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Original Communications.

OBSTETRICS AND GYNECOLOGY.

By A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. ENG.,
Lecturer on Gynecology in Medical Faculty Bishop's College.

How many women have died from the rupture of an undiagnosed extra uterine foetation, it is impossible to say, but it is certain that the number must be very large. As the general practitioner becomes more expert in diagnosing these cases, and as the gynecologist is always ready to operate, their condition will become less and less desperate. When in Berlin last year I saw two such cases in one week, I think, in the practice of one operator in which the ruptured tubes were ligatured and removed. One of these women was up and about before I left Berlin, and the other, as I learned from Martin at the Congress at Washington, died a few days later, from anæmia. Martin at the time complimented the physicians who had made the diagnosis.

A case of successful operation of one of these cases was mentioned at the last meeting of the medical society here, by Dr. Gardner. The case occurred in the practice of Dr. Brown, who promptly diagnosed the condition and called Dr. Gardner in consultation, who as promptly decided to operate with the gratifying result that the lady is alive and doing well, and with every prospect of continuing so.

In quite a contrast to this is a case reported in the *British Medical Journal*, 3rd March, 1888, in which the attendant says: "He found the patient pallid and pulseless, and refusing to be moved. Sur-

prising the nature of the case," he says, "he decided that nothing could be done." At the autopsy his surmise was confirmed.

Testimony still continues to pour in from every quarter in favor of Apostoli's treatment of fibroids and chronic metritis and endometritis. Even Keith, one of the greatest of English Laparotomists, is so satisfied with the result of a year's work with the method, that he says that he does not intend ever to remove a fibroid with the knife again. Dr. Burton (*British Medical Journal*, 3rd March, '88,) says: "As one of the English surgeons who have profited by Apostoli's teachings, and as I have put the teachings into practice, I may be considered to be in a position to say something on the question. In the first place I have seen no appearances threatening danger to life from the use of electricity, and I have used it sixty times. Secondly, I have used it in seven cases of uterine myoma, and of this number three are already practically cured, the tumors having become so much reduced in size as to have become insignificant. As I only began the treatment in Dec., I claim that three recoveries out of seven cases in the short space of two months quite equals the success obtained by castration operations. I look upon the latter, as regards the treatment of the tumors under discussion, as dead as amputation of the finger for whitlow (which was the recognized treatment in the time of Charles the II)."

I have been using electricity in gynecology since June of last year, several hundred times, and have not yet seen any dangerous symptoms, and the results, which I from time to time publish, are very satisfactory. Of course the ovariomists, especially the ones who annually reap a large

harvest of healthy ovaries, pain in which is so easily cured by high tension faradism, are not pleased with Apostoli, and they have declared war to the knife against his method. As a rule the fight is conducted fairly, but in the last *British Medical Journal*, Mr. Tait has been tempted to use an argument which is quite unworthy of a man of such acknowledged greatness. He was in Paris a year ago, and because the leading gynecologists there did not tell him anything about Apostoli, Mr. Tait argues that the treatment of fibroids by electricity is worthless. If Mr. Tait will turn to page 33 of the English Edition of Apostoli's book on Metritis, he will find this objection anticipated. Apostoli says: "It was in France that curetting the uterus was first practiced; it was a Frenchman, Recamier, who was the first to formulate it scientifically, and it is in our country full of new and original ideas, which timidity, *to say nothing else*, soon so often strangles, that it is actually practised the least."

Thus it has always been and thus it will always be. When Mr. Tait himself goes abroad he is everywhere received with the highest honors; it is principally in his own country that his statements are treated with coolness and suspicion.

If Mr. Tait would say that he had tried Apostoli's treatment in the balance and found it wanting, the argument would have far more weight; but Mr. Tait does not want to learn anything about it, for he will not even give it a trial, as the honest old Scotchman, Keith, has done with the result I have mentioned at the beginning of my article. To add to the weakness of his argument he says: "I have just been called to Paris to a lady with a fibroid who has been given up by all the doctors." We see the same thing here in Montreal every day, patients going to New York to have wax removed from their ears, or to have a laceration of the cervix repaired, which could be quite as well done at their very door. The fact that Mr. Tait was called to Paris to attend a lady, who could be far better treated by a gynecologist at her very door, therefore proves nothing. If Mr. Tait should be convinced of the advantages of Apostoli's treatment, as Mr. Keith has been, there will still remain for his skill thousands of cases which Apostoli's method does not pretend to touch.

I recognize in Mr. Tait the most skilful remover of ovaries the world has ever seen, but this does not render me blind to the advantages of a treatment which leaves the ovaries in.

Dr. George McKeough of Chatham, Ontario, is the author of an important paper appearing in the *Canada Medical and Surgical Journal*, in which he records eleven cases of puerperal albuminuria which may be recapitulated thus: Nine mothers recovered and four children were born alive. One case in which convulsions did not occur was no seen until labor had set in naturally; the mother made a good recovery but the child was still born. In the four cases in which temporizing measures were instituted until labor came on, convulsions came on in three, one mother died and three recovered, the child perished in all four. In the two cases in which labor was excited after convulsions occurred, both children born dead, one mother recovered and one died. In the four cases in which labor was induced after a temporary trial of expectancy, but before convulsions took place, all the mothers made good recoveries and the four children lived.

After reviewing the advice given in the standard text books, which is altogether in favor of letting things alone, he comes to the conclusion that it is better to induce labor without waiting for the appearance of nervous signals, which only come on after the child has been irretrievably damaged and the mother's life has been placed in danger.

In a paper which I read a little over a year ago (14 Jan., 1887, before the Medical Society of Montreal) *Can. Med. Rec.*, Mar., 1887, I laid down dogmatically as a guiding principle of treatment: that, unless for grave reasons to the contrary, we should induce premature labor at any time after the seventh month, at which we find the urine of the pregnant woman loaded with albumen or considerably deficient in urea. By freely accepting this course, I said, all doubt and hesitation in the treatment of these most anxious cases were removed. I was led to adopt this axiom from the following considerations: that even if there were no convulsions, the condition of uræmia from mechanical pressure on the renal veins was a very serious one for both mother and offspring. The child suffers even more than the mother from uræmic intoxication, and may even be killed by it before convulsions come on, while the mother may have her brain more or less seriously injured by the circulation through it, for a long time, of the poisonous fluid, and so end her days in an Insane Asylum. This occurred in a case which I reported in the same paper, and in which I have ever since regretted not having induced premature labor.

I thus compared the relations of albuminuria, uræmia, puerperal convulsions, and puerperal mania :

A moderate degree of renal congestion causes albumen to appear in the urine.

A greater amount of renal congestion causes the albumen in the urine to increase and the normal quantity of urea in the urine to diminish, and at the same time the urea being retained in the blood and bathing the nerve centres causes headache, disordered vision, &c.

A still greater amount of urea in the blood and of albumen in the urine causes poisoning, and at the same time starvation of the nerve centres, and so that irritation is set up and convulsions ensue. And if this condition continues for a considerable time, the nerve cells are seriously altered in nature, so that even when the cause is removed they can with difficulty or not at all recover their normal functional activity.

As there is no longer the slightest doubt as to the mechanical nature of the disease, and as it is so easily, safely, and speedily remedied, I heartily agree with Dr. McKeough when he urges the induction of premature labor in the albuminuria of pregnancy.

Dr. E. S. McKee, in the course of an able article in the Feb. number of the *Cincinnati Med. Jour.*, says: "There is a growing tendency among careful obstetricians to limit vaginal examinations of the woman in labor as much as possible. Yet we must know the position of the child and the state of the labor. To be able to tell this with accuracy, it is needful that we cultivate more thoroughly the external means of the diagnosis of pregnancy. The *tactus eruditus* should be practised industriously. A great opponent to the frequent vaginal examinations is Prof. Crede of Leipsic. This gentleman claims that women in labor and the lying-in-state are diseased only through infection from without. He who does not examine a woman cannot infect her, is a statement of Crede's. The solutions of continuity, which are seldom or never absent in the course of child-birth, are generally made by some artificial assistance to parturition. The most careful digital examinations may result in wounds, and we should dispense with them altogether or restrict them to the fewest number possible. For weeks in succession at the lying-in hospital at Leipsic, the digital examination is omitted in all normal cases, especially if there is much sickness among the patients. This

omission results not in trouble, but most satisfactorily. What we need is more thorough knowledge on this important subject of external diagnosis in pregnancy, a knowledge gained only by experience, then we will use the internal method only when necessary. The surest prophylaxis against infection consists in total abstinence from vaginal examinations.

