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Progress of Science.

CERTAIN MATTERS OF TREATMENT WHICH SHOULD BELONG TO THE LYING-IN ROOM.*

BY HENRY F. WALKER, M.D., New York.

The physician's office in the lying-in room is, in one respect, peculiar. It is the only time in his professional life that he is called upon to superintend, and perhaps aid, a purely physiological process.

In all his other duties he deals with disease, but in the care he gives the parturient woman he is at hand to avert possible danger or to aid incompetent nature. This being the case, his endeavor should be to leave his patient in as good condition as she was before the parturient act. But too often he is called to see a well woman, and when he discontinues his attendance he leaves a chronic invalid.

I purpose to speak of some matters of care, of both mother and child, which I think properly belong to the lying-in room. Attention to these would, I think, diminish invalidism in women whose health motherhood has imperilled, and in the infant avert dangers which threaten its welfare.

My paper, which does not claim to be exhaustive, will be on "Certain Matters of Treatment which should belong to the Lying-in Room." I propose to speak only of such troubles as may attend upon natural labor, but which may nevertheless, leave a woman with health impaired, and years of feebleness before her.

The first in the natural order, as being first in the order of time, is the immediate care of the perineum. It can be fairly stated that no woman is delivered of a normal child at term without some perineal tear. Be it even trifling in degree, it should be immediately closed by sutures. First to increase the patient's immediate comfort. The

application of the sutures is but momentarily painful, and though their presence may be recognized, the movements of the patient's body give no more suffering, with the sutures in position, than when the torn surfaces lap one upon the other. At the end of a week the soreness is gone if union has taken place, while several weeks are required for the granulating surface to lose its tenderness and be shielded by mucous membrane.

Second, because the closed wound leaves one less avenue for septic entrance. If the wound heals by first intention the union is cemented in twenty-four hours, while the discharges seldom become poisonous before the second or third day.

These remarks apply specially to the slightest degrees of laceration, where the decision is between immediate attention and entire neglect. Where a greater injury has been inflicted it is better to close the perineum at once, because, besides the reasons already given in the lesser case, viz., the increase of the patient's comfort, and the lessened danger of septic absorption, a later operation will be required, and that is a matter of greater severity.

In these days, when operations are common, and every woman, or at least her bosom friend, has had special treatment, nothing is more common than for a woman to ask, at once, after delivery, if she be torn, and to express desire for immediate treatment. It is useless to attempt deceit, as it will be sure of detection and unnecessary, because, even popularly, no blame attaches to the accident. But, for that very condonation, blame does attach to neglect of such an injury after its occurrence. Results, too, are almost always favorable.

In my own practice an average of eight cases in ten have healed by first intention. A few times, from suspicion that a rise of temperature might be due to imprisoned pus, I have removed the stitches prematurely, but in no case has there been any untoward result. In some cases I have failed to operate and have regretted my neglect, but in no case where I have operated have I wished that I had pursued the other course.

* Read before the Practitioner's Society of New York.

It seems strange that any other habit than that of immediate closure of the wound should have obtained. In no other situation has it been the habit to prefer a healing by granulation to union by first intention. If a nostril were torn, the mouth gashed to double its size, the first effort has always been to bring the parts in close apposition and retain by sutures. But many a woman, nearly torn in two, has been allowed to suffer the slow torture of a possible healing by granulation.

As to the means to be employed, if not in one's pocket-case, they are always at hand. A button-needle and embroidery silk, or dentist's floss, have in several instances stood me instead. The silk suture is preferable to silver wire. Its perfect softness and pliability prevent all the suffering which every contact with the twisted wire occasions. The union is as perfect with silk, and though there is likely to be a little suppuration in the track of the threads, the additional comfort that is gained in motion and dressing by using a pliable instead of a stiff suture is sufficient reason for employing the former.

The second matter—often neglected, but deserving of attention in the lying-in month—is the condition of the uterus as to its position. Every woman should be examined by digital touch three or four weeks after delivery, or when beginning to move about freely upon her feet. Any descent of the uterus, or a slight alteration of normal axis is easily appreciated, but what is of more importance is then easily rectified. A light uterine support worn at this time, for a brief space, will achieve what no pessary could at a later one. I make such an examination, and if I find prolapsus or retroversion in the first or second degrees, I do not trust to nature, but attempt her aid by causing a pessary to be worn till involution has lightened the uterus, and the uterine supports have gained their tonicity and their normal size. I feel as well assured as one can, that cases of threatened severity have thus been cured.

Several cases I have had that have been relieved of chronic retroversion by the use of a pessary during the period of involution.

In cases where the uterus lies lower than normal but is anteverted, less can and less needs be done. The axis is more nearly correct and attendant inconveniences are less, while nature, in this case, is more competent to remedy the fault. But here, also, slight support by preventing passive congestion of the displaced organ, will in a measure diminish the tendency to a hyperplasia, which might result.

The nurse will usually tell the patient that the "sense of falling" is perfectly natural, and that it will disappear as strength comes. But in many cases the symptom is an indication of a true uterine displacement, which a little care will remedy, but which neglect will aggravate. There is no time so favorable to treat the malpositions of the uterus as that following delivery. The womb, as well as its supports, are then undergoing active change, and

with proper assistance can regain normal strength and tone. We look to the parturient act to remove the mechanical dysmenorrhœa of the nullipara, and we may look to it also as a means of improving many cases of displacement, and most cases of hyperplasia, unless a lack of careful management, during the precious weeks following delivery allow the troubles to aggravate.

The third matter I would specify, as usually neglected but deserving of care during the lying-in month, is the prepuce of the male child. Great attention has been called of late years to the influence of phymosis upon the child's nervous system and I have had many instances where improvement in general health, as well as in local nervous disturbances, has followed the removal of an adherent prepuce. So manifest has this been to the parents, that when a male child was subsequently born in a household where a child had been circumcised, the mother has always been eager that the same operation should be performed on the successor. The popular voice is in favor of the operation. It should be attended to in the lying-in room. It is a well-known saying among nurses, that boys are worse than girls, more restless and fretful. This I think is mainly due to preputial irritation. My attention was first specially called to this condition by two cases which were unable, or very insufficiently able, to empty the bladder. The release of the prepuce immediately relieved the symptom, and one boy, who for six days had wet only once in twenty-eight hours, urinated almost regularly every three or four hours. The other, with even severer symptoms, was at once benefited, and all disposition to retention was overcome.

Since these cases occurred I have examined the prepuce in every male infant, and have operated on all that seemed to demand interference. In the majority of cases at birth there is adhesion between the two mucous membranes, the orifice of the urethra and that of the foreskin not differing much in size. In cases where the preputial orifice allows I push it back, separating the two agglutinated surfaces with a probe. This can be done, I think, in one-fourth the cases. In three-fourths either very forcible stretching or a cutting operation is needful. Of those I much prefer the latter method of treatment. A linear incision slitting the prepuce on the median line is all that is needful, and there is no necessity of circumcision. The splitting up the prepuce is efficient, and equal in appearance. Besides, a demonstrable foreskin is left, which some prefer. In manhood this method results in deformity; in childhood the result is doubtful in this regard; in earliest infancy the result is perfect, provided after operation care is taken that the foreskin shall heal, leaving the glans constantly exposed. The chief reason why the less operation is equally efficient, and therefore should be performed in early infancy, is that the cuticular and mucous surfaces are then equal in development. As the child grows the mucous surface perhaps

by its adhesion, seems to develop less rapidly, all growth is apparently limited to the outer surface, which elongates in folding upon itself, so that it quite conceals the urethral orifice. The form known as "little boy's prepuce" begins development early, but if the operation is made in the first fortnight the incisions in skin and mucous membrane are almost equal in length. In two months' time the prepuce with its infolded skin will be nearly double the size of the mucous lining covering the glans.

As to the time of interference, unless there be retention of urine, as in the two cases I mentioned, I believe that the rule established by Jewish and Mohammedan usage is a good one. By that time all possible septic trouble from the cord is removed, and the mother is too far advanced in convalescence to be troubled by any possible shock to her nerves.

If the prepuce is slit back as far as the corona and the two mucous surfaces separated, there will be no after-trouble, and at three years, save that the glans is uncovered, there will be little sign of the surgical interference. My reasons for advocating this plan are these :

Sooner or later the boy or man will require some treatment similar to this, the splitting of the prepuce or its circumcision. If likely to be required, all things being equal, it had better be done early than late. It is better that the child's system should escape the long nervous strain that the constant preputial irritation gives. If done early the lesser operation gives equally good results, both as to efficiency and appearance.

The points I have endeavored to make are these :

First.—Examine every woman immediately after delivery, and if there is any laceration, even a trifling one, close at once with silk sutures.

Second.—Examine every woman when she begins to move about, and if there be displacement of any kind, anteversion, retroversion, or prolapsus, introduce a proper pessary, with the hope that its temporary use during the period of involution will establish a cure.

Third.—Examine at birth every male infant, and if the prepuce be so contracted or adherent that, with probe and pressure, the glans penis cannot be uncovered, operate by splitting the prepuce as far back as the corona with scissors or bistoury ; the chosen time for operation, unless urgent symptoms present themselves, being the ninth day.

TREATMENT OF PUERPERAL SEPTICÆMIA.

Let us now suppose that, in spite of every precaution, the specific poison has gained entrance at one of the numerous door-ways left open in the genital tract between the vulva and the fundus uteri ; what are the most reliable means now known

to us for checking the advance of the septic disorders which are set up in consequence ?

But let me stop here, before answering the question just asked, and explain what I mean by the use of the term specific poison. I do not believe that there is, necessarily, any specific disease germ which gives rise to puerperal septicæmia. It is probably the same germ as that which is the source of septicæmia, phlebitis, lymphangitis in the stump after an amputation, in the wound created by a compound fracture, or in the lacerated tract produced by a gun-shot. But the pathological condition excited appears to me to be entirely different from that putrid absorption which results from the decomposition of a retained placenta, or a putrid mass of blood. Such decomposition produces a toxæmia, violent and dangerous it is true, but which disappears as soon as the offending mass is removed. That of the true puerperal disease at once, or almost at once, diseases the lymphatics and sets up an action which often proves uncontrollable. If the mere presence of decaying animal material in a uterus would produce puerperal septicæmia without the agency of a specific disease germ, we should surely have that affection developing in healthy country localities where the woman are attended by ignorant midwives, but where, nevertheless, it is almost an unknown disorder.

"I," says Hervieux, "who write these lines, declare that in my own country I have within the space of three years attended one thousand cases of labor, and out of that number have lost only one patient !"

And now, in summing up what I esteem the most certain and the most rational treatment of the disease styled puerperal fever, I will be as concise as possible :

As soon as the patient is stricken by the poison, certain very marked phenomena usually develop themselves with great promptness. After a chill or a slight horripilation she is affected by a high temperature, pelvic pain, considerable mental perturbation, headache, pain in the back and sometimes, though not commonly, by nausea and vomiting. We will assume, first, that the attack is a severe one in its inception ; and, second, that the patient is in such a position in life that we are not in any way hampered in our efforts to save her by considerations of economy. Having considered treatment from these standpoints, it will, of course, be easy to modify the plan so as to meet the requirements of a mild attack or of a scanty purse.

As the practitioner sits by the bedside of his patient at the commencement of her attack, he is aware that there are points connected with its true pathology which he cannot yet determine. For example, he cannot say whether the case is going to assume the form of septicæmia lymphatica or septicæmia venosa ; whether of perimetritis or parametritis ; or whether thrombosis of some of the large pelvic or utero-ovarian vessels, or a true parenchymatous metritis is to play the most active part in the siege which has begun. If he frantically

away the golden moments in vague speculation ; if he soothe his fears by hoping that the attack is due to malaria or milk fever ; or if he cast aside the rational doctrines of to-day in favor of the idea of a general infectious and particular form of disease called by the forefathers of the French school, "*la fièvre des femmes en couche*," time will be lost which can never be regained. If, on the other hand, he is encouraged by his clinical observation to stand with many of the best pathologists and practitioners of our time in the position assumed by Hervieux—"I believe in the multiplicity of the affections classed under the head of puerperal fever ; I believe in puerperal poisoning as the source of them"—he will act at once and strike at the poison before it has fairly gained a foothold. In other words, if the physician could see into the future and learn with certainty that peritonitis, cellulitis, thrombosis, lymphangitis, or true phlebitis is to be the final disorder, he should, if he reaches the case at the inception of the attack, follow, in my opinion, the course here formulated :

1. As soon as a diagnosis of septicæmia is determined upon, all pain, nervous perturbation, shock, and mental anxiety should be quieted by the hypodermic administration of ten minims of Magendie's solution of morphine, unless some special and very decided idiosyncrasy with reference to opium be ascertained to exist; and throughout the severity of the attack, whenever suffering of mind or body occurs (perhaps it will be about once in every six or eight hours), this should be repeated. In my experience, no other method of administering morphine in these particular cases compares with this, and, as it is not to be continued long, there is no fear of causing the patient to become addicted to the drug as a vice. If a small, sharp, and new needle be used, if it be thoroughly cleansed with soap and water before each time of using, and be dipped in a solution of bichloride, 1 to 1,000 of water, just before each insertion, no abscesses will occur. It is the large, rusty, unwashed and unpurified needle which the doctor's economy makes last him for many months, which so commonly results in them.

