New York and Atlantic City in a few days.

Dr. Richard Carney has been appointed City Physician to Windsor; and Dr. J. A. Ashbaugh, Medical Health Officer of the same city.

Mr. M. J. Haney has been appointed by the Ontario Government, Trustee of the Toronto General Hospital in the place of Mr. John Ryan, deceased.

Dr. John B. Murphy, of Chicago, has received the Lactare medal from the University of Notre Dame, Indiana, for "signal success in medicine and surgery."

Dr. Don. Armour, Senior Demonstrator of Anatomy, University College, London, England, has been appointed Senior Assistant Surgeon to the Belgrade Hospital for Children.

Dr. D. Gibb Wishart, of Toronto, spent a portion of March in New York and Philadelphia. While in New York he attended the meeting of the American Laryngological Society.

The following constitute the Sanitary Committee of the Industrial Exhibition: Drs. A. Lynd, Herbert Hamilton, Edmund E. King, W. H. B. Aikins, and Messrs. Gibbard and Hargreaves.

Dr. Harry J. Watson (Trin. '96), who has been serving in the American Army Medical Service in the Philippines during the last two years, has been appointed Chief of the Medical Department of the largest Brigade Hospital in the Philippines.

Dr. Michael Joseph Kelly, a graduate in medicine and law, University of Toronto (M.D., LL.B.) who has been Inspector of Public Schools for more than thirty years in Brantford, has resigned, his resignation to take effect upon October 1st. next.

Dr. Harry W. Spence, Toronto, returned to London, England, from China and Japan a few weeks ago. Soon after his arrival he received an appointment from the British Government as medical officer for one of the concentration camps in Natal, and sailed from Southampton, March 18th, for South Africa.

Dr. W. H. Drummond, the author of "The Habitant" and "Johnny Courteau" will receive the honorary degree of LL.D. at the June convocation of the University of Toronto. He will also lecture in Massey Hall, April 24th. The talented and genial doctor has many friends in Toronto who will doubtless be glad to have this opportunity of seeing and listening to him again.

Obituary.

ADAM DICKSON WAGNER, M.D.

Dr. Wagner, of Cornwall, a graduate of McGill University, 1872, died February 13th, aged 53.

EDWARD PAYSON GORDON, M.D.

Dr. E. P. Gordon, formerly of Toronto, died at San Francisco, Cal., March 30th, aged 35. He studied medicine in the Toronto School of Medicine and the reorganized Faculty of Medicine, University of Toronto, graduating M.D. University of Victoria College in 1890.

F. H. THOMPSON, M.D.

Dr. Thompson, a graduate of Trinity, son of Mr. Thomas Thompson, Rosedale, Toronto, died of typhoid fever at Seattle, Wash., March 22nd. He was engaged in the United States Naval Service and was surgeon on the Pacific coasting steamer *Patterson*.

CHRISTIAN FENGER, M.D.

Dr. Fenger, the well known surgeon of Chicago, died of pneumonia, on March 7th, after an illness of one week, aged 62. He was born in Copenhagen, Denmark. While a student he served as a surgeon in the war between Denmark and Germany. He came to America in 1877, and at once settled in Chicago. He soon acquired an international reputation, and was generally recognized as one of the ablest surgeons in the United States.

JAMES TEMPLETON M'KILLOP, M.D.

Dr. McKillop died at his home in Wardsville, April 6th, 1902, aged 42. He took his medical course in Kingston, graduating M.D. in Queen's University, and also in Trinity University in 1889. Soon after graduating he located in Wardsville, Middlesex County, where he practised with much success until the time of his last illness.

EDWARD MOTT MOORE, M.D., LL.D.

Dr. Moore, of Rochester, died of bronchitis, March 3rd, aged 88. We quite agree with the *Journal of the American Medical Association*, that the following words respecting a deceased English physician, may well be used for Dr. Moore: "Eminently distinguished for science. Beloved for the simplicity of his manners and the benevolence of his heart. Respected for his inflexible integrity. In all the relations of his professional life he was sagacious, cordial, diligent and humane." Both Drs. Moore and Fenger were well known to the profession of this Province through work done in connection with the Ontario Medical Association.

W. S. MUIR, M.D., L.R.C.P., L.R.C.S. (Edin.).

Dr. Wm. Muir, of Truro, Nova Scotia, was probably better known by physicians of Quebec, Ontario, Manitoba, the North-West Territories, and British Columbia than any other doctor in the Maritime Provinces. We learn with much grief from the *Maritime Medical News* that Dr. Muir died of appendicitis March 10th, after an illness of four days, aged 49. A gangrenous appendix was removed on the morning of the 9th.