A good deal of discussion has taken place lately at the various societies as to the danger of anti-septic midwifery, especially where bichloride of mercury is the agent used. And the same question may be raised in employing sublimate solution in gynecological practice. I have had one case of slight mercurial poisoning in a midwifery case, but it was due to the neglect of two precautions which should always be observed: 1st, never to guess the quantity of corrosive sublimate you are putting into the water, and 2nd, to allow the patient to sit on a chamber or otherwise empty her vagina shortly afterwards. But out of an immense number of irritations with sublimate at my office (from 1 in 2000 to 1 in 5000) I have never seen any unpleasant results, and Apostoli's experience has been the same in many thousand cases. But this immunity is due to the simple precaution of pressing down the perineum and emptying the vagina after every irrigation.

Montreal, 21st March, 1888.

Society Proceedings.

MEDICO CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 9th, 1887.

JAS. PERRIGO, M.D., PRESIDENT, IN THE CHAIR.
PATHOLOGICAL SPECIMENS:

Development of Bone from Periosteum.—Dr. BELL presented a section of the shaft of the femur illustrating the reproduction of bone from the periosteum. The specimen was secured from a patient whose thigh had been amputated ten days after receiving a compound comminuted fracture of the lower end of the femur and the head of the tibia, opening the knee-joint. Extensive sloughing had occurred, and at the time of the operation the patient was *sapremic* from the absorption of putrid material from the sloughing tissues. Twenty-five days later it was found to be necessary to remove two and a half inches of the end of the bone owing to sloughing of the flaps. At the primary amputation the periosteum had been stripped from the

bone to the extent of nearly an inch above the point at which it was removed. The bone removed at the secondary operation showed an undoubted development of bone in the periosteum thus detached.

Dr. SHEPHERD said that this case was most interesting in connection with the views recently given by Dr. MacEwen of Glasgow in the October and November numbers of the *Annals of Surgery*. That authority held that periosteum does not initiate the reproduction of bone. In Dr. Bell's case the periosteum had certainly developed bone. He had no doubt of the correctness of Dr. MacEwen's views when he states that the periosteum is not the chief factor in the reproduction of bone, this function being performed by the soft tissues in the bone itself.

Dr. MILLS thought that the Society was much indebted to Dr. Bell for having brought to its notice a specimen that might readily have been overlooked, and which illustrates one of the great laws of reproduction of lost tissue in the adult, in a structure but imperfectly understood as yet. There were other methods of ascertaining the laws of the organism than by laboratory experiments. Disease was one of nature's own experiments; and medical practitioners might supplement the work of the physiological and pathological laboratories by the results of their clinical observations. The views most likely to be correct and lasting were that resultant of the comparison of facts derived from many different fields of observation. It was, moreover, to be remembered that however carefully conducted our laboratory experiments, there was always some disturbance of nature's processes, a principle often forgotten by over-confident investigators.

Purulent Meningitis.—Dr. JOHNSTON reported a case which had been under the care of Dr. Molson, and in which he had performed an autopsy. Patient was a healthy woman, who, whilst in the sixth month of pregnancy, fell and struck her head. She developed soon after brain symptoms, deviation of the eyes, flexion of the neck to one side, and active delirium. She was admitted to the General Hospital, miscarried, and some days after died. At the autopsy, the ovarian veins were distended but patent, the renal veins free. There was severe parenchymatous nephritis with slight interstitial nephritis. Spleen and liver enlarged and soft. Uterus enlarged, cavity dilated, placental site free from inflammation. On the right side

there was purulent meningitis of the inner surface of the pia mater extending to the base in the middle and anterior fossæ of the skull. There was thrombosis of the right lateral sinus and inferior petrosal sinus. No fracture of the base of the skull was found, but there was purulent otitis media of the right side with pus in the mastoid cells. The tympanic cavity was covered with granulations. In this case there was no history of ear trouble. Dr. Johnston had no doubt that the otitis was the cause of the meningitis, and that the fall a short time previously had very little to do with the fatal result of the case.

Rupture of the Heart.—Dr. H. L. REDDY exhibited a heart showing rupture of the left ventricle, and related the following history:—S., aged 68, day watchman by occupation, enjoyed good health for the thirty years preceding his death. Good family and personal history. Was a tall, well-built man, but not obese. On Monday last he left his house at 5 A.M. to go to work. When going down the steps of his house he was seized with a severe pain in chest; he managed to walk about a quarter of a mile, when he was forced to return and go to bed. In my absence Dr. Spendlove kindly saw him for me, and has given me the following note: "Patient complained of severe pain below the lower third of the sternum and extending two inches to the left of the sternum and three or four to the right; pain down both arms to the fingers, and a sensation of tingling in the finger-tips, general malaise, and a feeling as if a heavy weight was on the chest; slight dyspnoea; no cough; lungs normal; pulse slow and full but intermitting once in four beats; heart-sounds slightly indistinct, no murmurs to be heard; vomited once after taking a cup of tea. Dr. S. gave him a small dose of nitro-glycerine, which apparently had the effect of removing the intermittence." I saw the patient about 12.30 P.M.; he complained of severe pain in the epigastrium, and was greatly troubled with eructation; pulse was then normal, and there was no symptom pointing to the heart as the cause of the trouble. I ordered him $\frac{1}{4}$ gr. of morphia, which relieved him greatly, and in four hours another $\frac{1}{4}$ gr., which relieved him entirely. The patient, after the second dose of morphia, seemed quite well, and enjoyed his broth diet. On the afternoon of the 8th, or four days after the first attack, whilst reading the newspaper, he threw back his head and died instantly.

At the autopsy Dr. Johnston found the follow-

ing conditions: Pericardium moderately distended by blood, on opening, blood and clot to amount of 10 oz. found within the sac, the clot forming a complete mould about the heart. A small laceration, half an inch long, situated in anterior wall of left ventricle, one inch to left of septum, surrounded by an area of ecchymosis. On opening ventricles, left nearly empty. Endocardium appears normal, but at spot of rupture, on separating trabeculæ, an area of softening can be seen, and bristle readily passed through the laceration. On transverse incision above laceration, a thrombosed vessel seen surrounded by soft yellow area of necrotic muscle. Subpericardial fat in excess, but heart muscle not fatty. On microscopic examination, no extreme atheroma of coronary or systemic arteries.

Dr. MACDONNELL thought that the thrombosis of the vessels in the wall of the ventricle caused the symptoms which preceded death, but that the rupture itself occurred later.

Mucous Polypi.—Dr. JOHNSTON exhibited some microscopic specimens of mucous polypi from the nose. In eight or nine cases the condition was seen in its early stage to be strictly an adenoma of the nasal mucous glands. In later stages in the epithelial cells cause a disappearance more or less complete of the cell outlines, leaving only areolar tissue infiltrated with mucous fluid. This secondary change probably the reason why these growths are commonly but wrongly called myxomata of the nose and confused with true myxomata, which are tumors of quite a different nature, originating in connective tissue.

Dr. J. J. GARDNER exhibited a horizontal section of an absolutely normal human eye through the *mucula lutea*. Specimen was hardened in Müller's fluid, cut under alcohol imbedded in celluloidin and stained, first with hæmatoxylin and after with eosin. Under the microscope the yellow spot shows well the thinning of all the layers of the retina, with entire absence of the rods, leaving the cones very distinctly seen.

Sub-diaphragmatic Abscess.—Dr. SHEPHERD reported a case which had come under his observation some months ago:

John R., aged 60, carter, was admitted into the Montreal General Hospital, under Dr. Wilkins, on the 14th of April, 1887, complaining of a painful swelling in his right side. More than a year ago he had, after exposure, become thoroughly chilled, and had suffered from very acute pain in

the region of the stomach; he was able to be about again in a day or two, but never felt quite well. The severe pain returned in a couple of weeks in the right hypochondriac region, and was increased by inspiration and movement of the body. At this time he became jaundiced. He remained in bed for a week; after this the pain left him, and he got up and went about, but was unable to do any work. In the middle of April, 1886, he had another severe attack of pain in the right hypochondrium, and this time he remained in bed till July, 1886. He now first noticed a swelling in his right side, immediately below the margin of the costal cartilages. Since July, 1886, although he was never confined to bed, he always suffered from pain, and the swelling in his right side gradually increased. At the beginning of April, 1887, the swelling became more painful and rapidly increased in size; he entered the General Hospital. During the whole period of his illness he never had any rigors nor any marked shortness of breath.

When examined on entrance into hospital, April 14, 1887, the following note was made by Dr. Wilkins: "Well developed man, not emaciated or anæmic; skin cool and moist; no hectic flush; no jaundice; temperature 98.5°, respirations and pulse normal; appetite good, sleep well, and always lies on his right side. In the right hypochondriac region is a large, smooth, globular, fluctuating swelling extending below the costal margin to within half an inch of the umbilicus, and laterally to near the median line; lower border of the swelling is convex and yields to pressure; right side of chest from third rib downwards is expanded, the intercostal spaces widened and bulging, and a dull note on percussion in front and in the axillary from the third rib downwards and from the middle of scapula behind. Breathing sounds are completely absent over this area. In upper part of right lung breathing is feeble and somewhat tubular in character. Left lung and heart normal. Urine normal. It is impossible to make out the liver dulness or to feel the lower border of that organ."