2. The physician must now decide whether, in his opinion, the septic disease which is developing has originated in the wounds situated between the os internum uteri and the vulva, or in the endometrium, above the former point. If he decide in favor of the former view, he should persist, for a time longer, in the more thorough use of vaginal injections ; if of the latter, intra-uterine injections should be at once resorted to. Usually the question has to be decided by the efficacy or inefficacy of frequent germicide vaginal injections in bringing down the temperature and controlling other grave symptoms. Should the failure of these seem to prove that the origin of the disease is higher up the genital tract, more decided and radical measures must be taken,

The patient having been entirely relieved of pain and thoroughly quieted, the first injection

should be practiced in this way : An Indian rubber cloth should quietly, without hurry, noise, or disturbance on the part of the nurse, be spread over the edge of the bed on which she lies, and made to fall into a tub of warm water rendered antiseptic by the addition of 2 or 2½ per cent. of carbolic acid, or of the bichloride of mercury, 1 to 2,000, or of some other reliable germicide. Then Chamberlain's glass uterine tube, which I here show, or the very excellent and ingenious tube invented by Dr. George H. Lyman, which is here seen, thoroughly fitted to a Davidson's or Higginson's syringe, should be immersed in the tub. The nurse now aiding the patient by the shoulders, and the doctor by the hips, she should be gently laid across the bed and be made comfortable with a pillow under the head. Each foot should rest upon a chair placed at either side of the tub, and she should be entirely covered over with a couple of blankets. The doctor, now placing himself between the knees of the patient, should take the tube in his right hand while a stream of water is made to flow through it by the nurse, who squeezes the syringe bulb, and he should pass it gently up the fundus of the uterus. The stream of water, which has been steadily flowing, is now projected with gentle force against the walls of the uterus, washing away adherent blood-clots, detaching portions of hanging membrane, and everywhere neutralizing the influence of the poison which has excited the disorder.

After the first injection the position of the patient need not be disturbed, but the injection may be given as she lies upon a bed-pan.

In some cases, in which I have had reason to suspect that portions of the placenta or membranes have been retained, I have chloroformed the patient, passed the hand, rendered thoroughly aseptic, within the cavity, and very gently scraped off adherent masses from the uterine walls, using the nails as a curette, as Wilson, of Baltimore, has advised. In some other cases I have rubbed the whole endometrium with an aseptic sponge, held in a long sponge-holder, or employed the largest of my curettes to remove clots and adherent secundines, with great apparent advantage.

That the use of antiseptic uterine injections after parturition is attended by danger is beyond question. The greatest hazard attending this plan is the entrance of air into the uterine cavity; the next, the production of hemorrhage by detaching some of the thrombi which fill the mouths of the uterine sinuses; the third, the danger of forcing the fluid used as an antiseptic directly into the general circulation, through the introduction of the tube into the mouth of a sinus; fourth, the creation of convulsions, violent pain, or nervous prostration, by a sudden and baneful influence upon the nervous system; and the fifth, the passage of the tube into a Fallopian canal, and the injection of fluid directly into the peritoneal cavity, as in a case reported by Dr. W. Gill Wylie in an interesting

paper in the *New York Medical Journal* for June 23, 1883, p. 679.

All these dangers may be, to a great extent, avoided by care as to details, by using a large injecting tube which cannot enter an open-mouthed sinus; by using water warmed to 105° ; by injecting the fluid through the tube so as to exclude air before passing this up to the os uteri; by using only a moderate degree of force in throwing the jet against the uterine walls; and by proceeding with the whole affair gently, cautiously, slowly, and intelligently.

The tube should never be allowed to fill the os uteri completely, so as to prevent the escape of the injected fluid. Should the cervical canal be so narrow as to hug the tube closely, it should be dilated by dilators of hard rubber, by the fingers, or Barnes' bags, before the injection is practiced.

A solution of the persulphate of iron should always be at hand in case of sudden hemorrhage from displacement of a thrombus. Should this accident occur, ergot should be immediately given hypodermically, the iron solution be at once added to the antiseptic solution and allowed to pass into the uterus, and pressure be made upon the fundus so as to stimulate the contraction of uterine fibre to accomplish closure of the open sinuses in that way. Quite a number of cases of death from this plan of treatment are on record. In a very large experience with it I have met with but one. The whole number on record would, however, fall, I think, into insignificance if weighed in the balance against the many deaths which have been due to a neglect of the means, or against those lives which have been saved by it.

After all, the question as to the dangers attending a plan of treatment are not to be settled upon mere abstract reasoning. The evil which it is known to do must be weighed in one scale, and the good which it effects in another; and careful consideration must decide whether we are justified in accepting the former for the sake of the latter.

Judged in this manner, I feel very sure that intra-uterine injections for puerperal septicæmia deserve a place among the most valuable resources for the saving of life for which we are indebted to modern pathology.

The frequency of these intra-uterine injections should vary greatly with individual cases. In mild cases of septicæmia, where the temperature comes readily down after the uterus has been washed out, and rises very slowly, they need only be used once in every five hours; in other cases they become necessary once in every three hours; and in bad cases they are required once every hour. These injections should always be administered by a physician, should always be carried fully up to the fundus uteri, and should always be used with every regard to caution as to detail which has been already mentioned.

Many prefer the use of those syringes which allow of a steady flow of a stream of water pro-

pelled by gravitation, as is the case with the so-called fountain syringe, which is so popular among us. This is partly because greater safety is supposed to attach to these, and partly from a theory that danger attends the propulsion of a stream by intermittent jet against the uterine walls. For a number of years I shared this belief, but experience has taught me that a gentle projection of the fluid is an advantage, that by this means a more thorough cleansing is accomplished, and that with due caution no more danger attends the plan than that by the steady flow.

Some have adopted continuous irrigation of the uterine cavity, but this is, I feel perfectly certain, a delusion and a snare. It gives the appearance of great thoroughness, which it does not possess, for the reason that by this plan it is very difficult to bring the germicide fluid into full contact with the entire endometrium. For vaginal irrigation it is an excellent method, but I have seen it allow the temperature to remain high when applied to the uterine cavity, and have replaced it by the intermittent douche, used only as often as every three hours, with striking results. Nevertheless, in very severe cases I prefer to employ continuous irrigation, replacing its use every third hour by that of the intermittent current; rather than exhaust my patient by half-hour disturbances and injections, as has been by some advised.

After all that has been said on this subject, the essential fact is this: that plan is best which accomplishes most perfectly the cleansing of the parturient canal. With ordinary precautions, danger need not necessarily attach to any method.

3. The uterus having now been thoroughly cleansed, and the patient entirely quieted, attention should be turned to controlling the temperature, which in septicæmia of puerperal character runs so high and maintains itself at so exalted a range as to constitute one of the immediate factors of a fatal issue. Even if this were not the case, the patient's strength is so much exhausted by prolonged high temperature, her nerve powers so much depreciated, her blood-state so rapidly injured, and her comfort so decidedly interfered with, that these considerations alone would point to the propriety of combating hyperpyrexia. For this purpose I formerly relied upon the affusion of cold or tepid water, the patient lying upon Kibbee's cot; at present I accomplish the same result more easily and more pleasantly for the patient by the use of Chamberlain's rubber tube coil, which I here show. A mat, composed of a rubber tube rolled upon itself in a circle, covers the whole abdomen from the ensiform cartilage to the symphysis pubis; the upper end of the tube which makes this mat is anchored by a weight in a tub of ice-water, placed about three feet above the level of the patient, and the lower end falls into a tub upon the floor. By siphon action the water of the elevated tub runs through the tube which constitutes the mat, and collects in the receptacle on the floor. By this means a temperature of 104° can very

readily, as a rule, for there are exceptions to the rule, be kept at 100° for weeks together.

Unfortunately, there are almost unsurmountable difficulties connected with the use of this invaluable method in the minds of the patient's friends, the patient herself, the nurse, and, alas, too often, the attending physician. You are told that the patient becomes chilled, that the coil prevents her resting, that the temperature absolutely goes up under its use and descends whenever it is left off. By the doctor you are apt to be informed that his fear of resulting pleurisy, bronchitis or pneumonia is very great.

I will merely say, in refutation to these charges, that in my service in the Woman's Hospital, where convalescents from laparotomy are constantly under treatment in large numbers, this means of controlling temperature is as commonly and as freely in use as poultices are in general hospitals, or gargles in dispensaries for diseases of the throat. We never meet with any of these difficulties, and very rarely with failures as to the desired result, and I believe that I am correct in saying that successive house-staffs whose duty it has been to carry out the plan have thus far had, to a man, the most implicit faith in its beneficial agency.

There are some peculiarities about it, however, which I must mention: Very often the coil will not succeed in controlling the temperature, for twenty-four hours; its prolonged use alone develops and illustrates its great benefits; and removing it from the body for an hour at a time damages its influence very much. I have never seen evil result from the chilliness which it excites, if hot bottles be kept at the soles of the feet, and in not one instance out of hundreds of cases have I seen pneumonia or pleurisy excited by it.

4. The nervous system should be kept under the influence of febrifuge medicines as to keep under the control the tendency to chill and pyrexia. For this purpose, fifteen grains of sulphate of quinine should be given in capsule or by suppository night and morning, or in place of this, two capsules may be given night and morning of Warburg's tincture, in the form of solid extract, as advised by Dr. J. T. Metcalf. Lastly, to the same end, the salicylate of sodium may be employed.

5. The patient's diet should consist entirely of fluid food, given often, and in small amounts. The staple article should be milk, but animal broths and gruels may be alternated with it with advantage.

6. At the very commencement of such a case the attending physician should, in the patient's interest, surround himself with efficient and abundant assistance. If he undertake to wash out the uterus every four or five hours without other assistance than that of the nurse; and if the patient is to rely for the constant attention and care which she will inevitably require, upon one nurse, it is needless to point out that the duty of both doctor and nurse—vital duties, be it remembered—will be but half performed. And, unfortunately, the penalty will fall upon the patient and her friends.

For a case of puerperal septicaemia to be properly treated in private practice by the plan here advocated, it is necessary for the attending physician to associate with himself some young practitioner, who has the time to devote to the case, and the intelligence to use the uterine douche safely and efficiently. Furthermore, two nurses are necessary: one to be in charge for twelve hours, and the other then to relieve and replace her for an equal time. Without the rest and sleep thus afforded, no nurse taking charge of such exacting cases as these can possibly do her duty in such a way as to subserve the patient's interest. As a rule, the nurse will begin with the declaration that she is competent and willing to take entire charge; that she is one of those people who can do without sleep, etc.; and her heroic offers of self-sacrifice are hailed with enthusiasm by the terrified family. To believe in and to act upon this would be very foolish and very dangerous. After three nights of watching, this same nurse would snore through the hours in which her patient needed her, give the wrong medicines, mislead the doctor, allow the bladder to become distended with urine, and fail in every requirement of the occasion.

If the patient cannot bear the great expense attendant upon the extra service which I have mentioned, it is her misfortune, and for such as herself the doors of our hospitals are open. There is no case of ovariectomy in the Woman's Hospital, however poor the patient be, upon which, thanks to the generous arrangements of its managers, just such attendance as I have mentioned is not lavished.

The antiseptics which have heretofore been tried under these circumstances are thymol, boric acid, salicylic acid, carbolic acid, and mercuric bichloride. Of these, all have disappeared before the superior merits of the last two; and carbolic acid, which for so long a time has been almost supreme, appears about to be abolished in favor of the bichloride of mercury, 1 part to 1,000 or 2,000 of water. For all antiseptic purposes outside of the uterus, the bichloride is now, owing to the carefully made and important investigations of Koch, very generally employed in the strength of 1 to 1,000, and the uterus has now been washed out with this excellent germicide 1 to 2,000, often enough to make us regard its use as an intra-uterine injection as entirely warrantable. If carbolic acid be used in that way, it will not be safe to carry its strength beyond a two, or, at most, a two-and-a-half per cent. solution.

INFANT FEEDING.

BY JOHN M. KEATING, M. D.,

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It has been my custom for some years, after having brought before the class numerous cases of children's diseases which make our clinic so interesting, to call your attention to an important

branch of your life work, infant feeding, a subject that upon superficial thought seems so simple that the majority of medical students are apt to pass it by as pertaining to the nurse and not to the doctor; yet my association with recent graduates enables me to say that it is the one subject that comes up before them soon after entering their medical career, and often it is not merely a matter which is important for the moment and easily evaded, but becomes either the portal of entrance to a large practice, or the starting point of embarrassments and disappointments which render their arduous duties even more irksome.

I wish distinctly to state, that though I shall dwell at length upon the feeding of infants with prepared food, I do not wish to be understood to underrate the value of mother's milk or in its stead that of a reliable and well-developed wet-nurse; there are times when a mother cannot and should not nurse her child, a wet-nurse should then be the first thought; then again I may also state, at this point, that a child which has been nursed for a short period can be very much more easily brought up by hand than one who is obliged to be hand-fed from birth.