He was born in Truro, and received his medical education in Dalhousie College, graduating in 1874. After three years, part of which time he was engaged in post graduate work in Edinburgh, he commenced practice in his native town, and remained there until the time of his death.

He was best known to the Westerners through his connection with the Canadian Medical Association, of which he was one of the strongest and most enthusiastic members. We are quite in accord with the *News* in its statement, that "His frank and genial nature, his transparent honesty, and his whole-souled devotion to his profession, gained him the confidence of the public, and the esteem of his colleagues." At the time of his death he was President of the Maritime Medical Association, past Vice-President of the Canadian Medical Association, Fellow of the New York State Medical Society, and held many positions of trust in connection with Eastern Examining Boards.

We take from the *News* the following quotation from the Truro *Daily News*: "From early morn (day of funeral) flags were at half-mast, and citizens moved to and fro in a way that plainly indicated that a great calamity had fallen on our town. There was a feeling that Truro had sustained an irreparable loss, which was intensified as the time appointed for the funeral services drew near. At that hour shops and places of business,

public schools, and private offices were closed, and the streets were lined with spectators. A pathetic part of the long funeral cortege was the sight of Dr. Muir's empty carriage, drawn by his faithful horse Billy, led by the ever faithful groom, Willie Wilmot, that followed immediately in the rear of the hearse."

PROFESSOR KAPOSI.

We regret to say that the great dermatologist, Kaposi, is no more. A telegram from Vienna states that he died from apoplexy on Thursday last, at the age of sixty-five. Dermatological science owes much to the research and painstaking investigation of a lifetime, which he had devoted to diseases of the skin. Kaposi and his father-in-law, the great Hebra, accomplished much in making sure foundations for this branch of medical science. Kaposi was not only a great student but a famous teacher, and as a physician his reputation was world-wide. His publications are said to exceed 150 in number. With the death of Professor Moriz Kaposi, Vienna University loses one of its most distinguished men.—*Medical Press and Circular*.

EZRA HURLBURT WILLIAMS, M.D., L.R.C.P. Lond.

We record with very deep regret the death of one of our ablest and most successful Canadian graduates in a far distant portion of our big empire. Dr. E. H. Williams died at his home in Melbourne, Australia, January 13th, 1902. He graduated M.D., Trinity, in 1884, and was for a year one of the resident physicians in the Toronto General Hospital. He was there recognized as a man of superior parts who was likely to succeed. After leaving Toronto he went to Australia, and settled in the city of Melbourne, where he continued in practice until the time of his last illness. We have been told by one who knows that city well, that Dr. Williams was one of the most successful practitioners in Australia, although he only reached the age of 38. As to the particulars of his last illness we know nothing. The writer of this notice received a letter from him a few months ago, which one would suppose from its tone was written by a person in the best of health and spirits.

We regret much to announce the death of the wife of Dr. John B. Fraser, of 655 Queen Street East, Toronto, which occurred April 10th, 1902.

Correspondence.

To the Editor of the CANADIAN PRACTITIONER AND REVIEW :

SIR,—Is it not high time that our medical journals and medical associations should discuss the advisability of such legislation as shall prevent the pollution of medical journals and the public press by the disgusting advertisements that have become an intolerable nuisance?—"decayed manhood," "seminal losses," and such like, not to mention the uterine organs and their diseases, set forth by plates and printed descriptions. Is it not time, as well, that legislation insist that the formulæ shall be printed in plain type on the outside wrapper of every bottle and box of patent and proprietary medicines? When the gull of the adventurer has gone so far as to advertise a certain cure for cancer, presenting testimonials in support and selling to the poor dupes at ten dollars a bottle a stuff costing seventy-five cents or a dollar, and actually without good effect, not to speak of the myriad of less presuming and equally worthless trash for every conceivable ailment, bought in prodigal quantities, is it not time that the nefarious business got a set-back? If the ingredients were known the self-inflated bubble would burst; common decency would be respected; the medical profession get a chance in the race, and the nervous, credulous public get something more than whipped sillibut. Besides benefiting those immediately interested, it would be a relief to those weak-minded persons and silly old women who spend their brains in writing and their time in making affidavits, whose whole end is to benefit the manufacturer of the too often useless stuff.