On the 18th of April Dr. Wilkins aspirated the fluctuating swelling in its most convex portion below the ribs, and drew off 25 ounces of creamy sweet-smelling pus. This was examined microscopically for hooklets of echinococci, but without result. Nothing but blood, pus and necrotic tissue was found. After the aspiration, patient

felt much more comfortable, could sleep on his right side, and had no pain or nausea. He was transferred to the surgical wards, and on April 23rd Dr. Shepherd, under ether, made a vertical incision some four inches long in a line with the nipple, and commencing immediately below the costal margin on the right side; the parts were carefully incised, and it was found that the wall of the abscess cavity was adherent to the abdominal parietes, and consisted of a thick mass of inflammatory tissue. When the abscess cavity was opened there was a gush of fluid, and afterwards each inspiration caused the pus to flow more freely; to facilitate the exit of pus a large rubber tube was introduced, which acted as a siphon; in this way some 80 ounces of pus were drawn off. The patient now showed signs of collapse, breathing shallow, pulse extremely feeble, so the evacuation of pus was discontinued. On exploring the abscess cavity with the finger the diaphragm could be felt above, reaching as high as the third rib, but owing to the size of the cavity its lateral and posterior limits could not be made out; its lower limit consisted of a dense mass of inflammatory tissue, through which the liver could not be felt; a probe introduced could be felt posteriorly between the fourth and fifth ribs. The cavity apparently now contained as much pus as had been already evacuated, but owing to the condition of the patient it was decided it would be more prudent to allow it to drain away gradually through a rubber tube; so the wound was sutured, a large drainage-tube left in, and a dressing of sublimated jute and washed gauze applied. Patient, on getting to bed, under the influence of heat and stimulants soon rallied. During the next three days there was a large discharge of pus, and the dressings had to be changed daily. Temperature never rose above 99°, and from the day of his operation patient improved, the abscess cavity rapidly diminishing in size. By the 1st of June the discharge of pus had almost ceased, the abdominal organs had resumed their normal position, and liver dulness was normal, but breath sounds over right lung still feeble. Patient rapidly gained flesh, and when discharged from hospital in August there was a small sinus at the site of the wound which discharged a little serum. For the last three months patient had been at work, and looks, and says he feels, well. The sinus has not yet quite closed. The breath sounds could be heard over the whole right lung,

but at the lower part, both in front and behind, still rather feeble.

Dr. Shepherd said that there was no doubt in his mind about this being a case of abscess which originated between the diaphragm and the liver. The remarkable point about the case was the absence of history of fever or rigors, the slow and comparatively painless growth, and absence of jaundice. These conditions are those which generally indicate echinococcus disease: so at first, until a microscopical examination gave a negative result, the case was diagnosed. The symptoms were not acute enough for liver abscess, but when no hocklets or other evidences of echinococcus were found it was thought probable that it was such a case. He had intended making a counter opening posteriorly to facilitate drainage, but the collapsed condition of the patient, after the evacuation of so large an amount of pus, warned him to complete the operation as soon as possible and to apply restoratives. The result was quite as satisfactory as it would have been had an opening been made posteriorly as intended, a dependent opening when abscesses above the diaphragm being much more important than when they are below it, on account of pressure of the abdominal walls on the contents of the abdomen always tending to obliterate any cavity that may exist. In this case it was remarkable how soon such an enormous cavity disappeared.

Dr. RODDICK thought that it was not improbable that the case originally had been one of empyema; that the pus had ulcerated through the diaphragm, and got between that structure and the liver.

Dr. GEO. ROSS said that the explanation offered by the last speaker was an ingenious one, but not practicable. The anatomical structure of the parts did not give any likelihood to the supposition. The case had probably been originally one of subdiaphragmatic peritonitis which had become localized. We may have a pleurisy following a subdiaphragmatic inflammation without perforation of the diaphragm, but that such a small opening as would naturally result from an ulcerating empyema could completely drain the pleural cavity, and collect below the diaphragm, was not probable. Any empyema would surely come forward more readily than downward.

Dr. MACDONNELL related a case of peri-cæcal abscess, in which pus found its way up behind the peritoneum, between the liver and diaphragm, and

burrowing through the latter, formed an abscess in the lung, and was coughed up by the patient.

Dr. WILKINS said that when he first saw the case the probability of its being an empyema occurred to him, but he, for various reasons, discarded this idea. From the early history, jaundice, etc., he was inclined to regard the case as one of abscess of the liver; but against this was a total absence of a history of fevers, rigors, or sweating. He had now no doubt that the case was one of abscess between the liver and diaphragm. One feature about the case was the apparently slight amount of pain which pressure on the tumor caused.

Dr. SHEPHERD, in reply to Dr. Roddick, said that not one symptom in the early history pointed to an affection of the pleura; the pain was always below the costal cartilages of the right side, and there never was any cough or difficulty of breathing. At the time of the operation there was no pus in the plural cavity. Fluid always finds its way in the direction where there is the least resistance, and this is certainly not the direction of the diaphragm. In his experience the pus in empyema always pointed in the neighborhood of the nipple, and when it pointed elsewhere it did so by burrowing beneath the tissues external to the lung wall of the thorax, after perforating an intercostal space.

Four Cases of Literal Lithotomy.—Dr. FENWICK said: I desire, Mr. President, to lay before the Society four specimens of vesical calculi recently removed by lateral operation.

The first is a mulberry calculus removed in August of the last year from a young fisherman from Newfoundland, aged 22 years, who had noticed the usual symptoms of stone for the past five or six years. For the past year he had been quite unfit for his usual avocations, and at length decided on seeking relief by coming to Montreal. The voyage from Newfoundland was unusually rough, and he stated that the pitching of the vessel was very distressing. The usual operation of lateral lithotomy was performed. The patient made a good recovery; the urine ceased to flow from the wound on the 14th day, and he returned home ten days later.

The second specimen was removed by lateral lithotomy from a Scotch farmer, aged 57, who had suffered from difficulty of micturition for the past year and a half. He had also noticed occasional spasm, persistent pain at the point of the penis,

and frequency in passing urine; he could not retain his water longer than two hours at any time, and more frequently it would be passed every hour. He presented an anxious, care-worn appearance, was a strong, robust man, and otherwise well-nourished and healthy-looking. His physician had suspected stricture, and had failed in an attempt to pass a No. 4 catheter into the bladder. This, he stated, had been followed by hemorrhage, the only time, indeed, in which he had lost blood. An ordinary sound was passed into the bladder and a stone at once struck. The prostate gland was not enlarged, and the urine was found to be normal and otherwise healthy. I may state that this man's brother, a year or two before, had been successfully operated on for stone by Dr. Roddick. Lateral lithotomy was performed on the 27th September last, and the two calculi shown were removed; their united weight is 243 grs. The patient progressed favorably. On the tenth day after the operation he complained of some bladder irritation so that I determined to pass and leave in a soft rubber catheter. This was done with a view of hastening the closure of the wound in the perineum. The pressure of the catheter, however, could not be endured; it was removed on the second day after its introduction. The urine ceased coming by the wound on the fourteenth day. The wound made rapid progress towards improvement and closed on the seventeenth day after the operation, and he was allowed to return home on the twenty-sixth day from the date of operation.

The third specimen submitted was removed from an old gentleman, aged 69 years, by lateral lithotomy. It is almost pure lithic acid, and one of the largest specimens of the kind in my collection, its weight was 625 grs. The operation, which was performed on the 1st November last, was attended with some difficulty owing to the high position of the bladder, due apparently to an enlarged prostate gland. The bladder was, however, readily incised, but on attempting to enter with the finger I found that the point of my finger did not reach further than the commencement of the prostate. Fearing, if I used any force, that the bladder would be pushed beyond my reach, I requested my friend Dr. Roddick, who has a much longer index finger than I have, to complete the operation, this he did with some difficulty; no further cutting was necessary as the opening in the prostate was large enough for the purpose. The bladder was then carefully washed out, and a

large-sized gum-elastic tube introduced through the wound and tied in. This was removed by the patient himself the morning after the operation, and to this I attributed the subsequent disturbance which delayed the recovery. Erysipelas attacked the wound on the fifth day, the edges of the incision presented a sloughy aspect, and the erysipelatous blush extended over the buttocks and up the back as high as the shoulders; septic sore throat followed. The entire fauces and hard and soft palate were covered with diphtheritic membrane. The muriate tincture of iron with quinine was prescribed in full doses, and he was supported with beef-juice, milk and champagne. At the same time the throat was sponged over with a solution of salicylic acid 3 i to ʒ i glycerine every two hours. This treatment was persevered in, and about the fifteenth day after the operation the symptoms began to improve. The urine was highly ammoniacal, and as he was constantly wet, which added to his distress, a soft rubber catheter was introduced into the bladder so as to drain through the natural passage. This was kept up for several days. He was, however, somewhat difficult to manage, as he would himself remove the instrument, but always permitted it to be reintroduced. This was followed by marked improvement. The erysipelas subsided about the twenty-second day and the wound became more healthy in appearance. The catheter was retained at intervals up to the 30th ult. The patient is now making a slow recovery; the urine ceased coming through the wound on the 5th of December and the wound itself is all but closed.*