The great question which has always given rise to so much hesitation and difficulty in its answer is upon what food to place a child. This at times is perplexing; it depends upon various conditions; it depends upon age of child, upon its health, upon its residence, country or city, and upon the circumstances of the family. All these should be taken into consideration; is it to be weaned gradually, or is it necessary that hand-feeding should constitute its only supply? If you attempt to study this matter from your text-books, you will be dazed with the number of suggestions there presented. It is well that you should form in your own mind the regular course to follow in such cases, and avoid the unfortunate way of answering your inquirer, the fond mother or nurse, by saying, "try this," or "try that." It should not be a matter of trial.

Let me say now that *milk* should form the basis of all preparations of food. It is not necessary for me to show you the difference between cow's and mother's milk. I will refer you to your physiological tables, and also those of you who read the medical journals of the day to the interesting investigations of Prof. Leeds and Dr. A. V. Meigs, who have studied this matter with great care.

There have been several ways suggested of preparing the food for infants, one taking mother's milk as a guide, and endeavoring to make cow's milk approach the human standard as near as possible by dilution and the addition of sugar of milk. For this purpose Dr. Meigs has suggested the following formula: Order five or six packages of milk-sugar, containing seventeen and three-quarter drachms each; the contents of one of these to be dissolved in a pint of water, and each time the child is to be fed let there be mixed together and then warmed, three tablespoonfuls of the sugar solution, two of lime-water, two of cream and one

of milk. This makes about a gill, and as much of it as the child does not take should be thrown out and a fresh mixture made for the next feeding. The solution of sugar should be kept in cool place and at once thrown away if it sours, as occurs if kept more than a day or two in warm weather. The dry sugar keeps indefinitely, and is easily dissolved in warm water. A pint bottle should be kept for the purpose of containing the solution, to serve also as a measure of the quantity of water to be used with each package dissolved, and also to save further measuring. The milk to be used should be good ordinary cow's milk, and not the very rich milk of Jersey or other high-bred stock, and the cream in the same way should be such as is usually sold in the cities, and not too rich, containing about sixteen or seventeen per cent, of fat. The quantity of this food taken by a new-born infant should be two or three fluid ounces every two hours, and if it thrive it will soon take as much as a gill every two hours.

Then there are the various preparations in the market of the cereals proper, whose use I shall tell you more of in a few moments, and those of the cereals that have undergone change into dextrine and glucose by malting, and those foods which are composed of milk, either preserved, condensed, or prepared in a more solid form. These preparations are expensive, not to be procured in every drug store, and furthermore are somewhat perishable, so I shall talk to you to-day of the "home-made" foods, to which I advise you to adhere for a time.

Let us suppose that you are confronted with a case in which the mother, having nursed her child some months, finds her milk gone, and it becomes necessary to establish hand-feeding. She tells you that her child no longer receives the amount of nourishment that it should. Convince yourself of this fact before you make any change; take the appearance of child into consideration, examine its muscles to see if they are firm, and judge whether or not it presents the rosy hue of health. Examine the mother's breast, and if you think that a course of tonics, with outdoor exercise or change of food will increase the supply, by all means have recourse to them before making a change. Remember that the milk does not always remain constantly in the mother's breast, and that frequently those who are able to nourish their children with an abundant supply have, between nursing hours, scarcely any evidence of milk whatever; the application of the child will, however, produce a flow in a few moments.

I give you all these points because frequently mothers wish to wean their children too young, and I firmly believe that encouragement and firmness on the part of the doctor will in very many cases give a child a far better chance in after life. If the child is six months old, or thereabouts, and you find it necessary to establish handfeeding at once, the following would probably be the best plan to adopt: Order nurse or mother to take a quart of

morning's milk which is pure and fresh—better than not from a mixed dairy—and dilute with a half of a pint of water; put on to boil; take of Robinson's prepared barley, which comes in packages, a heaping dessertspoonful or tablespoonful; rub this to an even paste with a small quantity of milk; then add to it the milk that is boiling, and stir this for twenty to thirty minutes, letting it boil. This should be strained, and a small quantity, say a teaspoonful, of white sugar added to it, the whole to be placed in the refrigerator for the day. When cool a jelly will be formed. Of this the child should take about four ounces, made fluid by heating, and strained in bottle or by spoon, every three or four hours. The last feeding would for a time be about ten o'clock in the evening; after a few months the child will need nothing after usual bed-time until first meal in the morning, at about seven o'clock.

Barley flour seems to hold a position somewhat neutral as regards action on the intestinal tract. Should the bowels become constipated, or should you desire to change the food, a preparation of oatmeal known as "Bethlehem Oat Meal" can be used in the same way as the prepared barley. The wheat foods may be used in the same way; they are apt to constipate, however.

At times it may be well in preparing the food to mix these various articles, as a child needs a variety in taste as well as a grown person. If a child is younger than six months, of course it will be necessary to add a larger percentage of water and a smaller amount of cereal. I am satisfied, from investigations made last year (Some Observations on the Salivary Digestion of Starch by Infants Trans., College of Physicians, Third Series, Vol. VI.), that infants are able in some degree to digest a small quantity of starchy food, and that the starch contained in the above described preparation is not merely useful in preventing the formation of a heavy curd, but that it also is useful in nutrition. I have found the preparation that I have suggested to you applicable in the majority of cases, and especially in those children who are apt to suffer from indigestion during the summer season, with its unfortunate results. It is also useful when gradual weaning is thought advisable. In such cases the child is nursed from the mother in the early morning; after its bath, say ten A. M., it is to take its bottle or cup of food; nurse again at one or two, a cup of food at six, and again nurse at ten in the evening. As far as condensed milk is concerned, I am satisfied that it is an extremely valuable preparation, but not one upon which it should be attempted to raise a child. It is useful as a bridge to tide over difficulties, and as such can be relied upon, but a child that is brought up on condensed milk alone from an early period is, in my experience, liable to succumb more rapidly to the influence of disorders than other children, either nursed or fed with cow's milk, are able to withstand. Prejudice has frequently interfered with the use of

condensed milk, I regret to say. It is certainly nutritious and easy of digestion, and frequently will agree, when properly administered, with a child whose stomach is intolerant of other food. Of the purity of the brand usually used there is no question, and I would advise you to study this matter carefully yourselves, and not throw away a valuable food because many statements are made against it.

It is easy enough to find some form of diet that will nourish a healthy child. The most difficult problem to solve is the food to be administered to an infant who is delicate from birth and cannot nurse, one who is suffering from some form of intestinal catarrh, or one whose digestion has been totally upset by a severe attack of summer complaint.

These are in fact the most difficult cases that we have to deal with; in treating such cases we should bear in mind that a child's food should not be made so extremely weak, in order to avoid all irritating qualities, as to make it fail in its object of supplying nutrition, but we must endeavor to make the child's digestive-functions meet us half way, and thereby establish an equilibrium; we can either do this by the administration of those drugs which are known to facilitate digestion, such as the various forms of pepsine or pancreatine as the case demands, or we should endeavor by tonic influences to bring about a healthy establishment of the functions of those organs whose secretions are needed for the proper digestion of food.

If a child is so weak and exhausted that it will not digest the mildest form of prepared food, and it is impossible to obtain breast milk, for this should be our first thought, it is useless to weaken the condensed milk, or whatever we use, to such a degree as to make it absolutely valueless as a nutrient; the proper thing to do, under such circumstances, is, in my opinion, to give some form of food which requires but little action of the digestive juices, or to prepare the food so that it is partially digested beforehand.

I have used for some time with great advantage, egg albumen dissolved in water, as a food for sick children when the stomach was intolerant of ordinary milk food, also gum arabic water will nourish for a surprisingly long time, and allay irritability.

The barley food, as recommended above, would be valueless in a case of this kind, and pure cow's milk diluted to resemble as closely as possible the mother's milk, would be regurgitated; in such cases, and they are very frequent in the summer months, especially if you are called much in consultation practice, the preparation of milk which has undergone partial digestion by the pancreatic ferment, in an alkaline condition, I have found most useful. The preparation is one which must be made with care and according to the following directions: Into a clean quart bottle put a powder of five grains of Extractum Pancreatis and fifteen grains of bi-carbonate of soda, and a gill of water; shake; then add a pint of fresh milk. Place the bottle in a pitcher of hot water, or set the bottle

aside in a warm place for an hour or an hour and a half, to keep the milk warm; by this time the milk will become peptonised. When the contents of the bottle acquire a greyish yellow color and a slightly bitter taste, then the milk is thoroughly peptonised; that is to say, that the casein of the milk has been digested into peptone. Great heat or cold will destroy this digestive action, so to prevent all further action, when you think that the digestion has progressed far enough, at once place the bottle of peptonised milk on ice, or into a vessel of boiling water long enough to scald its contents; it may then be kept like ordinary milk.

I have found from experience that it will be objectionable to the child if the bitter taste is at all well marked; the mother, who should receive your instructions, should be warned to frequently taste the milk during its digestion, and as soon as the bitter taste is the *least* apparent, the bottle should be placed on the ice for cooling and use, as in these instances it is sufficient to partially peptonise the milk.

I mention these facts particularly, as, strange to say, I have always failed with it in hospital practice, whereas in private practice I have had some excellent results, owing, I think, to extra care in its preparation.

Whey is another admirable alternative in these cases; it can be made in the usual way by rennet, and afterwards sweetened slightly and given to the child cold or warm as it prefers, in the same manner as ordinary bottle feeding; it may be made with wine and given when there is great weakness, being both nourishment and stimulant. Mothers do not often know how to make wine whey; the proper method is to put the milk to boil and when boiling put a wineglassful of sherry, say to the pint, into it, if the curd does not separate add more wine until it does, and as soon as you notice separation of the curd taking place add no more wine, but let the mixture boil for a time, until the whey and curd have been thoroughly separated, consuming about five minutes. This should be then thoroughly strained. It has been recommended to use lime water in the feeding of infants and young children. I am opposed to its indiscriminate use. I have seen children who could not tolerate even the ordinary weak preparation of the pharmacopeia: undoubtedly at times it may arrest vomiting, as we all know, both in children and adult practice, but I much prefer when it is necessary to use an alkali, and if you use cow's milk raw for a young babe, it is always advisable to see that it is made alkaline, to do it with a small quantity of bi-carbonate of soda.

The food which I have recommended to you above for the weaning of children I am sure that you will find it to work satisfactorily, especially in large cities, where the milk supply is so apt not to be reliable, and on that account so difficult to keep sweet without boiling. I have one word of caution to give you in regard to the use of nursing bottles. They are certainly useful as labor-

saving machines in early infancy, and when thoroughly cleaned and carefully watched are no doubt indispensable, but I have long since come to the conclusion that if you can persuade the mother and nurse to take the time and have the patience to feed a child that is old enough to manage by the cup or spoon, the word *colic* will seldom meet you in your practice. I am convinced that in institutions for foundlings, if it could be possible to discard the bottle, the percentage of deaths would be very much diminished.—*Archives of Pediatrics.*

DANDRUFF: WHAT IT IS, AND HOW TO CURE IT.

By GEORGE T. JACKSON, M.D.

The term dandruff, or dandriff, has often been very loosely used to designate at least four distinct diseases of the scalp, namely; pityriasis simplex, seborrhœa sicca, eczema erythematosum or squamosum and psoriasis, and it is probable that a fifth disease has been included under it, namely, a diffuse trichophytosis capitis. Properly speaking, its use should be limited to that scaly condition of the head which is due to seborrhœa sicca or pityriasis simplex.

Whether these latter two diseases are identical or not is still an unsettled question. By the majority of the German systematic writers they are regarded as one and the same disease, but they present enough points of difference to entitle them to separate consideration. I have here placed them together for convenience, as they give rise to a somewhat similar condition of the scalp, and are amenable to the same treatment. To draw the line sharply between the two is sometimes exceedingly difficult.

Seborrhœa sicca is a functional disease of the sebaceous glands in which an abnormal amount of sebaceous matter of abnormal consistence is secreted by them. This dries upon the scalp, and either appears in the form of thin, fatty plates about the mouths of the hair-follicles, or adheres to the hairs in flakes, or, if of more pronounced nature, heaps up into thick, fatty masses or cakes which cling with a good deal of tenacity to the scalp. This latter form is seen very frequently in children during the early months of infancy. If portions of these crusts or cakes are rubbed between the thumb and finger they will impart an unctuous feeling. The scalp in this disease is usually pale or leaden-hued, and when the crusts are removed shows no tendency to moisture, or else exhibits a fatty, glistening surface upon which the crust is soon renewed. In some cases more activity is shown, and the scalp is hyperæmic. The affection runs a chronic course, is generally quite uniformly distributed over the whole head, but in some cases it is confined for the most part to the edge of the hair over the forehead and to the vertex of the head. Some pruritus at times is present, and sometimes, in consequence of scratching, there

will be excoriations. When we have the head covered with thick, fatty crusts which give an unctuous feeling when rubbed between the thumb and finger, and upon being removed leave the scalp pale there will not be any difficulty about the diagnosis. But in those cases in which only dry scales are present and the scalp is slightly hyperæmic, our decision as to the disease cannot be so readily given.