Yours truly,

P. PALMER BURROWS.

Medical Matriculation by Act of Parliament.

A discussion took place one afternoon last week in the Quebec Legislature upon a bill introduced by a member thereof, to permit medical students who commenced study prior to 1899 and who omitted to pass their preliminary examination, to dispense with it. The Hon. Mr. Flynn, leader of the opposition, ridiculed the measure, stating that if this sort of thing were to continue, classical education for entrance to the professions had better be abolished. Hon. Dr. Guerin moved the six months' hoisi, which was adopted by a vote of forty-five to fifteen.

Book Reviews.

A Laboratory Handbook of Physiologic Chemistry and Urine Examination. By CHARLES G. L. WOLF, M.D., Instructor in Physiologic Chemistry, Cornell University Medical College, New York. 12mo. volume of 190 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.25 net. Toronto: J. A. Carveth & Co., Canadian Agents.

The object of this book is to supply to students and practitioners of medicine a guide to a course in physiologic chemistry and the examination of the urine and the contents of the stomach. The first part of the book is taken up with simple exercises in physiologic chemistry, which will give an elementary insight into the chemical side of physiologic processes.

A Laboratory Course in Bacteriology. For the use of medical, agricultural and industrial students. By FREDERIC P. GORHAM, A.M., Professor of Biology, Brown University, Bacteriologist to the Health Department, Providence, R.I. 12 mo. volume of 198 pages, with 97 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.25 net. Toronto: J. A. Carveth & Co., Canadian Agents.

Bacteriology is essentially a laboratory study. It is also a subject of very general scientific interest. Courses in bacteriology are no longer confined to the medical schools, but are being introduced into colleges and agricultural and industrial schools. This volume has been prepared as a guide to the practical details of laboratory work.

Atlas and Principles of Bacteriology and Text-Book of Special Bacteriological Diagnosis. By PROF. DR. K. B. LEHMANN, Director of the Hygienic Institute in Würzburg, and R. O. NEUMANN, Dr. Phil. and Med., Assistant in the Hygienic Institute in Würzburg. Authorized translation from the second enlarged and revised German edition. Edited by George H. Weaver, M.D., Assistant Professor of Pathology, Rush Medical College, Chicago. W. B. Saunders & Co., 1901. Toronto, Ont., Canada: J. A. Carveth & Co. Price, \$5.00.

Saunders' Hand Atlas series is already familiar to our readers in many departments. This book is in two volumes. Volume I, the Atlas, consists of 69 plates, which illustrate the form and color of the gross and microscopic preparations of a large number of the best known micro-organisms. Volume II, the Text, is divided into a general part, which furnishes a condensed survey of the principal properties of bacteria, so far as they are of practical value, especially so far as they are of diagnostic aid, to which is appended a short list of media, rules for stains, etc. and a special part gives, as far as possible, in a natural botanical arrangement, a complete description of the important varieties, with constant references to the less important ones which for any reason are worthy of notice. The authors have succeeded in bringing a certain amount of order out of the bacteriological chaos, and made it possible for the student to get some idea of the kind of germ with which he is dealing. We heartily recommend it to all students of the subject.

The American Year-Book of Medicine and Surgery for 1902. A yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of GEORGE M. GOULD, A.M., M.D. In two volumes—volume I, including *General Medicine*, octavo 700 pages, illustrated; volume II, *General Surgery*, octavo, 684 pages, illustrated. Philadelphia and London: W. B. Saunders & Co. 1902. Per volume: cloth, \$3.00 net; half morocco, \$3.75 net. Toronto: J. A. Carveth & Co., Canadian Agents.

The plan of issuing the Year-Book in two volumes, inaugurated two years ago, met with such general favor with the profession that the publishers have decided to follow the same plan with all succeeding issues. Each volume is complete in itself, and the work is sold either separately or in sets. The contents of these volumes, critically selected from leading journals, monographs, and text-books, is much more than a compilation of data. The extracts are carefully edited and commented upon by eminent specialists, the reader thus obtaining, not only a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, but also the invaluable annotations and criticisms of the editors, all leaders in their several specialties. As usual, this issue of the Year-Book is not lacking in its illustrative feature; for, besides a large number of text-cuts, the Surgery volume contains five, and the Medicine volume four, full-page inserts. In every way the Year-Book of 1902 fully upholds, if it does not strengthen, the reputation won by its predecessors.