The fourth specimen is mulberry calculus, removed from the bladder by the lateral operation on the 22nd of November, 1887. The patient is a healthy-looking lad of 18 years. I was informed by his mother that he had suffered from bladder irritation off and on since the age of five years. During the past twelve months he had observed that he experienced pain in riding over a rough road; there was a continued irritation, frequency of micturition, and pain at the point of penis. He had never passed blood. No examination for stone had ever been made until recently, when the gentleman whom he consulted had passed a sound and readily found the stone. He advised him to come to Montreal, and he was admitted to

the Montreal General Hospital on the 16th November, 1887. The day following an examination was made while the patient was under ether. A short beaked sound was passed and a stone struck; it appeared hard, had a clear ring, was evidently of good size, and was rough on the surface. Lithotomy was advised. As the examination had been attended with slight bleeding and increased bladder irritation, it was decided to defer the operation for a day or two. On Tuesday, 22nd of November, the operation of lateral lithotomy was performed. Some difficulty was experienced in delivering the stone. The patient progressed favorably. A sponge wrung out of a very weak solution of sulphuric acid was placed in his bed against the wound, on the seventh day from the date of operation he first experienced a desire to pass urine, but not over half an ounce was passed by the natural passage. This gradually increased in amount each day. On the thirteenth day the urine was passed in full stream and very little by the wound, on one the sixteenth day the urine ceased to come through the wound and two days subsequent the wound closed. The patient was allowed up, and he returned home on the 24th December, 1887. The weight of the stone was 411 grs.

Cirrhosis of the liver.—Dr. R. L. McDONNELL related a case of recovery in cirrhosis of the liver, where ascites had been present to a very great extent. The patient, a woman aged 35, married, but childless, was admitted to the Montreal General Hospital in August, 1885, with a large quantity of fluid in the abdomen. She had suffered during the past year from dyspeptic symptoms with morning vomiting. There was a history of spirit drinking. Prior to admission, was tapped to the extent of 200 ounces. There was tenderness over the hepatic region. The liver was small, measuring three inches in the right mammary line. She remained in hospital for ten months, being tapped at first every two or three days, but subsequently at longer intervals, the amount withdrawn being at first about 180 to 200 ounces, but at the time of leaving hospital but 16 to 20 ounces could be obtained. She was tapped sixty times during that year, and taking 150 ounces as an average, altogether 8,500 to 9,000 ounces were removed. The woman has gained health and strength, and is now apparently well and attending to her household duties. The liver is of the same size, the belly empty, and

*He progressed slowly, but steadily, and early in January returned to his home in the country. Since then I have heard of his steady amendment.

dyspeptic symptoms have disappeared. The total amount of fluid removed in a year is large, considering the patient's weight (125 lbs.) and size. Much larger quantities have been taken, but the case is instructive as illustrating the benefit to be derived from paracentesis in cirrhosis.

Dermoid Ovarian Cyst in a Pregnant Woman.—Dr. WM. GARDNER alluded to a case he related to the Society with exhibition of the specimen last winter. The case in question was one of ovariectomy for dermoid cyst, with twisted pedicle and most alarming symptoms of peritonitis. At the operation there was found universal adhesion of the cyst; it was necessary to remove the second ovary for commencing disease. Washing out of the cavity was freely practised, and a drainage tube was used for five days. It lay against the posterior wall of the uterus for five days. The uterus was somewhat large and vascular, but pregnancy was not seriously thought of, yet in a few weeks the woman was found to be undoubtedly pregnant. He now had to report that a few weeks ago she had been confined at full term by her ordinary medical attendant, Dr. Molson, of a large, healthy, living child, and had made an easy and rapid recovery. This was the second ovariectomy Dr. Gardner had done during pregnancy. The first case was also confined at full term, both mother and child being alive and well. Considering the dangers of pregnancy with ovarian tumor when uninterfered with, such cases surely furnish a strong argument in favor of prompt performance of ovariectomy even when at the time of diagnosis there are no alarming symptoms. Both of Dr. Gardner's cases were, however, done for urgent symptoms.

The Dangers and Accidents of Local Treatment in Puerperal Cases.—Dr. J. C. CAMERON then read a paper on this subject, as follows:—

Dr. Matthews Duncan has somewhere remarked that the subject of antiseptics in midwifery is by far the most important obstetrical question of the day, being of even greater moment to the public than the prevention of epidemics, for while epidemics come only at intervals, puerperal septicaemia is a constant menace to the lives of a most valuable portion of the community. Antiseptics may justly be said to have revolutionized the practice of midwifery, so that results impossible anywhere a few years ago are now everywhere obtainable. Antiseptic midwifery in some form or other is practised almost universally; but unfortunately,

general use is apt to run speedily into abuse, and the antiseptic system is no exception to the rule. Uterine and vaginal douches, when properly administered in suitable cases and at suitable times, are invaluable, but otherwise they may prove dangerous. To point out some of the dangers and show how they may be avoided is the object of this paper.

The opinion seems to be prevalent among the profession that, while the intra-uterine douche is generally safe, the vaginal douche is perfectly so. No particular skill is considered necessary. Impressed with its harmlessness, some recommend the antiseptic vaginal douche as a prophylactic against infection during the puerperal state, and advise its use in all cases. Not unfrequently we find the operation entrusted to the nurse or some incompetent person, without direction or supervision, as if douching was a trivial matter out of the province of the physician or perhaps beneath his dignity. With such doctrines and practice I cannot agree, for in my opinion prophylactic douching during the puerperal state is not only unnecessary, but frequently the cause of serious harm. Though believing in thorough antisepsis during labor and the puerperal period, and admitting the value of vaginal and uterine douching in certain conditions, I am nevertheless convinced that the douche is not perfectly harmless, and that it should be used only when clearly indicated, and then with caution.

Liability to absorption through tears, fissures, abrasions or other traumatism constitutes the chief danger of the vaginal douche. The contraction of the constrictor muscles narrows the orifice of the vagina and favors sacculation of its canal; consequently part of the infection is apt to be retained, perhaps for a considerable time. Indeed absorption is more liable to take place through the vagina than through the uterus, because the latter usually contracts firmly and empties its cavity, especially if the injections be hot.

For various reasons the intra-uterine douche is more dangerous than the vaginal, especially if the current be too strong or the outflow insufficient. Fluid may be forced through the Fallopian tubes into the abdominal cavity, causing acute peritonitis or even death, as in Voht's case; or a thrombus may be dislodged from the placental site and hemorrhage take place; or air may find its way directly through the uterine sinuses into the veins; or some of the injection fluid may enter the veins.

In Stadfeldt's case, symptoms of poisoning appeared, while a large sublimate douche (1 to 5000) was being administered, proving that the mercuric solution entered the circulation directly. The uterine sinuses, firmly attached to the muscular wall of the uterus, are closed during muscular contraction, but gape open during relaxation; therefore, in relaxed conditions of the uterus, fluid or air may readily penetrate into the veins. I have seen sudden death produced in this way during an intra-uterine injection of perchloride of iron for post-partum hemorrhage.

The fluids most commonly used for injection are plain water or solutions of permanganate of potash, carbolic acid or corrosive sublimate. Plain hot water is the safest, and is quite sufficient when debris is to be washed away and a simple mechanical effect is the only one desired. But in septic cases where germicide action is also required corrosive sublimate is by far the most effective, but at the same time it is the most dangerous. Death has occurred in sixty hours from the effects of an intra-uterine sublimate douche (1 x 2000). Patients suffering from anæmia or kidney troubles are very susceptible to the action of mercury; so, too, are those who have recently been under mercurial treatment, or in whom there is marked atony of the uterus or extensive traumatism of the genital tract. It may be taken as a general rule that sublimate injections are contra-indicated in all such cases, or should at least be given with the greatest caution.

Frequently an intra-uterine douche is followed by a chill and rapid rise of temperature (104° or over), accompanied sometimes by colic and abdominal tenderness. As a rule, these symptoms are of nervous origin, though exceptionally they may be due to absorption. In men, the passage of a catheter or sound is occasionally followed by a sharp rigor and high fever; surgeons call this urethral fever, and attribute it to nervous influences. Similar symptoms may be caused by the passage of a uterine sound or by artificial dilation of the cervix, without any evidence of inflammatory mischief; nervous influences are undoubtedly the cause. So, in like manner, the passage of a foreign body (irrigation-nozzle) into the uterus, and the distension of the uterine cavity with fluid, especially if the outflow be insufficient, may produce similar nervous symptoms sometimes of an alarming nature.

What precautions are to be taken for the avoidance of these dangers and accidents?