Pityriasis simplex, or *capillitii*, is essentially an interference with the cornification of the upper cell-layers of the skin, on account of which, instead of the normally compact stratum corneum we have a constant scaling off of the imperfectly formed epithelial scales. The whole scalp may be quite uniformly affected, or the disease may be limited to the vertex, or it may occur in circumscribed patches. The scales are thin, easily detached from the scalp, sometimes so easily as to be readily blown off, and they do not pile up into crusts. When rubbed between the thumb and finger these scales do not impart the same unctuous feeling as do those of *seborrhœa sicca*, though there is usually a certain amount of sebaceous matter present, as in *seborrhœa sicca* there is always an admixture of epithelial scales. More or less hyperæmia is usually present, though in some cases the scalp is of normal color. There is never any moisture of the scalp. Pruritus often annoys the patient, especially when he is overheated or is using his brain actively, and this, inviting scratching, excoriations are often met with.

These two diseases, differing mainly in their essential lesion and constituting dandruff, cause annoyance by the constant falling of the scales upon the shoulders of the patient, ruining the clothing, or giving it the appearance of being powdered, and by the pruritus which attends them. It is for these reasons, in most cases, that the patients apply to us for relief. But dandruff is in many cases the forerunner of baldness, and the fact that a long-continued *seborrhœa sicca*, or *pityriasis*, is the most frequent cause of premature alopecia should stimulate us to our best efforts to cure the disease.

Causes.—Dandruff frequently occurs in strumous individuals who are anæmic and have a sluggish circulation, marked by cold hands and feet. Adolescence is its peculiar time of appearance, and chlorotic young girls are apt to be annoyed by it. It is attendant upon chronic debilitating diseases, as rheumatism, syphilis, phthisis, and the like, and comes on after profound disturbances of the constitution, such as fevers and parturition. Dyspepsia and constipation are very common exciting causes or aggravants of the disease. Improper care of the scalp, the use of the fine-toothed comb, and of pomades, hair "tonics," and hair-dyes will give rise to the disorder. In some cases there is apparently no cause for the disease, but careful inquiry, even in these cases, will usually bring out some latent cause, such as worry, overwork, mental or nervous strain, and the like. Malassez, Thin, and some

others claim to have found a parasite as the trouble, and recent experiments by Lassar and Bishop would seem to prove that the disease, at least *pityriasis simplex*, is contagious. These investigators (Lassar and Bishop), took the hair and scales from the head of a healthy German medical student, made a pomade by chopping them up and mixing them with vaseline, and rubbed it into the back of a guinea-pig and of a rabbit. In the course of three weeks these animals presented an appearance similar to that of the student. The experiment was twice repeated, using the hair and scales from the first and second pair of animals respectively, and with like result.

Diagnosis.—Before we can intelligently treat a case of scurfiness of the scalp we must arrive at a coærect diagnosis, and must differentiate between dandruff on the one hand and eczema, psoriasis, and diffuse trichophytosis capitis on the other.

Eczema is distinguished by the scales not being so abundant or so greasy as in dandruff: by their being more parchment-like, as if formed rather of dried serum than inspissated fat; by the disease not being so diffuse but, more limited to certain patches, or to one side of the head, and implicating contiguous non-hairy parts; by the greater amount of hyperæmia; by the moisture which is either present or readily induced by scratching; by its being far more pruriginous, and by its history. If thick crusts are present they will usually be of a greenish-yellow color, and when removed will expose a reddened oozing surface.

Psoriasis rarely occurs upon the scalp without being found on other parts of the body: It occurs in the form of circumscribed round, or oval reddish infiltrated patches, which, if of large, size are seen to be composed of a number of smaller round patches which have joined together at their edges. These patches are covered with a thick mass of grayish or white glistening scales, which are not greasy, and, on being removed, expose a number of minute bleeding points or red dots, and do not reform as quickly as those of *seborrhœa*. The disease tends to form a fringe under the hair on the forehead, and sometimes to push its white, glistening, scaly surface down upon the forehead, and often presents a patch just in front of the ear.

Trichophytosis capitis (*tinea tonsurans*), when occurring as a "ringworm," should offer no difficulty in diagnosis, its circular shape and the presence of broken and gnawed-off hairs being pathognomonic. The diffuse form is rare, and is to be diagnosed by its history of gradual spread from numerous reddish points or papules, by its scales not being greasy, by the hair being broken off and fragile, and by the microscopic examination of the hair and scales, which will reveal the trichophyton fungus in abundance.

Besides these three diseases lupus erythematosus may sometimes call for differentiation. It is rarely met with upon the scalp, and then occurs in the form of a sharply defined patch with an infiltrated reddened base covered by a thin adherent scale,

which, being raised, shows on its under side a number of prolongations, the sebum plugs withdrawn from the follicles. The disease causes loss of hair and well-marked atrophic changes in the scalp.

Treatment.—A good deal in the way of preventive treatment of dandruff can be accomplished by the proper care of the scalp and of the general health. More care than is usual should be bestowed upon the operations of brushing and combing the hair, washing the scalp, and upon the selection of the brush and comb. The brush should be composed of bristles well set into the back. The bristles should be placed in little clumps at regular distances and rather far apart, and those in each clump should be of unequal length and arranged so that the longest ones are in the centre of the group. It is well to have two brushes, one stiff enough to warm the scalp when used with vigor, and one quite soft. The comb should be made with large teeth set wide apart. When held up to the light the teeth should show no roughness or inequality of surface. The fine-toothed comb should be banished from the toilet-table, as it is an active agent in producing inflammatory conditions of the scalp, as many a case of eczema capitis in children will testify. In the morning the hair should be thoroughly opened up in all directions with the comb, and it and the scalp brushed vigorously with the stiff brush. Then the stiff brush should be laid away for the day, and the soft one used in parting the hair, in polishing it, and in subsequent brushings during the day.

Do not wash the head too much. I believe that the so commonly practised daily sousing of the head in water is hurtful to the hair and scalp, especially if they are not carefully and thoroughly dried afterward, and a little oil or vaseline rubbed into the scalp. It is not the daily sousing which is objectionable, but the insufficient after-care. Water renders the hair dry, and the daily sousing only washes the head superficially. A good shampoo every week or ten days for those persons exposed to a good deal of dust, and every two or three weeks for other people, is sufficient for cleanliness. For the shampoo, soap and water, borax and water, or one composed of the yolk of an egg beaten up in lime-water, are still simple and good, but it must not be forgotten to wash out these materials with plenty of clean water and to thoroughly dry the hair and scalp.

Patent hair "tonics," pomades, washes, and dyes are to be avoided. Those containing grease—the pomades—are, to use an Anglicism, "nasty," give the hair an unnatural lustre, smear the hat-band and whatever the hair touches, and, becoming rancid, act as local irritants. None of these dressings are needed by the healthy scalp, and the proper care of the scalp as above indicated will preserve the hair in better condition than they will.

The nearer the body can be kept to the standard of perfect health by means of bathing, exercise,

and good diet, the less likely is dandruff to develop. When, therefore, the disease has appeared, and we are applied to for relief, one of our first inquiries should be concerning the general health, and our first efforts addressed to remedying anything found to be wrong. For, important as our local measures are in relieving the local disorder, in most cases we must depend upon internal treatment to render the cure permanent. The internal treatment must be along the lines marked out in works upon general medicine—tonics, as cod-liver oil and iron, for the debilitated; the acids and bitters for the neurotic and dyspeptic; mercurials, podophyllin, and the like for the bilious, etc. Duhring recommends sulphur and the sulphide of calcium as of especial efficacy, and arsenic sometimes acts well. We should insist upon our patient obeying the laws of general hygiene, and instruct him in the above or similar rules as to the proper care of the scalp.

Various substances, all of a more or less irritating nature, have been recommended for the local treatment of dandruff. Such are tincture of cantharides, ʒ j.—ʒ j.; tincture of capsicum, ʒ j. ʒ j.; chloral, ʒ j.—ʒ j.; bichloride of mercury gr. ij to iij.—ʒ; the oleate and other mercurials in proportionate strength; sulphur, ʒ j.—ʒ j.; carbolic acid, gr. x. to xx.—ʒ j.; quinia, strychnia, etc. These have been given either in solution in alcohol, water, or the oils of olive, castor, rosemary, sage, etc.; or as ointments. A good menstruum for their exhibition is composed of glycerine, ʒ j.—ij., to dilute alcohol, ʒ j. Vaseline forms the best medium for their exhibition as ointments. Excepting where the hair is decidedly thin, so stiff an ointment as the ungt. zinci oxid. should not be used, and lard itself is apt to become rancid,

Of all the above remedies, I have been led by experience to place my main reliance upon sulphur and the mercurials, and would advise the following plan of local treatment. If the case presents itself with a decided accumulation of scales, or if crusts are present, direct the patient to saturate his head with oil, preferably sweet almond oil, before going to bed, and to place over his head a flannel cloth soaked in the oil, and outside of all an oiled silk cap. The next morning he should shampoo his head thoroughly with soap and water, using by preference the tincture of green soap, and wash out the soap with plenty of water. The scalp is then to be dried by vigorous rubbing with a coarse towel, and the hair by pulling it through a soft towel. If the crusts by this method are not completely removed, the oil should be kept on during the day, the head again soaked at night and washed with the soap and water in the morning. If the scalp should appear very hyperæmic after the crusts are removed, anoint the head with vaseline or some simple ointment, as rose ointment, until the hyperæmia is lessened. When the crusts are removed and the hyperæmia overcome, have an ointment composed of one drachm of sulphur loti to one ounce of vaseline applied every morning to

the scalp. If the scales form rapidly apply the oil every night and the sulphur ointment every morning, and wash the head every second or third day. As soon as scaling is lessened stop the use of the oil, but continue the ointment, at first using it every second morning, then gradually reducing its application to once a week. Throughout this plan of treatment the head should be shampooed about once a week with the tincture of green soap, borax and water, or the yolks of three eggs beaten up in one pint of limewater, to which a half ounce of alcohol is added. Another excellent ointment for these cases, for the formula of which I am indebted to Prof. Bronson, of the New York Polyclinic, is composed as follows:

R. Hydrarg. ammon..... gr. xx.
Hydrarg. chlor. mitis..... gr. xi.
Petrolati..... ℥j. M.
This applied once or twice a day has yielded

most admirable results in a number of cases of simple dandruff. Its consistence being that of a Mayonnaise dressing renders it an elegant pomade for private practice. Its use should be combined with the occasional shampoo as directed above.

The persistent and systematic use of either of these two plans of treatment, together with a proper oversight over the general health, should cure every case of dandruff. But we should be prepared for occasional relapses, and not give our patients promise of too speedy a cure.—*The Medical Record.*

A CASE OF TRUE CROUP TREATED BY LARGE DOSES OF MERCURY.

By O. SCHULTZ, M.D.,

(Continued from June Number.)

Since few persons have had an opportunity of watching the effects of large and oft repeated doses of mercury, I will here report a case of true croup, in which I followed out Reiter's method fully and to the letter. The case was in my own three-year-old Rudolph; and as I had lost a very promising child but a few months before from the same disease, you can well imagine the misgivings with which I grasped Reiter's straw.

The boy got well. The course of the disease under the mercurial treatment was exactly as Reiter has so graphically portrayed it; no markedly untoward symptoms appeared, still I beg not to be understood as indorsing the treatment; *I merely gave my own child the benefit of a doubt, and I present the case simply as a pharmacological study.*

THE CASE: Rudolph, a remarkably strong child of three and a half years, had been out-doors playing the larger part of March 11th, a day which opened with a morning temperature of 60°, brought several hard rain-showers, and closed with the

thermometer at 45°. The temperature on morning of 12th was 35°. The child had been very healthy; had passed through an attack of laryngeal catarrh (pseudo-croup) about two years ago, and had several slight bronchial catarrhs during the present winter. On March 11th he was entirely well, and had been so for more than a month. During the night of 11th-12th he coughed three to four times—a hoarse, hacking cough. On morning of 12th he was quite hoarse; hoarseness wore off during the day; feverish; cough not frequent but barking; no coryza; no bronchial catarrh. He was given iodine and aconite. By evening breathing had become stridulous; cough not very frequent, but barking; voice clear, except when excited, when it became raw and coarse. Sleep during night was much broken; seasons of moderately easy respiration, alternating with seasons of laborious, stridulous breathing, almost bordering on dyspnaic seizures. During these he tosses about, wakes up, and gasps for breath. On morning of 13th he looks pale; face bloated somewhat; throat swelled. He is not hoarse, but his voice is remarkably weak, flat, without any timbre, and readily creaks; the cough is very hoarse, barking, and more frequent. Respiration is very hurried, composed of crowing inspiration and rough blowing expiration. A severe dyspnaic attack occurred at 8 A.M. No appetite. Patient is feverish; the pulse is very rapid, small, 160-180. The sensorium is greatly dulled; usually a bright, sprightly lad, he lies in complete apathy. The velum palati and the tonsils are somewhat swollen; no membrane within view. No signs of nasal or bronchial catarrh. In larynx there is rattling of dry character. Iodine and aconite (Willehaudt's solution, gtt. ¼ and fl. extr. aconit. rad. gtt. ⅓, every two hours,) have been diligently kept up since yesterday morning.