The Principles of Hygiene: A Practical Manual for Students, Physicians and Health Officers. By D. H. BERGEY, A.M., M.D., First Assistant Laboratory of Hygiene, University of Pennsylvania. Octavo volume of 495 pages, illustrated. Philadelphia and London: W. B. SAUNDERS & Co., 1901. Cloth, \$3.00 net. Toronto: J. A. Carveth & Co.

This book is intended to meet the needs of students of medicine in the acquirement of a knowledge of those principles upon which modern hygiene practices are based, and to aid physicians and health officers in familiarizing themselves with the advances made in hygiene and sanitation in recent years. The book is based on the most recent discoveries, and represents the practical advances made in the science of hygiene up to date.

Among the important subjects considered are ventilation, heating, water and water supplies, disposal of sewage and garbage, food and diet, exercise, clothing, personal hygiene, industrial hygiene, school hygiene, military and naval hygiene, habitations, vital statistics, disinfection, quarantine, etc. The idea of the book is to give the reader a clear understanding of the general principles of this broad subject. The rapid strides made in our knowledge of the entire subject has rendered such a book, reflecting the more recent discoveries, a necessity to physicians and students of medicine.

The book contains all the latest regulations regarding maritime disinfection, certain additions having recently been made on account of the existence of plague. On page 61 the air supply to hospitals is cut shorter than it should be, and less than the author's remarks would lead us to expect.

A Manual of Syphilis and the Venereal Diseases. By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Presbyterian, Michael Reese and Augustiana Hospitals of Chicago; Consulting Dermatologist to the Chicago Hospital for Women and Children and to the Chicago Orphan Asylum; and FRANK HUGH MONTGOMERY, M.D., Associate Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School; Dermatologist to St. Elizabeth's Hospital, Chicago. Second edition, revised and enlarged, with fifty-three illustrations in the text, and nineteen full-page lithographic plates. Philadelphia: W. B. Saunders & Co.

The second edition is a very thorough revision of the first, and much new material has been added. This is one of the most complete and concise manuals that we know of. The pith of the subject is here and references are free to the more elaborate treatise. We hope that in a subsequent edition that chapter on chancroids will be modified by omitting the word "sclerosis" and substituting some word like "lesion." The "sclerosis" has been the cause of much poor diagnosis, both from its absence and presence. At the earliest period of development, when one has to begin his treatment, there is the strongest resemblance between a chancroid and an infecting lesion, but there is no sclerosis there. It develops sooner or later. We know this is a common error, but would like to see a change. The work is one that any physician can refer to with the utmost confidence the advice sought will be found and of the quality that can be depended upon. The technique, illustrations and press work are of the very best.

Genito-Urinary Diseases and Syphilis. For Students and Practitioners. By HENRY H. MORTON, M.D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island College and King's County Hospitals and the Polhemus Memorial Clinic, etc. Illustrated with half-tones and full page color plates. Pages xii-372. Size, 9½ by 7 inches. Price, extra cloth, \$3.00 net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

We feel that with the rapid multiplication of new work, together with the too frequently appearing complication of old and older ones, that the poor purchasing physician has a surfeit. In many lines new works are demanded, but they must be new, up to date, and contain material that will be of value. We are sorry that we cannot herald the present volume loudly. It is an overlapper, and real'v does not contain anything new. The publishers have been kind to the author, however, and produced the volume in their usual most creditable style.

Selections.

SURGICAL HINTS.

In spinal cocaine anesthesia the abolition of pain may be delayed for some time. It has been observed to come on as late as forty minutes after the injection.

If obliged to leave a catheter in the bladder, always avoid employing a metallic instrument. Their rigidity and their tendency to become rapidly incrustated render them soon harmful.

In burns of the mouth or throat, particularly in children, give frequent small doses of codliver oil, or sweet oil, with lime water. It will act both as food, and, as a form of Carron oil, as a dressing.

Sugar placed in the water, or the use of simple syrup, will greatly facilitate the removal of plaster-of-paris from the hands after applying plaster dressings. The use of sweet oil is also serviceable for this purpose.

Surgeons have now quite generally abandoned the procedure of washing out the pleura after operations for empyema. Washing out does not seem to shorten the period of recovery, and it may, if repeated, cause a tendency to the establishment of a permanent fistula. It may also interfere with the formation of adhesions, thus preventing the union of opposite layers of the pleura.