1. The patient should always be placed across the bed in the *dorsal* position, with hips well raised and thighs everted. The operator has then better control over the direction and force of the injection as well as over the outflow. In intra-uterine douching, the anterior lip can be more easily seized and the uterine cavity straightened, if the patient is lying in the dorsal position.

2. The vaginal or uterine nozzle should be *inflexible* (glass or hard rubber), without a central orifice in the bulb (to avoid injecting fluid through the Fallopian tubes or dislodging thrombi from the placental site). The openings in the bulb should be directed slightly backwards, so that the injection stream may flow away from the fundus, not towards it.

3. A sufficient outflow should be secured. The vaginal orifice should be kept open. Before an intra-uterine douche is given, the anterior lip should be seized with a vulsellum or tenaculum and drawn gently downwards till the uterine cavity is straightened. The nozzle can then be more easily introduced, and a good outflow is secured. After the operation it should always be ascertained that there is no pouching of the vagina or retention of fluid.

4. The quantity of fluid injected should be small; from one to two litres is quite sufficient. Large and long-continued injections are not more effectual, while they greatly increase the risks.

5. Antiseptic injections should be weak, unless powerful germicide action is required in acute septic cases. For an ordinary vaginal douche a sublimate solution of 1 x 7000 or 1 x 5000 is quite strong enough. The strong solutions (1 x 2000 or 1 x 1000, or even 1 x 500) should be used only in urgent septic cases, and then with the greatest caution. After a sublimate injection, a pint or two of plain hot water should be run through to wash away any retained sublimate, thus lessening the risks of absorption.

6. The injection should always be used hot (103°-112° F.). Hot water is a powerful stimulant, causing the uterus to contract firmly, thus closing up the sinuses and tubes, and expelling the injection fluid from its cavity.

7. To prevent nervous chill and rise of temperature, a glass of brandy or some diffusible stimulant should be given fifteen minutes before

operating. The stimulant acts primarily by bracing up the vascular system, and secondarily by increasing the resisting power of the nervous system. If this precaution be taken, and the injection be given rapidly and without undue exposure or chilling of the surface, rigors and fever will rarely follow. In very nervous, excitable patients, or where there is likely to be pain, ether may be advisable.

During the more severe methods of intra-uterine treatment, such as curetting or brushing (écouvillonnage of Doléris), the placental site is apt to be disturbed; some of the little plugs may be scraped or brushed away from the mouths of vessels, permitting the entrance of air, fluid or septic matter. Curetting or brushing should be followed at once by a small douche of very hot water given very slowly and carefully; a suppository of iodoform should then be passed into the uterine cavity and the vagina loosely packed with a strip of iodoform gauze.

Dr. BLACKADER said he would like to ask the reader of the paper under what circumstances he now advised curetting, and whether he would perform this operation whenever there were any septic symptoms present. He thought that injections should not be too hot, for he had seen serious symptoms follow the employment of very hot injections; peritonitis even had resulted from the injection of plain hot water.

Dr. WM. GARDNER related an instance illustrating the dangers of vaginal injections with improper syringes. The case was that of a lady whom he attended during the past summer for a violent attack of pelvic peritonitis. She had been for some months suffering from pelvic symptoms, and on one occasion proceeded to take a vaginal injection with the ordinary syringe; but having mislaid the vaginal pipe, she used the rectal pipe with a single aperture at the end. The vagina was lax and the perineum and cervix lacerated. She had no sooner begun than she was seized with violent pelvic and abdominal pain with symptoms of collapse, speedily followed by vomiting, fever, and all the other symptoms. She was in bed for four or five weeks, and was for a time in great danger. There can scarcely be a doubt that the water was forced directly into the uterine cavity through the open cervix.

Dr. RODDICK said he was cognizant of not a few cases where serious results had followed the use of bichloride of mercury injections. He

thought Condyl's Fluid a safer antiseptic. But best of all is hydronaphthal; it has germicidal qualities nearly equal to bichloride of mercury, but no odor or irritating qualities, and there is no danger of poisoning.

Dr. MILLS thought that the untoward results sometimes following vaginal and uterine injections were to be explained through the impressions directly made on the nervous system as well as by absorption of the fluid used. This being the case, the good effects of the stimulant, given as Dr. Cameron recommended, prior to the injection were probably owing to its acting by lessening the susceptibility of the nerve centres to any sort of afferent impressions. He doubted whether the effect on the circulation was not rather favorable than otherwise to absorption. Dr. M. wished to know whether there was any exact evidence bearing out the belief that fluids were more readily absorbed from the vagina than the uterus after parturition. It is scarcely what would be expected.

Dr. CAMERON, in reply, stated that the value of curetting, in suitable cases, is unquestionable, viz., where portions of the placenta are retained; the brushing out of the uterus would not, in all cases, replace curetting. The danger of absorption is greater through the vagina than the uterus, as the former is always more or less abraded, and also because the injected fluid, owing to the greater tendency of the vagina to sacculate, remains longer in contact with the absorbing surface. He had written this paper as a protest against the indiscriminate and careless use of injections in the puerperal state.

Correspondence.

LETTER FROM NEW YORK.

The disadvantages under which a correspondent labors, when he attempts to write a letter upon general topics connected with medicine, is that he is certain, in the case of a very large medical centre like New York, to give a one-sided view or review of his subject. Perhaps the fact that my time here has been chiefly devoted to the consideration of certain special branches may however make it more easy to speak with authority about them. To begin with, it seldom strikes a visitor to this city that in extent, population and wealth (consequently in variety and amount of disease

and the special means adopted to relieve it) New York may lay claim to being the second city in the world. Because New York, Brooklyn, Jersey City, Hoboken, Long Island City, and the suburbs of these, with over 3,000,000 of population, are practically one and the same, and the clinical material included within their limits is quite as available for teaching purposes as is that within a circle having 20 miles radii and its centre Charing Cross. And since the magnificent Vanderbilt donation to the Medical Department of Columbia College, and other generous gifts of like kind, this vast amount and variety of disease is being more and more put to good use for the teaching of medicine.

The post graduate courses here may be described as excellent. I will not say that they offer as good inducements to the students as the German courses, but I must say that a man may study to unusual advantage any or all of the branches into which medicine and surgery are commonly divided. It is a matter of taste which of the two schools one chooses, probably certain branches are more effectually taught in one than in the other. Taken as a whole, I prefer the Polyclinic on East 34th Street. The arrangements for the practical study of the Eye and Ear are second to none anywhere, the courses on the Throat and Nose are complete; the man who does not profit by them has himself to blame. The teachers are anxious to impart instruction, and every facility is offered to the student. Not only are certain daily or tri-weekly lessons given in manipulative work, but for each branch cards are issued, giving a list of hospitals and teachers connected with the schools where the student may work up the branch from "early morn till dewy eve," if he be so inclined. The New York Post Graduate School and Hospital on East 20th street is also well worth a visit. The students here are not quite as numerous as at the Polyclinic, a fact somewhat in favor of the Post Graduate School, in my judgment at least. I would like to support the proposition that one is much more likely to make progress in study (particularly where skill in the handling of certain instruments of precision is desired) with a few patients and few students, than in a clinic crowded with teachers, students, and patients.

To begin with, it is essential that one (every beginner at least) should have the same teacher, because no two men impart instruction in the

same manner. Then in crowded classes one does not readily obtain that contact between teacher and pupil which is so desirable where hand-to-hand instruction is involved. Finally it is in crowded clinics more difficult to follow up individual cases from time to time.

After wandering around and taking notes of the various teaching advantages available for the special branches I was interested in, I decided to spend my mornings with another searcher after practical knowledge, as office assistant to a well known oculist and aurist here, Dr. Mittendorf, Assistant Professor in Bellevue. My afternoons, with the exception of occasional visits to other Eye, Ear and Throat clinics in the city, were devoted to the courses given by the surgeons attending the New York Eye and Ear Infirmary. Those who are familiar with the four "head" specialties will recognize the names of Drs. Bull, Loring, Noyes, Derby, and Cocks, on the Eye; Rupp on the Ear; and Asch—one of the most friendly of teachers and most genial of men—on the Throat and Nose. The competition between the post graduate schools and less ambitious special courses, like that of the Eye and Ear Infirmary, is a very healthy and a very profitable one to the student. Seventy-five per cent. of the teachers have studied in the various continental schools and are well read men. They all frankly state their belief that shortly the graduated student will have advantages here not to be surpassed by those of Vienna or Berlin,—advantages arising out of the necessity for having an intimate knowledge of German,—the Viennese English courses to the contrary, notwithstanding—on the one hand, and out of the perfecting of the teaching system here on the other. I should like to say something later on that subject while breathing the atmosphere of a foreign city. Similarly, I would advise any one who proposes to spend some time here in post graduate study:—Take a week or ten days in looking around. You can study what you will, where you will, and, last but not least, at almost whatever cost you will, if you will only hunt it up.