It is a fact, established by my experience in hundreds of cases of laryngitis, that under the above combination very marked improvement sets in in all the croup symptoms within a very few hours after the inception of this treatment, and that the few cases that do not yield to these agents, but in which the general local symptoms get worse and worse during the first twenty-four hours of its use are doomed to die. The first class contains the many cases of pseudo-croup that annually come into my hands, and which get well under any treatment; the latter represents the few cases of true croup of which I had so far succeeded in saving not one. So valuable do I consider this line of treatment, when the question of diagnosis lies between false croup and true, and so certain and infallible do I regard it, that I trust in it as implicitly as I do in quinine to differentiate a malarial affection and in mercury and potassium iodide to single out a syphilitic trouble. *Each and every one of my cases of croup that did not respond favorably to the above line of treatment terminated fatally, although I employed in them the various methods*

known, except tracheotomy, which I have not yet been permitted to practice.

It may now be readily understood with what mental agony I saw my boy rapidly passing from bad to worse, and how I longed to avert a calamity which experience had shown me to be unavoidable, and which had overtaken his brother a few months before, he dying the most horrible of deaths in my own arms.

In my despair I concluded to try Reiter's method. The treatment was begun at 9 A.M. on 13th. The patient was given calomel: twenty grains at 9 A.M., ten grains at 10, five grains each at 11, 12, 1, 2:30, 4:30, 6:30, 8:30, 10:30, 12:30, 2:30, and 5 A.M. of 14th, being *eighty-five grains* in twenty hours. No other remedial measure was made use of.

During this time his condition was as follows: At twelve M. of 13th he is sleeping quietly, breathing easily; the hard sound in inspiration and expiration is replaced by a soft gurgling or babbling; the cough is loose; large, loose râles are heard in larynx; the surface is warmer than normal, soft but not moist; the pulse is very fast and small. At 2 P.M. profuse vomiting; glairy mucus with yellowish flakes; there is one thin, loose, not fetid, passage. At 2:30 no more dyspnea; stridor entirely absent; voice clearer, stronger; cough not frequent, loose, barking. Vomited again at 2:45; water and flakes looking like membrane, bearing occasional clots of blood; a similar vomit at 4, and a thin, loose stool containing flakes of white mucus. At 6 is bright, playful, breathing noiselessly, eats some, which he has not done since yesterday; cough still hoarse, loose; voice clear, possessing some timbre, not much given to creaking. Went to sleep at eight o'clock sleeping quietly, breathing normally, without any rattling in larynx or any signs of dyspnea; no fever; an abundant, dark passage, coming on rather hurriedly at 11. From this on he slept soundly and well till morning, his sleep broken only by occasional barking cough and by taking his medicine. At 7 A.M. of 14th he had another dark passage; the voice is clear; cough at times hoarse, at times not loose; respiration easy and noiseless some feverishness, and pulse is rapid and small. Hydrargyrum bichlorid, one-sixteenth grain, is ordered every two hours; but the second dose causing vomiting in half an hour, the dose is reduced to one thirty-second of a grain. About noon began to complain of frequent attacks of belly-ache. Cough is only at times hoarse, respiration is easy, voice is clear; no appetite, no fever. By 4 P.M. has had two passages; the pain in the abdomen continues, is paroxysmal. In evening the cough appears drier and is more frequent, and has the characteristics of bronchial cough; small dry râles are heard now for the first time in both lungs. At 10 P.M. hydrargyrum bichlorid., one one-hundredth grain, and ipecac was begun—a dose every two hours. At night patient slept quietly and well, with scarcely any cough.

At 7 A.M. of 15th somewhat hoarse; appetite better; bright and playful; looks pale and has lost con-

siderable flesh; belly-ache is gone; bowels are normal; cough raw, dry, not hoarse, not severe; mercury and ipecac continued.

On 16th the bronchial catarrh was in resolution; soft, mucous râles had taken the place of dry sibilant; cough loose, not hoarse; the boy was bright and playful; appetite had fully returned; bowels moved normally. The medication was kept up till 17th, when there was no further occasion for its continuance.

Remarks: The change from 9 to 12 o'clock of the first day was something wonderful. Several hours before vomiting occurred respiration had become easy and the obstruction in the larynx softened. Patient was lying in a peaceful slumber, the anxious expression of the morning entirely effaced.

As further proof of the melting away of the exudation we find a few hours later the voice partly resuming its timbre. Quite a change from the weak, dead, flat sound of the morning. The vomited matter evidently contained portions of membrane. The act of vomiting was a sudden and powerful effort. There was not much gagging, and after the stomach was relieved quiet was restored. The vomiting was evidently caused by the mercury. There were but six easy feculent passages in the forty-eight hours of the mercurial treatment. There was no straining, but considerable tormina set in on the second day, which at once disappeared when the dose of the mercurial was diminished. The bronchitis following upon the croup was evidently equally benefited with the primary disease. The mental hebetude, feverishness, extremely rapid, soft and small pulse, pale, bloated face, swollen neck, steady increase in the laryngeal symptoms notwithstanding the previous treatment, justify the diagnosis of true croup; and this opinion is confirmed by the flakes of membrane vomited and the course of the disease, corresponding, as it does, in all respects with that described by Dr. Reiter, the originator of this method of treatment.—*Am. Pract.*

A VALUABLE REMEDY FOR HEADACHE.

We desire to call attention to a simple, and at the same time wonderfully efficient, treatment for many kinds of headache. We lay no claim to originality, nor do we know who the originator was, but having used it for a year or more, and in many cases with remarkable results, we feel disposed to give it our endorsement, and desire to make it more generally known. The remedy is nothing more nor less than a solution of the bisulphide of carbon. A wide-mouth glass-stoppered bottle is half filled with cotton or fine sponge, and upon this two or three drachms of the solution are poured. When occasion for its use occurs the mouth of the bottle is to be applied to the temple or as near as possible to the seat of pain, so closely that none of the volatile vapor may escape, and retained there four or five minutes or longer. For a minute or so nothing is felt, then comes a

sense of tingling, which in a few minutes—three or four usually—becomes rather severe, but which subsides almost immediately if the bottle be removed, and any redness of the skin that may occur will also quickly subside. It may be re-applied if necessary, several times in the day, and it generally acts like magic, giving immediate relief.

We believe this was the basis of a once popular nostrum. The class of headaches to which it seems especially adapted is that which may be grouped under the broad term of "nervous." Thus neuralgic, periodic and hysterical headaches, and even many kinds of dyspeptic headaches, are almost invariably relieved by it. True, the relief of a mere symptom is quite another thing from the removal of its cause, yet no one who has seen the distress and even *agony* caused by severe and frequently recurring headaches (and who has not seen it?) but will rejoice to be able to afford relief in so prompt and simple a manner, besides it is sure to secure the hearty gratitude of the patient if he has suffered long. As to the *modus operandi* we have nothing more definite than a theory to offer, and that is that the vapor being absorbed through the skin produces a sedative effect upon the superficial nerves of the part to which it is applied. We know by experiment that its influence is not due to its power as a counter-irritant. We, however, know that it does act, and if we do not clearly see in what way it acts that is no more than can be said of several other remedies which are firmly established in professional favor and confidence.—*Physicians' and Surgeons' Investigator*.

THE BEST TIME FOR ADMINISTERING MEDICINES?

Before or after meals? Such is the question often asked of the Doctor, but the answer is not always ready. The *Midland Medical Miscellany* answers it as follows: Medicines that are irritating should be given after meals, when the stomach is full, viz: the salts of copper, zinc, iron, and arsenic, in large doses. Small doses, intended to act on the stomach terminals of the vagi, must be given when the organ is empty. Chemical reasons also have their influence, thus, oxide and nitrate of silver, intended for local action, should appear in the stomach during its period of inactivity, lest, at other times, chemical reactions destroy the special attributes for which these remedies are prescribed. Iodine and the iodides further illustrate this point. Given on an empty stomach they promptly diffuse into the blood, but if digestion is going on the acids and starch form products of inferior activity, and thus the purpose which they are intended to subserve is defeated. Substances prescribed to have alvine action on the mucous membrane, or for prompt diffusion unaltered, are preferably given before meals. The condition of the stomach veins after

meals is such as to lessen the activity of diffusion of poisons, and hinders their passage through the liver. It follows that active medicaments in doses near the danger-line, are more safely administered after meals.

When shall acids and alkalies be given, before or after meals? First, as to acids. When acids are prescribed with the view to check the excessive formation of the acids of the gastric juice, they may be given before meals—as, by the laws of osmosis, they will determine the glandular flow of the alkaline constituents of the blood. The same reasoning would hold good when the alkaline condition of the blood is in excess; osmosis being favored, the acid would reach the blood more readily. Second, as to alkalies: these may be given just before meals, when the acid-forming materials in the blood diffuse into the stomach glands, and after digestion is completed, when the alkalies diffuse directly into the blood, without interference from the contents of the stomach. An alkali taken during the time when the reaction of the stomach juices should be strongly acid, must necessarily hinder, if not arrest, the digestive process for the time being. The metallic salts—notably corrosive sublimate, alcohol, tannin, and some other agents—impair or destroy the ferment, or digestive power, of pepsin. Wine that is intended to act as food is most beneficial when taken slowly during the course of the meal. The objection as regards the ill-effect of alcohol on pepsin, is not applicable here, except to the stronger spirituous wines in large quantities, for the ordinary medicinal wines do not have sufficient alcoholic strength to injure this ferment. Iron, phosphates, cod liver oil, malt, and similar agents should, as a rule, go with food through the digestive process, and with the products of digestion enter the blood.—*The American Medical Digest*.

A CLINICAL LECTURE ON GASTRO-DUODENAL CATARRH IN YOUNG CHILDREN.

By JOSEPH P. OLIVER, M.D., Instructor in Diseases of Children.

[Delivered at the Harvard Medical School, Boston.]

Physicians in general practice are often called to see and prescribe for little patients who present the following symptoms: They are delicate-looking, and one is told that for some time past they have complained of languor and weariness, particularly after slight exertion. They appear to be bright and fresh enough in the morning, but as the day wears on they are apt to be dull, and disinclined to play. When the hour to be dressed and go to the park arrives, they do not care to go out, but prefer to stay at home. Usually good-natured and amiable with their brothers and sisters or other companions, they now become peevish and fretful, com-

plain of occasional headache, are restless at night, grind their teeth, have bad dreams, wake up suddenly in terror, and at times with pain in the legs. The appetite is capricious; to-day there is none whatever, to-morrow it may be voracious. After eating, they will frequently complain of pain in the region of the stomach and small intestine. The tongue is at times clean, and again it has a moist, milky coat, through which the papillæ show prominently. The tip and edges are usually clean, and not particularly red. The bowels may be constipated, or they may be so for a few days, and then a little loose, or the child may have a slight clay-colored operation for a week or ten days. The breath is at times very offensive. In the autumn or spring there is apt to be more or less follicular pharyngitis. Now, this condition of things persists till the child has what the mother calls a "bilious attack"—that is, headache, nausea, vomiting, and diarrhœa. The child is then in bed for a few days, and after that is a little better for a while, but in the course of a few weeks goes through with the same thing again. Occasionally there is a little cough; short and hacking during the day but loose in the morning. The temperature is never above the normal, unless the so-called "bilious attack" is protracted. Now, the foregoing symptoms go to make up what is called gastro-duodenal catarrh—an affection which, in my experience, is very common, especially in girls between the ages of four and twelve. Sometimes the symptoms are vague and indefinite. The patients do not have the explosive or so-called bilious attacks, and the patients do not seek advice until the condition of emaciation or a slight cough suggests the terrible name of phthisis. The symptoms often come under the head of that unscientific term, "general debility," and I am very sure that in children these symptoms mean nothing more nor less than gastro-duodenal catarrh.

The affection is often met with after some exhausting disease like pneumonia or typhoid fever; it may, however, occur without being preceded with any of these affections. I presume that during the fever the system in general becomes so exhausted that the digestive organs partake of or share in the general weakness. In these cases the appetite is at times voracious, and, if the child is allowed to indulge in it, the penalty for the indiscretion is generally pretty severe; an acute attack is developed with its train of distressing symptoms, such as pain in the head, nausea, vomiting, intestinal pain, and, perhaps, diarrhœa. As is well known, a child is not nourished by the bulk of food he takes into his stomach, but only by the food he can digest. In all children there is a constant tendency to acid fermentation of their food. This is very marked in feeble children; it may be due to their diet. The mucous membrane lining the intestinal tract is naturally active, and on the slightest irritation pours out suddenly and freely an alkaline secretion; if they have over-eaten, or if starchy food has entered too largely into the diet, fermentation is set up,

and an acid is formed which stimulates the mucous membrane to further secretion. Now, this excess of mucus is the *fons et origo mali* under consideration, for it interferes with the digestion and absorption of food. As a result, the child is imperfectly nourished, and, from lack of nourishment, the symptoms of general debility, or, properly, in these cases, gastro-duodenal catarrh are developed.

As I before stated, the affection is more common in girls than in boys. With watchful parents some children seldom have the explosive attacks. The cases are less severe, but the child is half sick all the time.

During second dentition this affection is extremely common, and often mothers believe this process to be the occasion of the child's ill-health. Worms are also supposed to be the cause of the illness, and it is not surprising that mothers think so, for it is not unusual to find in these cases lumbrici or oxyuri. The excess of mucus which is secreted forms a favorable nidus for the development of the worm, and, consequently, the parasite is less a cause than the result of the disease.