In acute abdominal conditions, such as strangulation, obstruction or appendicitis, it is wise to withhold opium in order not to mask the symptoms and induce a false sense of security. But as soon as an operation has been decided upon, if there is to be any delay in its performance, it would be cruelty then to abstain from its use. It will relieve pain, thus diminishing shock, and will make the induction of anesthesia more easy.

When, after a laparotomy, there is evidence of intestinal atony, the bowels must be made to move. Purgatives, either mercurial or saline, may prove inefficient, and enemata must be resorted to. A high tube must be used. The most effective substances are the saturated solution of Epsom salts, in quantities of a pint or more, or the mixture of Epsom and Glauber salts, each two ounces, with two drachms each of turpentine and dried oxgall in a pint of water.—*International Journal of Surgery.*

Surgical Treatment of Pruritus Vulvae.

Tavel (*Rev. de Chir.*) advocates resection of the internal pudic nerve in the treatment of obstinate vaginismus and pruritus of the vulva, and reports two cases in which he applied this treatment with good results. This method of dealing with painful affections of the external genital organs of the female, though first practised by Simpson, of Edinburgh, forty years ago, has not, it seems, been repeated by other surgeons for vaginismus, although it has occasionally been tried for the relief of certain painful forms of chronic urethrocystitis. The author discusses at length the surgical anatomy of the internal pudic nerve and its different branches, and describes his method of operating on this nerve. The external incision on either side of the perineum, which is about four inches in length, is carried directly from before backwards in the middle of the fossa between the tuberosity of the ischium and the outer margin of the anus. The nerve—the course of which is indicated by the pulsations of the accompanying artery—is carefully separated from this vessel and followed backwards to its trunk. The main divisions supplying the muscles of the vulva and the painful area of integument are divided near their origins and the peripheral portions of the nerve twisted and torn away. In this operation care must be taken to avoid the inferior hemorrhoidal nerve and the anal twigs of the deep perineal branch.—*British Medical Journal*

Rheumatism.

Every now and then some one bobs up and extols quinine, black cohosh or wintergreen in the treatment of acute rheumatism, when a long-extended experience by the medical world in general has abundantly illustrated the fact that the salicylates stand far and above all other agents or medicaments for the relief of this affection. And of the salicylates the salicylate of sodium has long had the preference.

If the salicylate of sodium be given to an adult in quantities of from ten to fifteen grains every two or three hours (some recommending as high as one hundred and twenty grains daily), and the patient held under the influence of the drug for a number of days, suffering is greatly curtailed and even almost entirely done away with, and the course of the attack much abbreviated.

This outcome will be observed in the great majority of cases; nothing of even approximate virtue has been advanced; hence it is questionable treatment to ignore these facts and go "beating about the bush" with quinine, black cohosh and wintergreen.—*Clinical Review.*

The King and the Treatment of Consumption.

As is now known over the world, His Majesty King Edward has had placed at his disposal the sum of £200,000 by Sir Ernest Cassel, whose generosity must stamp him as one of the benefactors of mankind. The money was to be utilized for the benefit of the sick and poor according to the King's discretion, and the announcement that it is to be devoted to the building and maintenance of a Sanatorium for Consumptives is the very strongest evidence (if evidence were required) of His Majesty's wisdom and thoughtfulness in regard to medical relief. For a great many years the King has taken a prominent part in all matters pertaining to the nation's health, and the principal schemes which have been established with a view to mitigating human suffering have been instigated and carried to success by His Majesty's own efforts. Few monarchs can claim such a distinction. It may be pointed out also that not only is the King's interest in these matters based on his general knowledge of the needs of his subjects, but it is also true that he is well acquainted with the subjects of tuberculosis, cancer, etc., in their technical aspects. He has often studied the bacilli of tuberculosis and other diseases under the microscope, and is thoroughly conversant with the main facts of their pathology. The deep interest which His Majesty takes in the advancement of medical science is an object lesson which it would be well if every medical man amongst us would daily lay to heart.—*The Medical Magazine*.

Schleich Method of Producing Local Anesthesia.

Inquiry has been made as to the more detailed steps of the Schleich method of local anesthesia, which is now having so much popularity for all kinds of minor work. (A condensed note regarding this method was given in this department in a recent issue.) The commonly employed Schleich solution has the following composition :

℞ Cocain hydrochlor.	gr. ii.
Morphin hydrochlor.	gr. ss.
Sodium chlorid.	gr. iv.
Sterile distilled water	℥ iv.
Sol. carbol. acid (5%)	gtts. ii.