One would imagine from the way in which quinine is given by professional drug distributors, and the facile manner in which it is consumed by the laity, that malarial germs were laying siege to the city. And yet I can find no evidence of its existence to any extent. The dozens of doctors and patients whom I have questioned on the subject furnish no signs of its especial prevalence. I

suspect that the Yankee public have tired of the good old word "cold" as an etiological explanation, and for a time at least have adopted a more classical term.

The Dispensary and Hospital evil has perhaps not become so pressing as it is in London, but it thrusts itself upon one's observation everywhere. People—well dressed people—present themselves daily at the charitable institutions, and obtain relief which they ought to have paid some hard-working doctor for. The necessity on the part of teaching institutions for clinical material, the want of unanimity upon this subject among members of the profession, and the cupidity of the patients themselves, here as elsewhere, combine to prostitute the proper use of these charities. A side issue lately arose out of this matter. It was found (and I know that it is not an uncommon thing to do here, even among some of the so called better class of practitioners) that a certain attendant upon one of the largest hospitals was in the habit of diverting such of their patients who were worth anything to his own private office, and getting out of them what he could in the way of fees. I do not propose to discuss the morality or the medical ethics of the affair, but I think that the action of the medical board in calling for his resignation was, on the whole, commendable.

Intubation of the larynx, especially as a substitute for tracheotomy, is still under trial. It may safely be said that even if no better results are obtainable from it than from tracheotomy for the cure of croup and diphtheria, it will always be valuable as a relief measure. Parents who refuse to permit a "bloody operation" will allow intubations to be performed. I have seen O'Dwyer's latest modification of his introducer, tubes and extractor, and they are marvels of mechanical ingenuity. The introduction and extraction of O'Dwyer's tubes, under the circumstances which commonly call for their use, is no easy matter. "Let them who think it is just try it," said an instructor to his class in laryngology the other day.

A phase in the attempt, old as the hills, to cure epilepsy by operative procedure has presented itself here in the field of ophthalmology. Dr. Stevens, an oculist in large practice, is the author of a work on nervous diseases, in which he claims to have cured a large number of epileptic and allied cases by operations upon the ocular muscles. Everybody knows that muscular insufficiencies, as well as

disturbances of the normal relation of one set of eye muscles to another, will bring about dizziness, nausea, and other subjective symptoms. Dr. Stevens claims that they also give rise to much more serious neurotic troubles, whose relief lies on the connection of such muscular deficiencies and insufficiencies. The matter must be regarded as yet *sub judice*, but when one remembers in how many parallel instances similar extravagant claims have been made, it is best to maintain for the present an attitude of intelligent scepticism.

Lately, in the Academy of Medicine, Dr. Kratzshmar read a very interesting paper on Dettweiler's treatment of phthisis, and entered a plea for the erection of his pavillion hospital convenient to large cities like New York, where unfortunates might make a stand against this terrible disease.

To-night I am going to attend the dinner given by that most delightful of all the New York social and literary gatherings, "The Twilight Club." The subject for discussion,—“How would you spend a million dollars for the public good?” suggests the Royal Victoria Hospital in Montreal. What a grand position for a consumptive hospital on the Dettweiler principle! About one-eighth of the population in temperate climates dies of phthisis in some of its forms, and notwithstanding all the workers from Æsculapius to Koch we get now no better results from treatment than came to St John Long or any other empiric,—ancient or modern. Enforced fresh air breathing in all weathers, full and generous feeding, the most rigid hygienic observances—all these could be carried out on the southerly slope of Mount Royal, as it hardly can be within the limits of any other city on this continent; and, in my humble opinion, it would do more good and be, consequently, a more lasting monument to the munificence of its founders than it can ever hope (from its remote, inaccessible and inconvenient position) to accomplish as a General Hospital.

About Dettweiler's plans it may be said that while his theory is old and commonplace, the means to the end he would reach are at least practical, somewhat novel, and infinitely more effective than any kind of drug treatment. Of all the plans which in common with my fellow practitioners I have tried for the relief of phthisis, I render thanks that I have always been a follower of the searchings of that medical free lance, Dr. Felix Oswald's, and I always regretted that a severe Canadian climate prevented my carrying out his

ideas with the majority of people who possess a small stock, either of money, courage or common sense. Dettweiler proposes to treat this majority irrespective of their possessions.

I have met many Canadian medical men here, both local practitioners and post graduate students. Dr. H. N. Vineberg, well known to Montrealers, is Dr. Hunter's assistant in Gynecology at the Polyclinic, and holds as well the position of Assistant Physician in the New York Hospital. I have to acknowledge many courtesies received at his hands. Dr. Frank Ferguson, originally from the Lower Provinces, has worked his way up to the chair of Pathology in Long Island College, and is also Assistant Pathologist at the New York Hospital. Dr. Ferguson is still a loyal Canadian, as frequenters of the Canadian Club can testify.

Dr. Chappell of Toronto "has fallen upon his feet," and is in partnership with Dr. A. H. Smith. Dr. Woodrough of London, Ont., Dr. Snow, Dr. Robinson, and a dozen others are also here.

C. A. W.

659 Lexington Avenue,
New York, Feb. 20, 1888.

Progress of Science.

FEEDING PHTHISIS.

BY SOLOMON SOLIS-COHEN, A.M., M.D.,
PHILADELPHIA.

Physicians of the present day, regarding phthisis as a fever, are taking the hint from Graves' celebrated maxim, and feeding it. Not that it has waited for the present day, or even decade, to demonstrate the value, or rather the imperative necessity, of a supporting treatment of the disease whose prominent clinical feature is so aptly expressed in many languages—consumption, *schwindsucht* *phthisis*. Not that the principal features of our hygienic and dietetic regulations may not be found in the writings of the older authors,* and how far back we hardly venture to fix the limit; but that the subordination of medication and the desire for medication to alimentation and concomitant measures, is distinctly modern as a generally adopted practice.

However much others may have contributed to this result, and however independently the practice has been elaborated, no one can consider the subject of alimentation in phthisis without render-

ing at least a passing tribute to the value of Debove's method of forced feeding. His striking results emphasized the lessons of experience, encouraged us to disregard loss of appetite, or even complete anorexia, proved that powers of digestion and assimilation did not decrease *pari passu*, and indeed were not to be arbitrarily limited by any other method than actual experiment; and his systematic use of meat powders gave us a hint as to the best method of preparation of food, the merit of which is no less that American chemists have since much improved upon it.

Our resort to the tube of Debove may be limited to cases in which physical or psychical disability prevents superalimentation by less distressing methods. The word is used advisedly. Often as the writer has performed *gavage*, and he flatters himself not with any great degree of awkwardness it has in almost every instance proved a source of distress to patient and physician; though it must be interpolated that the refined disgust of the omnipresent carping friend, relative, nurse or other busybody, has always far exceeded that of the sufferer.

However, in most instances, by judicious persuasion, explanation or insistence, it will be possible to induce patients to take a sufficiency of aliment in the ordinary way.

It is again to Debove that we must give credit for having demonstrated what is meant by *sufficiency* of aliment, namely, the extreme limit of assimilability. We have not only to provide for current needs, to repair daily excess of combustion but to make up as far as possible for previous unrepaid waste.

We have thus to determine in each case, and to prescribe with the same precision as in the case of drugs, the quantity and quality of food, and the times of feeding. As the results of experience, general rules will gradually formulate themselves in the mind of the practitioner; and confirmation or modification will result from the progress of physiological chemistry. The opinion most widely prevailing at the present time assigns the first rank as an aliment in phthisis to flesh, and more especially to beef. The results obtained by certain individuals, who devote themselves to the treatment of disease by an exclusive diet of beef prepared in a certain and most excellent manner, conjoined with lavatory potations of hot water to prepare the digestive canal for the reception and disposition of the aliment, cannot be ignored, whatever we may think of the theories or methods of the practitioners in question. Without confining themselves to beef, scientific physicians are justified in giving it the first rank.

It should be taken at least twice daily, three times if possible. It may be eaten raw, as it comes from the butcher, or it may be chopped finely, seasoned to taste, and made into little cakes, which are eaten raw or slightly browned on the grid-iron. It may be taken in the form of rare beefsteak broiled in its own fat, or as very rare

*Of modern authors, the best exposition of the hygienic treatment of consumption is the essay of Dr. B. W. Richardson, published in 1856, and reprinted in *The Asclepiad*, April, 1885, No. 2, Vol. II.

roast beef. Other methods of cooking are to be prohibited. The meat is to be as juicy as possible and fibrous portions are to be removed.

Very often one can be satisfied with the use of butcher's meat, raw or cooked as above. Sometimes, however, whether from partial failure of digestive powers or other condition necessitating reduction in bulk without loss of nutritive material, or suggesting conversation of the energy that would be expended in digestion, it becomes necessary to resort to special methods of preparation. The meat powders prepared by various pharmacists, more especially for forced feeding, here render valuable aid. By cutting boiled beef into fine pieces, drying by means of a water bath, and grinding in a coffee mill with the teeth set closely, an excellent meat powder may be made in the kitchen. (Dujardin-Beaumez.)