The symptoms, then, may be briefly enumerated as follows: I refer to the subacute or chronic gastro-duodenal catarrh, not the acute affection. The so-called "bilious attacks" which occur in these cases are simply the affection rendered acute for a few hours or days, and need not be described in this lecture.

First, the child's appetite is capricious or fails altogether. He is constipated, and, perhaps, the constipation is followed by diarrhœa for a day or two. After this state of things has gone on for a time, he complains of feeling tired on slight exertion, is languid, indisposed to play. At times he is fretful and peevish, restless at night, grinds his teeth, wakes up suddenly with severe pain in his legs or in great terror. The child emaciates, the eyes are sunken and surrounded by dark rings. The skin becomes thin, harsh, and dry. There may be nausea and slight headache, with blurring of the eyes, and, in older children, *muscæ volitan-tes*.

Through all this the tongue may be tolerably clean, or it may have a light milky coat, with the papillæ showing through prominently, the latter fact being generally significant of digestive disturbance in children. The so-called "worm-tongue" may exist—that is, a tongue tolerably clean on the tip and edges, with a coating of shiny mucus in the centre. The tongue is seldom markedly affected. The breath is often very offensive, though foul breath may be due to the disordered stomach, or to buccal or pharyngeal catarrh.

The cough which may be present is due to either slight bronchial catarrh, follicular pharyngitis, or elongated uvula. You frequently find hypertrophied tonsils in these cases, and the decomposition of the thick yellow secretion will account for the foul breath. Earache is not at all uncommon in these cases. I believe that I have

before alluded to the occasional pain in the epigastric region after eating.

Now, having made a careful examination of the little patient, and having come to the conclusion that the symptoms are due to gastro-duodenal catarrh, having recognized the weakness of the digestive system, and having seen the evidence of defective nutrition, our indications for treatment are plain enough. We must increase the nutrition—that is, increase the supply of food, but, at the same time, we must be careful in our selection, as the fact that the digestive system is feeble must ever be before us.

Treatment.—First, the diet is to be arranged; as the tendency to fermentation is so marked in these cases, I eliminate the starchy foods as much as possible. You can not deny a child of from six to twelve years bread and potatoes altogether, but you can arrange an agreeable and varied diet, so that he shall get a minimum quantity of these articles. Many physicians believe that such cases would be benefited if oatmeal and cracked wheat should enter more largely into the diet; it is not so, however, according to my experience. It seems to me that oatmeal and cracked wheat illustrate most admirably the old adage that “what is one man’s meat is another man’s poison.” Particularly in the summer season should the oatmeal be interdicted. In these cases I generally order a cup of weak mutton, chicken, or veal broth, to be given to the child as soon as he wakes in the morning, before he gets out of bed even; a good-sized teacupful is enough; of course, it must be warm.

Then an hour or so later a little toasted bread or stale French bread. The crust of the long French roll is excellent, and children usually like it. With the toast or French bread may be given a cup of milk and a hard boiled egg chopped fine, to which may be added a little butter and salt, or, better still, a little cream, or, in place of the egg, a little broiled fish. Some children will object to the milk, and in such cases you will do well to prescribe Schweitzer’s cocoatine, Cadbury’s cocoa essence, or Fry’s cocoa powder. Children, as a rule, like the cocoa or chocolate flavor, and do not object to the milk when so disguised.

At noon a dinner consisting of beefsteak, chop, a little bird, roast beef or mutton, not too much cooked, with meat gravy; but no made gravy or sauce is to be allowed. At night dry bread and milk. The broth, if not too rich, may be repeated at this meal. Some mothers think this a pretty limited diet, but you should vary it as much as possible, and give four or five small meals a day instead of three larger ones. As the excessive production of mucus in the stomach and intestines is to be overcome gradually and by constant efforts, I endeavor to attain this result in two ways: first, by diminishing the production—that is, by regulating the diet; and, secondly, by cleaning out the excess or over-production by means of cathartics regularly administered every third or fourth day.

As cathartics I use the aqueous tincture of rhu-

barb, liquorice powder (German), pil. rhei. comp., and occasionally the following powder: R. Calomel, ʒ part; pulv. jalap. ʒ parts; pulv. scammony, ʒ parts. M. To be given in syrup.

In mild cases the following recipe has often done good service, obviating the necessity of the regular administration of a cathartic; R. Podophyllin, gr. j; alcohol, ʒ j. M. Five to ten drops on a lump of sugar morning and evening. The indications for this are constipation, clay-colored stools, and loss of appetite. I do not expect to get a cathartic action from the remedy, for if it produces, such an effect it must be used in smaller doses or abandoned altogether. It is to be given for two or three weeks, or even longer. Under its use I have seen the tongue clean, the appetite return and follicular pharyngitis disappear completely.

Under the above circumstances some physicians will order four or six grains of calomel; but as it is very unpopular treatment among many of the laity, I seldom employ it, particularly as other things seem to act as well. One word more in regard to the Podophyllin: If the patient should have two or three dejections a day, the dose must be diminished about one half. The good effect of the medicine is not seen for several days. After cathartics, alkalies are of next importance—the bicarbonate of soda or potassa, given in a bitter infusion, say cascarrilla, chiretta, gentian, or colombo. If the mucous membrane generally is in a lax condition, to the foregoing bitter and alkali you may add a little tincture of myrrh. As it gives a disagreeable taste to the mixture (already disagreeable enough to the young patient), I would omit it from the prescription unless you consider that the patient really requires it.

The bitter is usually intensely disagreeable to children, and sometimes it is a difficult matter to get them to take it regularly; but if the mother understands the importance of the drug she will make the child take it. Tincture of nux vomica or liquor strychniæ are sometimes useful adjuncts to the bitter infusion. They, of course, render it still more bitter. The objection to syrup is obvious. La Bourboule water you will often find useful. This is a natural arsenical water which comes from La Bourboule, Auvergne, France. The arseniates play the most important part in this water, owing to the powerful action which they possess in a small volume and in a proportional large dose, as they are found in the Bourboule water; no other mineral water known contains so large a proportion. Now-a-days it is a favorite remedy with dermatologists; it is indicated in cases of gastro-duodenal catarrh where you find as a complication obstinate post-nasal and pharyngeal catarrh, and in patients who have the so-called herpetic diathesis, which shows itself by the familiar cutaneous lesions of certain forms of psoriasis, eczema, etc. It should be given warm, after meals, in quantities of one to three or four ounces three times a day; and should not be continued beyond

three weeks. Its administration may be resumed after a fortnight.

As the child improves, a little iron may be added to the treatment, but of the milder forms and in very small doses. A little later many children bear cod-liver oil well. Wines, such as dry sherry or good claret, may be given with dinner. Baths are a useful adjunct to the treatment—I mean sponge-baths.—*New York Medical Journal*.

ARSENIC AND DIGITALIS IN PHTHISIS.*

By A. JACOBI, M.D.,

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Many a case of phthisis, or rather many a case of pulmonary affection known to terminate in phthisis under most circumstances, heals spontaneously or remains dormant. At least we have reason to conclude so when of a number of cases with the same physical symptoms one or more never develop into phthisis, while the others run their complete courses. As the proofs of incipient phthisis we consider catarrh of the apices, which is always attended with the presence of broncho-pneumonic deposits, of either recent or old date, so old, indeed, they may be, that the history of their development dates back to infancy or childhood. Many cases of broncho-vesicular respiration over the upper, usually right lobe, diminished respiration, slightly bronchial expiration, moderate amount of dulness on percussion, and retraction of the supra or sub-clavicular region are the results, quite often, of a single attack of well-remembered inflammatory disease. Add to this a flat chest, prominent shoulders, known hereditary disposition, persistent anæmia, and constitutional debility, tendency to catarrh and occasional slight cough, and your diagnosis of incipient phthisis leaves nothing to be desired. But this condition does not necessarily lead to pulmonary disintegration and general consumption, but may remain stationary, and even improve to such an extent that the physical symptoms become more normal, the subjective symptoms easier, and the weight increase.

If that be true, and known to be so by every practitioner, if spontaneous recovery may take place, why, the inference is that—this spontaneous tendency being given—recovery is the more possible and probable under the influence of well-directed medicinal and dietetic treatment.

Caseous deposits, both glandular and pulmonary, are often found in post-mortem examinations where death had occurred from some disease not connected at all with pulmonary disease, in an inert condition; they meant nothing else during all the period of their existence but so much less respiring area. Practically that is phthisis re-

tarded or stopped in its progress. Even repeated attacks of broncho-pneumonia, with deposits leading, generally, to consumption, will finally cease, fever and cough will disappear, the general health will improve, and the lungs be in a sufficient condition for practical purposes.

It is only the last stage, when abscesses form, pus will be expectorated, the blood get deprived of albumen, blood-cells become diminished in number, oxygen not be admitted in sufficient quantity because of the scarcity of blood-cells, assimilation be impaired and weight reduced by perspiration, diarrhoea and sleeplessness—and when finally pus will be absorbed—that the chances of recovery become less. Hectic, like every other pyæmic fever, is apt to lead to death. But even such cases have been known to improve, or recover.

The treatment has to vary according to the stage; the period of gradual preparation, that of inflammatory action, that of pyæmic fever, have their several indications. It has frequently varied in accordance with the theories held concerning the nature of the disease. There were those who took every form of phthisis for a nutritive and dietetic disorder, those who saw in it a species of inflammatory disease in different shapes and degrees, those who looked upon every case and form of phthisis as an infectious disease either of chemical, or, as modern bacteriomania will have it, of parasitic nature. These different forms have their different indications for medical treatment.

On the effects of arsenic Isnard wrote a book in 1867. He administered arsenic mainly in malaria and phthisis. In both he explained its usefulness by its effect on the nervous system. He claimed that suppuration, debility, emaciation, vomiting, diarrhoea, and constipation would improve or disappear by it. The doses of arsenious acid used by him amounted to one centigramme (one-sixth of a grain) up to five centigrammes daily.

If there be any medicine which, besides quinine and mercury, has been called a specific in many diseases, it is arsenic. It is known to act as a poison, and a strong caustic. It prevents putrefaction, though, as a real antiseptic, it ranks even below salicylic acid. It acts very favorably in malaria, chronic skin diseases, maladies of the nervous system, and has considerable and sometimes unexpected effects in the treatment of lymphoma, even lymphosarcoma. In small and frequent doses it improves connective-tissue growth, it thickens the connective tissue of the stomach, and increases periosteal and osteal deposits. In the latter respect it is surpassed only by phosphorus, on the curative effects of which in subacute and chronic bone diseases I read a brief paper before you a number of years ago.* It is also said to improve the sexual desire and power, and the physical courage of animals. Thus there is a variety of effects, the uniform

* Read before the Medical Society of the State of New York, February 7, 1884.

cause of which remains to be found. It can be traced back only, it appears, to the action of the drug on the cell. It is true that the different organs mentioned have cells of different structure, appearance, and function. But in regard to their nutritive processes the different varieties do not differ at all. At all events oxygen acts on all of them in the same manner, albumen is absorbed by them all, and osmosis regulates their circulation equally.

The increase of cell growth in all the tissues mentioned points to the mode in which arsenic must develop its action. It cannot accomplish what it is known to do without local stimulation and irritation, which, when moderate, improves growth, when exaggerated (by large doses or in predisposed persons) leads to granular degeneration.

Arsenious acid, when in contact with the constituents of the living organic cell, is oxidized up to arseniate acid. This is often reduced again to arsenious acid. Based upon these observations, Binz and Schulz† have advanced the theory that the cells are kept in a constant condition of irritation by these changes, which involve an equal variability in the conditions of the atoms of oxygen. Tissues endowed with a rapid metamorphosis must necessarily be affected more than others, and those in which the effect of the drug is mostly developed may be destroyed by degenerative processes, while a moderate effect results in irritation only. To accomplish this, it is immaterial whether arsenious acid acts as such or in some chemical combination. Its action, as long as it is restrained within certain limits, has been utilized by Hans Buchner‡ for practical and theoretical purposes. The former consists in its administration for phthisis, the latter in the attempt to fortify the bacillus theory. In his belief phthisis can be prevented by keeping out the bacillus. This is done by stimulating and gently over-nourishing the cells, and thereby increasing the power of the organism to resist the invasion of the bacillus enemy. His theory is more shaky than his results. He relies on arsenic as his main medicinal resort in phthisis, and finds fault in Isnard only because of his using arsenic for curative only, and not for preventive purposes. In this remark lies the explanation of the effect which I claim myself also.

Consumption is almost always of long duration. The same nutritive disorder, the same inflammatory attacks recur frequently during the different stages. Besides the original dispositions, there are, then, many attacks, every one of which can and must be treated when perceptible, or prevented before they fully develop. If such prevention be thorough, phthisis will remain dormant. That

effect is accomplished by rational dietetics, climatotherapy, and finally by arsenic. I know it has been used formerly in that diseased condition called consumption, but the reporting of new experience does no harm. Besides, where two do the same thing, it is not the same thing after all, and the method of administration is more important than the fact of administering it. Under the permanent use of arsenic the infiltrations diminish, elastic fibres disappear from the expectorations, the strength improves, and the weight increases. Of this result I have convinced myself in a great many cases while they were in the incipient stages.