M.

An ordinary hypodermic syringe may be used, but it is more satisfactory, especially if the field of operation be of more than an inch or two in extent, to employ a larger and stronger syringe capable of holding from two to four drams of the solution. The point of the needle is not to be introduced slantingly, as when giving an ordinary hypodermic injection,

the purpose being not to introduce the solution into the general subdermic adipose tissue, but rather the point should be introduced almost parallel with the skin and running just immediately beneath it. Then, with a strong syringe an area of two or three inches may be infiltrated. The injection should be made evenly and gradually, when a whitish spot, the so-called wheal, absolute anesthetic, will occur. The anesthesia, with the strength of solution above given, will remain from fifteen to twenty minutes. If a larger area is needed, another injection may be made just at the edge of the first "wheal" in any direction desired, and the area of anesthesia may thus be extended over a considerable surface; but it must be borne in mind that not above three ounces, or possibly four ounces in particular cases, of this strength of solution is to be injected at a sitting. The amount of morphine and cocaine will at once show that there is a definite limit beyond which it is not safe to go. The quantity of cocaine may be increased or diminished should it be desired to use a stronger or weaker solution; but the quantity injected, the solvent remaining the same, would then have to be diminished or increased accordingly.

It can hardly be said that Schleich's infiltration anesthesia savors of indefiniteness, or that it is still in the stage of experiment. The method has been used for several years, and very extensively by some operators, who, of course, with increased experience have become expert both in method and in the selection of cases adapted or adaptable to this means of painless operations of limited extent and short duration.—*The Clinical Review*.

For Ascarides.

Progrès médical for February 1st attributes the following formulæ to Comby:

R	Santonica,	} of each	30 grains;
	Corsican moss,		
	Calomel		3 "

M. Divide into two powders and give one in the morning for two days.

It also ascribes this to Smith of Moscow:

R	Santonin	3 grains;
	Oil of sweet almonds	2 ounces;
	Tincture of santonica	4 drops.

M. A tablespoonful twice daily.—*New York Medical Journal*.

An Antineuralgic Ointment.

The *Gazette hebdomadaire de médecine et de chirurgie* for February 27th ascribes the following to G. Menier:

R Extract of belladonna,	} of each.... 150 grains;
Petrolatum,	
Powdered opium.....	30 "
Perfume, with essence of thyme.....	q.s.

M. Rub in thrice daily; the frictions should last for from five to ten minutes and be desisted from so soon as the face blanches.—*New York Medical Journal*.

On Simultaneous Ectopic and Intrauterine Pregnancy.

Hanna Ch. Vilsin (*Mittheil. aus der Gyn. Klinik in Helsingfors; Ref. Centralbl. fuer Gyn.*, January 11, 1902).—By a careful study of the literature—going back to the eleventh century—the author was able to collect sixty-eight unimpeachable cases of this condition, to which he adds one observation of his own. Some of the most interesting results of his painstaking investigations are the following: In twenty cases both children reached entirely or almost full term. Interruption of the intrauterine pregnancy has a by far slighter effect upon the further development of the extrauterine pregnancy than *vice versa*. Disturbances in the blood circulation in close neighborhood of the uterus, caused by the rupture or abortion of the pregnant tube, are in many cases responsible for the premature interruption of the intrauterine pregnancy. In twenty-five cases the ectopic fetus reached full term. This fact is striking. Engstrom does not consider this a mere accident, but believes that the increased afflux of blood to the pelvis, on account of the intrauterine pregnancy, improves at the same time the blood supply of the pregnant tube, thus promoting the development of the ectopic fetus. The diagnosis is always very difficult. During the first three months the diagnosis will be either intrauterine pregnancy complicated by pyosalpinx, or simple extrauterine pregnancy, the uterus always being somewhat enlarged in this condition. In a later stage it will be more than difficult to avoid the wrong diagnosis of a retroflexion of the pregnant uterus or intrauterine pregnancy complicated by ovarian tumor or pyosalpinx. The treatment of this condition is, of course, identical with that of ectopic pregnancy in general. [The possibility of such a condition may prevent those who are too ready with the use of the uterine sound from using it for a diagnostic purpose in cases of suspected ectopic pregnancy.—Ed.]—*Interstate Medical Journal*.

Miscellaneous.

An Operation on the Operator.