The preparation from which the writer has seen the greatest benefit, and which he is most frequently in the habit of prescribing, is Beef Peptonoids. Whether from improvement in the process of manufacture, rendering it more palatable, or from decrease in the fastidiousness of patients, there has not recently been the same difficulty in getting patients to persevere in the use of it that was experienced in former years.

The methods of administration may be varied almost indefinitely. It may be added to soups and broths, to milk punch, egg-nog, etc., taken in warm or cold water, or made into paste with milk or water and spread upon bread. Beginning with a teaspoonful three or four times a day, the amount is to be increased as soon as the preferable method of administration is determined upon, to a tablespoonful or more. It is preferably given among the supplementary articles of diet between meals.

Next to beef in the dietary, the writer would place milk, sufficient care being exercised to obtain a good, pure article, and to keep it properly. The "half Alderney" milk, supplied by a well-known dairyman in Philadelphia, is usually better than either the pure Jersey milk or that from ordinary cattle.

The manner of drinking milk is not unimportant. Ice-cold, gulped hastily, the chances are all in favor of its promptly coagulating and failing to digest, perhaps to be vomited, perhaps to cause considerable discomfort in various ways. While with some patients it is best taken cold and with some quite hot—a matter for which experience seems to be the only guide—in the majority of instances it should be slightly warmed (say to 100 deg. F.) and sipped slowly, so as to thoroughly incorporate it with saliva. Ten minutes may well be given to a tumblerful of milk, and in this way the fancied "disagreement" of which many persons complain may be avoided. If necessary, lime water may be added or peptonized milk employed. When these expedients fail koumyss may be tried, and failure here may indicate the necessity of greater attention to the condition of the gastro-intestinal

mucous membrane: not necessarily medication, however. Potations of hot water (flavored, if necessary), "aerated," acidulated or "mineralized" in some cases, from half a pint to a pint, one hour before meals, or *lavage* with simple alkaline solutions may answer. When disinfection of the alimentary canal seems indicated, creasote, iodoform and the sulphur compounds are among the preferable agents.

From one to two quarts of milk daily, in divided doses, should be given, if possible, partly with meals, partly between meals; as a vehicle often for Beef Peptonoids, etc., and sometimes for alcohol.

Alcohol, despite all that is said, forcibly and truly, against its indiscriminate employment, is in reality a food in phthisis. We may or we may not be able to follow the molecular changes and cellular reactions from the moment of its introduction to that of its elimination; but whether or not physiological chemistry has said its last word upon this subject, that intelligent empiricism upon which clinicians must continue to depend has demonstrated the value of alcohol in wasting diseases, and more especially in those associated with elevation of temperature.

It need not be given in excessive doses. A tablespoonful of good brandy or good whiskey night and morning, in the form of milk punch—or better cream punch—with a glass of good Burgundy wine at dinner, will ordinarily suffice, though much larger quantities may be given at times with much advantage. The elder Flint records instances in which a pint of whiskey daily was taken for a long time, with apparently very good effect. The writer knows of similar cases. It is only fair to add that cod-liver oil was also used freely in all these cases.

Sometimes malt liquors may seem to be preferable; and, if decidedly more agreeable, the patient's taste may be considered; a good wine of coca, used intermittently, is often useful. For prudential reasons, alcohol may be disguised as an extract of malt—and here the power of the diastase of the malt in aiding digestion is often of service—or it may be made into a prescription, as in the formula of Jaccoud, of glycerine, mint water and rum.

The combination of alcohol with milk, malt, cod-liver oil or glycerine is theoretically preferable to (Fothergill) and in experience more advantageous than its separate ingestion.

Returning to the consideration of meats, the value of an occasional variation of our beef diet must be recognized—in the way of a digression, however, rather than of a total or lasting departure. Mutton—preferably broiled chops—poultry and game, carefully cooked, and whenever possible rather underdone, may be employed from time to time. The "dark meat" is preferable to the "white meat" in the case of poultry. Sweetbreads are often tempting to a failing appetite, and may assist digestion. While the skill of the cook may

well be called upon to supplement the knowledge of the physician, yet elaborate dishes of all kinds, high seasoning of all kinds, and, in plain English, messes of all kinds—even among our humbler patients, the “Irish stew”—are to be rigorously interdicted. Even soups should be as simple as possible. Eggs, when palatable, despite fears of “biliousness,” form a useful addition to the dietary. A raw egg may be sucked from the shell, and will thus often relieve an irritable condition of the pharynx. It may be beaten up with milk, or milk and whiskey. If the egg be cooked it may be poached or soft boiled. Omelette, scrambled eggs and fried eggs are, as a rule, to be avoided. Hard-boiled eggs are sometimes well digested, but in most instances are not. Fish, when relished, may form one of the auxiliary articles of diet. As to variety, the taste of the patient may be consulted. As to preparation, frying should be strictly prohibited. Broiling, boiling, and baking are permissible. Of shell fish, when the patient desires it, and there is no other objection, oysters and clams may be permitted. All others should be prohibited. Many phthisical patients, however, are unable to take even an oyster without considerable discomfort.

The green vegetables—lettuce, celery, spinach, water-cress, etc., are to be freely partaken of. The leguminous group, especially green peas, made into soup, boiled with milk or otherwise prepared, are of benefit. Starchy and farinaceous foods are, as a rule, to be avoided, though they need not in all cases be absolutely interdicted. They must, in any event, be subordinated to nitrogenous aliments, and the quantity taken be minimized. The especially indigestible and fermentable articles, such as potatoes and turnips, are best avoided altogether. Even the amount of bread consumed should be limited, and, if possible, that made from the whole wheat, or the gluten bread, or one of the similar preparations manufactured for diabetics, employed. Pastry and sweets are not to be thought of save to be rejected.

While the diet is thus to be largely nitrogenous, a sufficient proportion of carbo-hydrates must enter into it. Fats and oils, preferably from the animal kingdom, will supply this. Cream has already been mentioned. Butter should be freely used. “Butter and bread” is to replace “bread and butter” in the consumptive’s diet-list. Oil-dressings of salads, etc., are useful in the same connections. Cod-liver oil may be given, though it is doubtful whether the large quantities sometimes ordered are assimilated. A tablespoonful three times a day probably represents the extreme limit, and half that quantity may often suffice, in many cases, the patient will do just as well without any. When the pure oil can be taken, either floated on whiskey or in any other way preferred by the patient, it is best given in that form. Emulsions extemporized by the physician are in general better than the proprietary ones. Ether, say Hoffman’s anodyne, may be introduced into the

emulsion, or given separately immediately following the dose of oil, and will not only assist in its solution, but stimulate the pancreatic secretion which prepares it for absorption. The combination of pancreatic preparations with cod-liver oil is rational; that with pepsin is based upon ratiocination or experience that the writer cannot follow.

When sufficient fatty matters cannot be taken in any of the ways indicated, oleaginous inunctions may be resorted to. If the oil used for anointing has an unpleasant odor, one of the essential oils, such as oil of gaultheria, or oil of bergamot, may be employed to disguise it. Inunctions with lanolin may be doubly utilized as a means of introducing iodoform or other desired medicinal agents.

The frequency of meals is a point of much importance in the alimentation of phthisical patients. Rarely more than three hours, never more than four hours, except during sleep, should be allowed to elapse without the taking of food.

The American custom of three set meals daily need not be altered, but in the intervals between meals, and just before going to bed, some of the lighter aliments, milk, soup or broth, milk-punch or egg-nog, etc., should be taken, and as already stated, with the addition, if possible of Beef Peptonoids. When the Peptonoids powder is not palatable or not available for any reason, the Liquid Peptonoids may be substituted and in some cases, being entirely pre-digested, is preferable. In addition to the glass of punch, or of plain milk or cream, taken at bed time, a glass of milk or cream, with or without alcohol, or a glass of wine or spirits, sometimes advantageously reinforced by half an ounce of Liquid Peptonoids, should be at hand to be taken in case of waking during the night or early morning. Liquid Peptonoids with coca is a good preparation for this purpose; for coca, like strong coffee under similar circumstances, facilitates the return of sleep. When a sufficient quantity of food is not taken in the six times suggested, the frequency may be increased. While our object is distinctly “cramming,” it is not well to so overburden the digestive apparatus as to give rise to positive discomfort.

The duty of the physician, who feeds his cases of phthisis, is not finished when he has prescribed the diet, even in all its details; or when, in case of failure by natural methods, he has resorted to *gavage*, inunction or rectal feeding. He must prepare the stomach and intestines to welcome the nutritive materials furnished, and to prepare them for absorption. He must endeavor to remove obstacles to proper elaboration and assimilation and to stimulate and assist these functions, not forgetting the respiration, which in Arbuthnot’s expressive phrase, “is the second digestion,” or the circulation which is to cause the oxygen-carrying corpuscles and the nutrient lymph to penetrate into all the tissues. He must further watch, and if necessary assist the process of elimination, so that broken-down,

useless, and sometimes toxic, materials may be speedily removed to make away for that which will better and more vigourously assist in tissue-building and force-production.