Trousseau and others recommended arsenic, in chronic pulmonary catarrh and asthma, in the shape of cigars. The indications in many cases are correct, the method of administration is very much less so; for there is no remedy the doses of which are less subject to, and tolerated in such uncertainty, as the smoking of arsenic cigars would imply.

Small doses of arsenious acid do not interfere with the efficiency of saliva, and gastric and pancreatic juice,* nor is the stomach itself affected by it. In some cases there is a slight sensation of pain or hunger, the result of which is increased appetite, and ingestion of food. However, as this larger amount of food is not followed by indigestion, the powers of the stomach must be presumed to be increased. Undoubtedly innervation of that organ is improved. For this reason only, the general nutrition is improved also. This effect is so well known to farmers and veterinary physicians that animals are supplied with arsenic for the purpose of strengthening and fattening. Its use among miners is well known. In many cases of anæmia it is the best alterant and nutrient.

Hans Buchner asserts that the incipient stage is not the only period in which arsenic proves effective. That is true. It has the same, or rather a similar beneficial effect in the later stages. But he claims that complete recovery has been accomplished in the most severe cases, that perspiration and fever will cease, the pulse become less frequent and stronger, and the vital capacity increase even in far-advanced cases. This I believe to be overdrawn. Particularly in regard to the hectic fever I have almost always been disappointed. I believe that even digestion was not at all improved by arsenic in that stage. Thus it has become my rule not to prescribe arsenic at all while the fever is high, but to begin or return to it as soon as the tempreture has a tendency to become normal.† When I acted on that plan I had very often the satisfaction of improving the condition of very doubtful and far-advanced cases.

* Transactions, 1880, p. 310.

† Arch. f. exper. Pathol. u. Pharmacol., xi., xiii., xiv., xv.

‡ Die aetiologische Therapie und Prophylaxis der Lungentuberculose. 1883.

* Erich Harnack: Lehrb. d. Arzneimittellehre, p. 482. 1883.

† In the discussion following the reading of these remarks Dr. Drake gave expression to his favorable experience in regard to the value of arsenic in the fever of phthisical patients.

The doses ought not to be large. Nausea, colic, diarrhoea, œdema of the eyelids are contra-indications to the continuation of its use. One-fifteenth, or one-tenth to one-sixth of a grain of arsenious acid, daily, is a sufficient dose for an adult if it is to be continued for a long time. In order to render it less liable to give rise to disagreeable symptoms a little opium may be administered with it. In most cases of incipient phthisis this combination is pleasant and useful. In such as show intestinal symptoms at an early period, its joint administration is a particularly happy one.

Still it may be remembered that gastric symptoms, attending the use of arsenic first, will be apt to disappear soon.

The preparations I use are either arsenious acid or Fowler's or Pearson's solution. The former it is best to give as a pill, in such combinations as I shall allude to shortly. Fowler's solution, three drops, or Pearson's solution, six drops, three times a day, in a few ounces of water, administered after meals, and gradually increased, will act favorably. In but few cases the former had to be exchanged for the latter, because of the intolerance of the stomach.

In connection with the above remarks I venture to submit a few words in regard to another remedy which I believe to have been beneficial in a great many of my cases. Again I have no new remedy to advise, but desire to state that an old one has, in the course of three decades, aided me much in relieving my patients. If I speak of as a trite a drug as digitalis, I may be permitted to add, that while nothing that I say may appear new, it has seemed to me as if from year to year I learned better how to use it.

In the vertebrate, digitalis increases the energy of the heart-muscle and the volume of its contraction. Thereby it increases arterial pressure and diminishes the frequency of the pulse. In this connection it is of no consequence whether the irritation of the inhibitory nerve is the primary or the secondary element. By increasing the pressure in the arteries, besides favoring the secretion of the kidneys, it improves the pulmonary circulation, empties the veins, and thereby accelerates the circulation of lymph and the tissue fluids. Thus, while having an immediate effect upon heart and lungs, it exerts a powerful influence on the metamorphosis of organic material, assimilation and elimination, that is, nutrition in general.

Thus both the local and general effect of digitalis are invaluable in all, stages of phthisis. While, however, they may relieve in the last, they are a healing element in the first stages. The congestive and nutritive changes constituting the preparatory, and, in part, the advanced stages of consumption, are favorably influenced. I seldom treat a case of phthisis without it. Very little care is required to avoid disagreeable results. Cumulative effects are either the consequences of excessive or too frequent—unnecessarily frequent—doses, or of the selection of improper preparations. Such

as are soluble in water with difficulty only, ought not to be used, for it may happen that, having been inert for some time, a large amount may enter the circulation at once. Particularly is this true of digitalia, which is by no means a soluble alkaloid, but a crystallizable glycoside. I use the infusion, the tincture, the fluid extract, the extract. Their relative values I do not desire to discuss, except in regard to their advisability in phthisis, and the possibility of continuing them for a long time. Patients of that class we see from time to time only; they require advice and prescription for a protracted period; as a rule, their digestive organs are among the first to suffer; indeed many an alleged dyspeptic patient is effected with gastric disturbances first, and has his attention drawn to the lungs by his physician, who discovers the cause of his gastric catarrh in the retarded circulation of heart and lungs. In this case the stomach exhibits the peripheral symptoms of the distant diseased organs in the same manner in which a local disease of the brain or cord shows itself first, in affections of peripheral nerves. Now, whenever the stomach is much affected, neither the tincture nor the infusion is tolerated long. The latter may be given in three daily doses of a half a tablespoonful each, or in two, of three teaspoonfuls each, for some time. But I seldom risk to recommend it for more than five or six days in succession without seeing the patient. The fluid extract has often disappointed me, I cannot tell why, nor do I claim to know why. What I mean to report is merely my experience. My main reliance is on the extract; my almost universal method of giving it is in the form of a pill, in such combinations as will suit the individual case. The stomach does not object to it, taste is not offended by it. I often prescribe one and one-half to one and three-fourths of a grain, corresponding with three and a half times its weight of digitalis, for weeks, without expecting to see the case again. It combines with extr. nuc. vom., with iron, with arsenic, with quinine in small doses, with extr. belladonna or extr. calabar, with coloc. cmp., in fact, with anything. Such combinations are frequently required in the early stages of consumption. The general muscular system requires toning up, the intestinal muscle requires strengthening, the intestinal tract evacuation, the intestinal and abdominal circulation easing. At the same time iron, as I mentioned, may be added, when there is no fever; or caffeine, for its stimulant effect on heart and arteries.

Speaking as a general practitioner before a meeting of almost exclusively general practitioners; I desire to add, in this connection, a single remark on the general usefulness of digitalis in other cases. Every chronic disease, and the results of the wear and tear of what is called civilized life, has a depressing influence on all parts of the organism. The heart is not the last to suffer. Its muscular strength is tasked every second, it is the very organ which cannot and must not rest. Stagnation in an outlying province will over exert it, ill nutrition of the

nerves will influence it, general anæmia exhaust it, infection paralyze it, weak circulation or venous obstruction interfere with its structure and strength. Now what alcohol and ether are to the nerve, strychnia to the muscle, that is digitalis to the heart unless in a condition of myocarditis. The increase of arterial pressure it produces is beneficial not only to outlying provinces, it is so to the circulation and nutrition of the heart-muscle itself. Thus in all cases of general anæmia, in slow convalescence, where iron and nux are called for, digitalis is also required. It strengthens the heart, propels the blood in its own fibres, and shortens the period of recovery. I have learned to look upon digitalis for restoring vigor and strength, as more than a mere symptomatic; I consider it to be one of the best tonics, along with iron, nux, and arsenic.

MELLIN'S FOOD.

Prof. Dr. R. Fresenius, Wiesbaden, Germany has made an analysis of Mellin's Food for Infants and Invalids, of which the following is a summary:—

Total carbohydrates	72.56
albuminoids.....	9.75
salts.....	4.37
moisture.....	13.32
	100.00

Starch and cane sugar, none; reaction, alkaline.

A copy of the detailed analysis and remarks of this first chemist in the world may be had by application to Messrs Doliber, Goodale & Co., 41 and 42 Central Wharf, Boston, Mass.

NEEDLESS, USELESS COUGHING.

There is in the world, says Charles J. Hare, in *Brit. Med. Journal*, a great deal of what I am accustomed to call "needless, useless coughing."

Where secretion takes place in the bronchial tubes, it must sooner or later be brought up; coughing must take place, or the patient will choke. But, both in organic diseases and in slight inflammatory or irritative affections of the air passages, there is often an immense amount of useless coughing—unless, that is, as regards bringing up any laryngeal or bronchial secretion, and far worse than useless, because it wears out the patient, prevents sleep, and, moreover, increases the condition which gives rise to it, inasmuch as it lets the affected parts have no rest or peace. Now the effects of opium are both local and general; and in mucilage of acacia, or tragacanth, or in glycerine, or with a thick solution of confection of rose, or honey, you give frequently from the one-fortieth to the one-twentieth of a grain of morphia, you not only give a marvelous amount of peace and comfort to the patient, but, where it is remediable, you

tend also to cure the disease. A favorite formula of mine, varied according to circumstances, is:

℞ Acetate of morphine.....	1	½	grs.
Nitric acid, dilute	1	½	grs.
Oxymel of squill.....	6		grs.
Mucilage of acacia.....	2	½	ozs.
Glycerine	2		drs.
Syrup of red poppy	2		ozs.

Cinnamon or rose water sufficient to make the whole equal 6 ounces.

M. To take one or two teaspoonfuls five, six or seven times in twenty-four hours.

The coughing in pertussis may be similarly relieved.—*The Cincinnati Lancet and Clinic*.

HOW TO CLEANSE AND BLEACH SPONGES FOR SURGICAL OR GYNÆCOLOGICAL USES.

Dr. L. Curtis in the *U. S. Med. Investigator* says: Having made the sponges free from sand and calcareous matter by gently beating them, wash them in water, squeeze them as dry as possible and then place a few at a time in a solution of *Permanganate of Potassa*, made by dissolving one hundred and eighty grains of the salt in five pints of water, and *pouring a portion* of the solution into a clean glazed vessel. Let them remain a few moments until they have acquired a dark mahogany-brown color, when they are to be squeezed by hand to free them from the solution. They are then dropped a few at a time into a bleaching solution made as follows: Hypo-sulphite of soda, ten ounces; water, sixty-eight fluid ounces; when dissolved, and five fluid ounces of muriatic acid.

This solution should be made the day before being wanted for use in order that the sulphur precipitated by the acid may be easily separated. This solution is poured off from the sulphur, and, if necessary, is strained through muslin into a glazed vessel. The sponges are allowed to remain in this solution a few moments, squeezing them with the hand occasionally in order that every part may be reached by the fluid, then squeeze out and wash through several waters to rid them of the sulphurous odors. They may be completely deodorized by washing them in a weak alkaline solution of *Bicarbonate of soda*, about one hundred grains to the pint, and then washing through several waters to free from any traces of the alkali. Much caution must be used in this last operation, lest the bleaching effect of the previous solutions be partly neutralized. When the sponges are *nearly dry*, immerse them into a solution of glycerine water, one-half ounce to the pint, squeeze them as dry as possible, and dry them in the shade—be sure and not let direct sunlight on them until dry. They will be as soft and white as wool.

DIARRHŒA IN CHILDREN.

Dr. Lees, in his paper in the *Med. Times and Gaz.*, May 3, 1884, calls attention to a class of cases, not very uncommon in children, in which the main symptom is an irresistible impulse to defæcation, experienced almost immediately after food has been taken. Colic pain may, or may not, be present, but there is no sensation of weight at epigastrium, heartburn, flatulence, or other symptom of dyspepsia. The motions are usually semi-solid, not often watery or slimy, and frequently contain undigested food. Usually a motion is passed almost immediately after every meal, and perhaps once or twice more during the twenty-four hours. Dr. Lees points out that these symptoms are evidently due to a hyper-peristalsis of the alimentary canal, without increase of secretion, the two factors of ordinary diarrhœa being here disassociated. Such increase of peristalsis, is probably due to irritation of the vagus nerve, which supplies the exciter fibres to the intestine, the splanchnics conveying the inhibitory fibres. The proximity of the nucleus of the vagus to that of the trigeminus, in the medulla, indicated the possibility that this increased excitability of the intestine may in part be due to dental irritation, the cases in question usually occurring during the period of the second dentition. Believing in the purely neurotic origin of the symptoms, Dr. Lees has treated several cases with bromide of potassium simply, without opium or any astringent, and had obtained immediate success, even in cases which had persisted for several months. The diarrhœa was usually arrested in a few days, and occasionally the children became so costive that the medicine had to be discontinued. Four cases were narrated, also a similar case occurring in an adult, in all of which speedy relief was given by bromide. In conclusion he remarks that individuals who suffer from these symptoms are often of a markedly neurotic temperament, timid, and easily frightened.

THE MILK-TREATMENT OF DISEASE.

In a rather extended experience with this treatment Dr. Tyson [*Journal American Medical Association*] has met with encouraging results in the following conditions:

1. In diabetes mellitus he has found no measures so efficacious as the dietetic and, of the dietetic, none so prompt as the exclusive skimmed milk regimen. The milk gives the crippled organs, especially the liver, more complete rest than any other food, thus allowing "the reparative tendency of nature to assert itself."