M. Doyen's newspaper report of his operation on Radica and Doodica has been made the subject of an amusing parody in that eminently respectable paper, the *Temps*. The author records how he operated upon Dr. Doyen, whose exceptional cerebral activity had doubled his personality.

"By ill luck the scissiparity was incomplete, the two persons remained attached to one another by a membrane extending from the umbilicus to the sternum. To distinguish them it was necessary to call one Radoyen, and the other Doyenka. This at first caused no inconvenience, but with increase of age troublesome disagreements, grave incompatibilities of character and temper became manifest between the two doubles. . . . It was determined to separate them, and my scientific aid was invoked. The operation did not last twenty minutes. I had invited my friends, the phenomena of Barnum and Bailey's circus, who are now indispensable to me. They were of the greatest use to me, particularly the man with the elastic skin. By stitching the skin of his abdomen to that of the abdomen of the living skeleton, I constructed artificial Siamese twins on whom I made most interesting preliminary experiments. There were also present the armless man, who wrote at my dictation with his foot, and the pincushion man, who played a modest but indispensable part, as will presently be seen. The two monsters, Radoyen and Doyenka, were placed upon a table invented by me, covered with a sheet sterilized by means of a preparation which is my property. I took up my position on their right, so that the cinematograph should lose nothing either of my movements or my features. The superficial part of the portion of the membrane was formed by a cartilaginous plate of a certain thickness which I divided with a bistoury made according to my directions. As is usual in my clinic, anesthesia was produced by means of chloride of methyl. As I ceased to require my needles, my scissors, and my forceps, I stuck them into the cheeks of the pincushion man, that is what he served for. Underneath the cartilaginous plate I found, as was to be expected, a bridge of liver, seven centimetres in breadth by four in thickness, traversed by a large number of arteries, arterioles, veins, and venules. This was the time or never to use my original method of hemostasis. I therefore performed extemporaneous crushing of the hepatic pedicle by means of my large double lever forceps from Creusot, which weighs a million tons, but which can be set in motion by one

finger, and which exerts a pressure of 600,000 kilos. . . . Happily for posterity the operation was completed before the cylinders of the cinematograph were exhausted. Radoyen was first carried to a neighboring table, a compress invented by one of my usual assistants was placed in the wound, and the skin provisionally brought together with toothed forceps, of which I recently published a drawing. Then came the turn of Doyenka. I sutured his abdominal wall, taking care to leave in a small drain of gauze sterilized by my ordinary attendant whom I cannot recommend to my *confrère*. The operation had succeeded. As for Radoyen and Doyenka, I hope they will get over it. An immense concourse of people, which I estimate at seven millions, was waiting at the door of the hospital, and I had to escape from their acclamations. There were also seen under the windows twelve or fifteen hundred automobiles, among which could be recognized those of the King of the Kymris, of the dethroned Emperor of the Aztecs, of the Grand Duke of Ganzeberg, of Lord Untrue, of the Marquis de Las Pesetas ey Cambio, of Jobard Pasha, of the Ambassador of Andorre, of the Fencer Spada-Blanca, of Mademoiselle Suzanne Chaste the exquisite story-teller, in short all Paris, including the private secretary of the Ministry of Submarine Communications, who had come in a cab. The Santos-Dumont No. 17,964 floated above my head, performing a thousand sublime evolutions. The King of the Air was even good enough to ask me to dinner in his boat, but the wind not being particularly favorable, after a masterly descent I decided to go home by the tram."

The self-assertion and eagerness for notoriety which made themselves felt in every line of the original are scarcely exaggerated in this clever skit.—*The Practitioner*.

Pork and Piety.

"They have no sense, men haven't," said Mrs. Hankey; "that's what is the matter with them." "You never spoke a truer word, Mrs. Hankey," replied Mrs. Bateson. "The very best of them don't properly know the difference between their souls and their stomachs, and they fancy they are wrestling with their doubts when it is really their dinners that are wrestling with them. Now, take Bateson himself," continued Mrs. Bateson. "A kinder husband or better Methodist never drew breath, yet so sure as he touches a bit of pork, he begins to worry himself about the doctrine of election till there's no living with him. And then he'll sit in the front parlor and engage in prayers for an hour at a time, till I say to him: 'Bateson,' says I, 'I'd be ashamed to go troubling the Lord with a prayer, when a pinch of carbonate of soda would set things straight again.'"—*The Farringdons*. ❧