2. In certain forms of calculous disease. He has yet to see a case of uric acid gravel in which, sooner or later, the persistent use of milk did not cause entire disappearance of the deposit. He found signal benefit from it in a case of nephritic

colic. It may also obviate the oxalate of lime tendency, but will not dissolve the deposit. In phosphatic calculus it is rather contra-indicated because it has a tendency to alkalinize the urine.

3. In Bright's Disease it has accomplished good. It is especially indicated in the contracted kidney of interstitial nephritis, causing frequently a rapid disappearance of nausea, vertigo, headache and other symptoms. In parenchymatous nephritis and in amyloid kidney it has proved less useful, but often does good by "producing diuresis and relieving dropsies."

4. In gastro-intestinal disease, ordinary dyspepsia is sometimes signally relieved. In gastric ulcer, the use of no other food than peptonized milk should be permitted. We may expect "the most satisfactory results" from its use in bowel affections, especially of large intestine.

5. In obesity it has given most satisfactory results, reducing its weight consistently with health. It seems to do this by making the system call upon its stored-up subcutaneous fat for oxidizable material, the milk furnishing very little of this itself.

To sum up: milk is highly useful in disease, especially those mentioned, because it is non-irritating, leaves little waste, and makes the smallest demand upon the digestive function. Skimmed milk is preferable in diabetes and some other affections, because it is more assimilable than milk with cream. Some objections to its use have been urged, as that it sometimes causes indigestion, flatulence and constipation. The addition of lime water will do away with the first two objections, a mild laxative will obviate the latter.

The milk is to be given as follows: Four ounces every two hours from 7 a. m., to 9 p. m., at first. This, of course, will be insufficient. It is to be increased afterwards to six, eight or more ounces every two hours, until the quantity is from five to ten pints in two to four hours, according to the needs of the patient. The quantity may be increased by giving some at night. After a varying time other food may be tentatively given until it is found that it does not cause symptoms to reappear.

STOMACH-WASHING FOR DYSPEPSIA.

The practice of treating patients suffering from chronic dyspepsia, who resist the influence of regulated diet and of drugs, by washing out the stomach, which originated some years ago in Vienna, forms the subject of a paper by Dr. W. B. Platt, in the *Maryland Medical Reporter*. We are there informed that cases most intractable to all other treatments have quickly yielded to this means. The principle underlying the treatment is to keep the stomach clean, and, so far as is possible, at rest, for a time sufficient to allow of its complete recovery. The operation should be performed in the morning, before breakfast. A soft, red rubber tube is passed gently down into

the stomach quite, to the pylorus; with this is connected about a yard of common flexible tubing and a glass funnel, which is held on a level with the patient's breast, and tepid water is poured slowly into the funnel, until a sensation of fullness is experienced; the funnel is then depressed to the level of the waist, and the fluid allowed to syphon out. The process is repeated until the water returns quite clear. The washing should be repeated every day for a week or ten days, and during that time the diet should be restricted to milk or a little meat; then the washing may be done every second or third day, and finally abandoned at the end of three weeks. The advantages claimed for this method are that it is efficacious, simple, and safe, and it certainly is worth a trial in intractable case of chronic dyspepsia,—a disease which makes its victims a burden to themselves and their friends, and hitherto has brought but little credit to physicians.

TREATMENT OF HYDROCELE BY INJECTION OF CARBOLIC ACID.

Extracted from a Clinical Lecture delivered by PROF. S. W. MOSS.

This plan originated with a physician of Tennessee, whose name I do not recall, some ten years ago, and it has been popularized by Dr. Levis, of this city. The method of applying carbolic acid is as follows: the fluid having been drawn off with a trocar, one drachm of the acid, rendered fluid by the addition of a minute quantity of water or glycerine, is injected into the sac by means of a rubber syringe provided with a nozzle long enough to reach through the canula. The canula and syringe are then removed, and the scrotum manipulated so as to bring the agent in contact with every portion of the serous surface. There is, at first, a little pain, but this is soon followed by numbness or anæsthesia. The patient may walk around for twenty-four hours, but he must then keep to his bed, with the scrotum supported by a proper bandage. This plan is said to be very efficient, and not liable to be followed by relapse.

Dr. Levis, who has had a large experience with it, records an almost uniform, if not entire, success. Other surgeons have not met with equally good results. In a case which I treated in this hospital some time ago, the injection of carbolic acid was followed by large effusion of blood into the sac of the tunica vaginalis, which resulted from the erosion of the serous membrane and the loss of support of the underlying vessels. The blood was evacuated and the patient recovered. I have not done the operation very often, but I have met with this complication on two occasions.

Before introducing the trocar, it should be mentioned that the scrotum is to be smeared with cosmoline, so that if any of the carbolic acid should fall upon the skin it will not produce excoriation."
—*College and Clinical Record*,

BENZOATE OF SODIUM IN THE SUMMER DIARRHŒA OF INFANTS.

The *Bulletin General de Therapeutique* quotes from the *Gazzetta degli Ospitali* a summary of an article, by Dr. R. Guaito that originally appeared in the *Rivista Italiana di Terapia de Igiene*, in which the summer diarrhœa of infants is considered as a zymotic disease produced by a special microbion introduced from without or developed during intestinal digestion, dietetic errors, defective hygiene, and excessive heat being the predisposing causes. On this theory, Kapuscinsky and Zilewicz employed benzoate of sodium for the vomiting and diarrhœa of infants, but in conjunction with subnitrate of bismuth. Guaita has made use of the benzoate alone in fifty-three cases of children between six months and two years of age, in thirty-five of which the affection had lasted from twenty-four to thirty hours, and in the eighteen others from six to fourteen days. In the first category, a cure resulted in every instance within forty-eight hours, in the second, after an average period of twenty-one days. Not a single death occurred. After a purgative (calomel or jalap) the author gives from four to six grammes of the benzoate, in 100 grammes of water, in the course of twenty-four hours, and continues the treatment for two days. On the third day, a gentle purgative is given (magnesia or manna), and the use of the benzoate is resumed. At the end of two days more improvement in the passages is constantly observed, they are no longer fœtid, and the vomiting ceases. During the treatment the diet is strictly regulated, and the child drinks nothing but lemonade and a few teaspoonfuls of wine; milk and broths are absolutely proscribed, but nurselings are given the breast not more than four times in the twenty-four hours. Other drugs may be given to meet special indications.—*N. Y. Medical Journal*.

BROMIDE OF ARSENIC.

Is easily prepared from Fowler's solution by cautiously dropping bromine into the solution shaking, letting the effervescence subside each time before adding more bromine. Continue to add the bromine to just up to the point when the solution begins to color and have the pungent odor. Bromine of arsenic is a valuable remedy in many nervous disorders, as well as being a potent alterative. It is also used successfully in diabetes mellitus and mitral disease of the heart. It does not cure the vulvular disease, but removes all, or nearly so, the distressing symptoms and suffering of the patient and makes life tolerable. We have used a great deal of bromide of arsenic prepared as per above, and have everything to say in its favor.

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THE PROTESTANT INSANE ASYLUM.

For some months public attention has been prominently directed to the working of the Lunacy Regulations in this Province. So much dissatisfaction has been expressed with the existing order of things that an active movement has been started by some of our prominent citizens to establish an asylum for the Protestant insane, somewhere in the vicinity of Montreal. It is unfortunate, however, that the question has been allowed to assume such narrow limits, when the wider and more important subject of the treatment and management of the insane in general in this Province needs such careful and earnest consideration. In this, as in many other respects, the Province of Quebec is half a century behind the times; such institutions as Beauport and Long Point asylums might have passed muster fifty years ago, now they are simply a disgrace to the intelligence of the Province and the capacity of its legislators. Asylums for the insane are no longer regarded by intelligent communities merely as prisons for the restraint of dangerous lunatics, but as special hospitals for the treatment of certain forms of brain-disease which are amenable to early and judicious treatment in a large percentage of cases. Public opinion in Great Britain has revolutionized insane asylums there; the Bedlams of olden times with all their horrors have been swept away; cruelty and violence have been replaced by kindness and gentleness; and to-day, in many of the largest asylums, locks and bolts, straight jackets and padded rooms are unknown. In the United States and Ontario similar

improvements are being rapidly made. In Great Britain, the United States and Ontario, the large asylums are supported by Government, the most accomplished alienists placed in charge, and every facility afforded for the proper treatment and management of patients; while, at the same time, government inspection is thorough, and the management always open to public and professional criticism.

Now how do we manage things in the Province of Quebec? At Long Point the Government farms out its lunatics to a community of nuns, at so much per head per annum! There is no competent resident Medical Superintendent to receive, classify and discharge patients, and to prescribe, direct and supervise their treatment. The Government Visiting Physician admits and discharges patients and looks after the hygienic conditions of the place, but he does not reside in the institution, nor has he any power or authority as regards treatment. A medical staff consisting of a superintendent and three assistants would scarcely do justice to the patients now confined in Long Point Asylum. The institution may be a model of neatness, and the sisters may be kindness itself to those under their care, but that does not justify the system. Under present arrangements Long Point is chiefly used as a place of restraint, and fails utterly in fulfilling its more important function—judicious medical treatment. Beauport is in a somewhat similar condition.

Seeing the utter inadequacy and inefficiency of the present system, several philanthropic Protestants have bestirred themselves to find a remedy, and are now proposing to establish an asylum for the Protestant insane, conducted upon a rational basis and securing for its patients the advantages of modern improved methods. All honor to these kind-hearted men for their good intentions; but are they not on the wrong track? It would not only be a very costly undertaking to secure a proper site and erect suitable buildings, but far more costly to run it efficiently afterwards. Being a strictly sectional institution, it would depend for its support upon the liberality of the Protestant public,—a liberality strained to the utmost by the numerous charitable schemes now in existence. If, after a time, enthusiasm declined and subscriptions fell off, expenditure would require to be cut down, probably by diminishing the staff or by replacing assistants who are expensive but efficient,

by others cheaper but inferior. Such a course would be fatal to success. When, however, an asylum is maintained by Government there is no inducement to economise by providing inferior or insufficient attendance, while strict government inspection affords an additional guarantee that no such deterioration in service will be permitted. The success of an insane asylum depends largely upon two things—first, liberal pecuniary support, and, second, the free untrammelled action of a judicious medical superintendent. No matter how perfect all other arrangements may be, unless a thoroughly competent medical man is at the head of affairs, and unless he be protected from meddling dictation, the efficiency of an asylum will be surely impaired. The thorough equipping and successful running of a Protestant asylum would, we fear, be impossible at the present time. Besides the matter of expense, there are other and stronger objections to the proposed scheme. Why raise sectional distinctions in such an important matter? Even suppose the Protestant minority to be by this scheme comfortably provided for, what is to become of all the others? Are the Catholic majority to be left as they are? Are they not quite as much in need of judicious medical treatment as their Protestant brethren? Are our Protestant philanthropists to be content with rescuing only their own co-religionists from the results of ignorance and mismanagement? Is there any more reason why Protestants and Catholics suffering from brain-diseases should be separated from each other, than Protestants and Catholics suffering from other forms of disease? If difference in creed necessitates separation in the case of the insane, it should, with equal reason, necessitate separation in the medical and surgical wards of our general hospitals. Unfortunately, in the Province of Quebec, the dividing lines of creeds and nationalities are too strongly marked—we do not fuse—we do not co-operate—consequently all are weakened and general progress retarded. Can we not in this matter sink sectionalism and make a determined effort to place ourselves abreast of the times and wipe off the disgrace which at present attaches to us? It has been suggested that Dr. Workman of Toronto and Dr. Bucke of London be consulted respecting the choice of a suitable site for a Protestant asylum. Why not go further? Petition the Government to appoint a commission of the leading alienists of Canada to investigate the working of the Lunacy Regulations in this Pro-

vince and report such amendments and alterations as they deem advisable. Such a commission should at least include the names of Dr. Workman and Dr. Clarke of Toronto, Dr. Henry Howard of Montreal, Dr. Bucke of London, and Dr. Vallée of Quebec.

CANADA MEDICAL ASSOCIATION.

The next annual meeting of this association takes place in Montreal on the 25th of August, and promises to be the largest and most successful gathering of its members since its formation. As the meeting of the British Association will take place immediately afterwards, and as many of the members of the latter are distinguished medical men from England, it is expected that these visitors will also be present and take part in the discussions. It is also the intention of the profession in Montreal to give a dinner to which all medical visitors, both English and Canadian, will be invited. Delegates from sister associations in the States are also expected, so that a brilliant gathering may be expected. In the absence of the general secretary, Dr. Osler, the functions of the office are performed by Dr. James Bell, of this city, who will supply all information and give certificates of membership to any who may wish to take advantage of the reduced travelling rates allowed to its members. A large number of papers are promised, and the lists will no doubt be extended beyond those already known.

WHERE IS IT?

We notice an advertisement in the New York Medical Record, announcing a medical agency said to be in existence in this city and conducted by Dr. W. H. Mercy. As we are in ignorance of the whereabouts of this establishment and of the professional gentleman named, it may be inferred that the usefulness of the agency cannot be very extensive. Correspondents are requested to send particulars, *with stamp enclosed*. Further remark is unnecessary.

PRACTICE FOR SALE.

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