This subject, including as it does the consideration of general and special hygiene, as well as mechanical, chemical and medicinal aids to digestion, respiration, circulation and excretion, simple and complex, must be indicated; but it cannot be properly studied in a paper which has already overrun its limits.

Yet one more word must be added, even at the risk of occupying too much space. Experience has demonstrated the utter futility of all measures designed to destroy the bacillus tuberculosis. A moment's reflection must convince us that even could we destroy every bacillus in the lungs, we would gain nothing; for the patient has only to open his mouth, to be invaded by a new host. So that whether we follow the opinion of the majority, and assign to this microbe supreme ætiological importance, or whether we are content to remain a minority which can at least boast among its numbers the most cultured and philosophical mind among medical men of the century, the experience of every physician and of every patient is in accord upon the all-important point that the secret of treatment is not microbicide, but NUTRITION.—*Dietetic Gazette.*

* THE CAUSE AND TREATMENT OF INFANTILE ECZEMA.

By JOHN V. SHOEMAKER, A.M., M.D., PHILADELPHIA, PA.

Infantile eczema is one of the most common diseases of early life. It is always a distressing and frequently an obstinate affection, remaining for weeks or months; but, as a rule, it is much more amenable to treatment than eczema in adults. It may occur at any period during infancy, but it is most frequently observed during the first six months of infantile life, at the time of weaning, and during the process of dentition.

It may appear in a variety of forms. In some cases it is characterized by the development of a veritable number of erythematous spots, or blotches upon the face, scalp, and other portions of the body. In others the eruption is purely papular; in still others it consists solely of vesicles situated upon a reddened inflamed base, or both lesions may be intermingled. The pustular variety is characterized by the formation of pustules of various sizes, either alone or comingled with vesicles, papules and vesico-papules. The disease may involve any or all portions of the integument; but it most frequently attacks the face, scalp, neck, chest, buttocks, and the upper and lower extremities. It pursues a variable course. The papular and erythematous forms usually disappear by resolution, but

they may pass imperceptibly into the chronic squamous stage of the disease. The surface then presents a dull red infiltrated appearance, and is covered with a number of minute epidermic scales.

The vesicular and pustular varieties rarely temperate in resolution. As a rule, the vesicles and pustules burst within a few days after their development, exposing a raw weeping, bleeding surface, from which a sero-purulent fluid exudes, and dries into large, firm, yellowish crusts. When the scalp is the seat of the eruption, the hairs are matted together by the exudation, and the entire scalp becomes covered with yellowish masses, forming the condition known as crustalactea. As the disease progresses the irritation increases, so that the inclination to scratch the parts becomes almost irresistible, and patients tear the surface with their finger-nails even while asleep. This, of course, increases the exudation and enlarges the diseased area. After an interval of several weeks the morbid action may cease, spontaneous repair take place, and these crusts drop off, disclosing a healthy but somewhat reddened surface. Usually however, unless appropriate treatment be instituted, the disease passes into the chronic stage, and remains for months or years with occasional periods of amelioration and exacerbation.

Infantile eczema is due practically to one of four causes: 1. Insufficient or improper food. 2. Imperfect assimilation. 3. Deficient excretion. 4. External irritation.

Insufficient or Improper Food.—This is one of the most frequent existing causes of the disease. If the mother's milk is scanty in quantity, or poor in quality, or altered in character by pregnancy, passion, menstruation, anxiety or disease, the nutrition of the child will suffer, and eczematous or other eruptions speedily appear. If the child is handfed, and given unsuitable and indigestible articles of food, or, if the cow's milk upon which it is nourished is so diluted with water as to be deprived of its value, the same result will follow.

Imperfect Assimilation.—This is another potent factor in the production of the disease. The food may be perfect in all respects, but if owing to disturbances of the digestive tract a considerable portion of it is either rejected by vomiting, or hurried out through the intestinal canal before digestion and assimilation are complete, the blood will become thin, the nervous system will suffer, and various cutaneous eruptions appear.

Deficient Excretion.—Deficient excretion is not as frequently chargeable with the development of infantile eczema, as it is with many other cutaneous disorders, but many stubborn cases spontaneously disappear when the normal functions of the various excretory organs are re-established.

External Irritation.—This is frequently the unsuspected cause of numerous cases of infantile eczema. Among the common sources of irritation may be mentioned woollen or flannel clothing,

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light clothing, dyed clothing, wet diapers, scratching, and the too frequent washing of the body and scalp with soap and water. The eruption is often aggravated by the use of quack preparations, or ointments recommended by obliging friends and neighbors.

Treatment.—The general principles upon which the successful treatment of infantile eczema must be based are, to improve the nutrition of the patient, correct any disorder of digestion or excretion that may exist, and protect the affected surface from further irritation, and endeavor to restore it to its normal condition. The measures to be employed in each case will vary with the cause of the disease, and the extent, variety and stage of the eruption. In some cases attention to diet and hygiene will be sufficient to effect a cure. In other cases, local or constitutional medicine will be required, while in obstinate cases both local and constitutional remedies must be employed. In mild cases of the erythematous or papular variety, in which the deficient character of the food supply is plainly apparent, immediate improvement can often be obtained by simply giving a sufficient quantity of appropriate nourishment. There are several ways of accomplishing this. If the mother is nursing the child, and her milk is scanty or impoverished, she should be placed upon tonics and a liberal diet, and directed to give the child a definite quantity of cow's milk in addition to her own at stated intervals throughout the day. I have notes of several cases in which a rapid and decided improvement in the character and the amount of mother's milk, and a disappearance of the eruption from her child followed a liberal diet, conjoined with the use of this formulæ :

B.	Tinct. ignatiæ	10 drops
	Tinct. serpentariæ	6 drachms
	Tinct. cinchonæ	1 ounce
M.	Sig. Teaspoonful in water before meals and at bedtime.	

If, unfortunately, the infant cannot be nursed by its mother, the best substitute for its natural food is pure, undiluted cow's milk, unmixed with any other substance whatever. More than thirty years ago Dr. N. S. Davis declared before this Association, that the practice of diluting the cow's milk given to infants was the direct cause of incalculable suffering and innumerable deaths. Careful observation has convinced me of the truth of Dr. Davis' assertion. Time and again have I been called in to see infants of ten weeks who were crying continually, pining away, and in addition were covered with various forms of eczematous eruptions. On inquiring what the little patients were fed upon, answers were one part milk and three parts water, one part milk, one part flour, and five or six parts water. In one case the unfortunate child was being slowly and unknowingly starved to death upon one part milk and eight parts water. My orders in every case were at once to give each child plenty of pure, unadulterated cow's milk and nothing else for

food. For some I directed 2 grains of pepsin to be given in addition with each feeding. No others medicine was employed or required, and in every case the eruption spontaneously disappeared in from a few days to two weeks.

In other cases it will be found that the trouble is due to the child being given potatoes, pies, pastry, pork and all sorts of table food, preparatory to being weaned, or to assist it to cut its teeth. The child's stomach is unable to digest such food, its gastro-intestinal canal is disordered, and various eruptions appears that are charged to dentition. Dentition is a perfectly natural process, and in the overwhelming majority of cases is accomplished without any reflex or direct disturbance of the system. The cases of eczema attributed to it are numerous, but they are really due to errors of feeding and disorders of digestion.

Cases of infantile eczema, due to imperfect digestion and mal-assimilation, require to be studied carefully. Those in which there is a deficiency in the gastric juice, are benefitted by the administration at each feeding of from $\frac{1}{2}$ to 2 grains of pure pepsin, or from 2 to 5 grains of lactopeptine. Nux vomica in doses of from one-quarter to two minims of the tincture three times a day is also valuable. Minute doses of the chloride of iron, or of hydrochloric acid, sometimes yield better results than either pepsin or nux vomica. If diarrhoea exist, small doses of opium or Dover's powders, with an astringent tonic, like cinchona or geranium, will be of the utmost value. In some cases a change of air, as to the seashore or the mountains, will be the most effective remedy. Cod liver oil will be found of especial value in all patients that are debilitated, anæmic, or that present any evidences of the scrofulous diathesis. It may be given in half-drachm doses three times a day, or used as an inunction every morning. In many cases no other treatment will be necessary. The syrup of the iodide of iron is also valuable. The dose will vary from five to twenty drops, according to the age of the patient. It may be given in any convenient medium or in combination with cod liver oil.

Quinine is also an effective remedy, especially in malarious districts and in cases in which the eruption manifests itself during the spring and autumn months. It may be given in the syrup of yerba santa, in doses of from $\frac{1}{2}$ grain to 3 grains once or twice a day. Very often in cases arising from gastro-intestinal irritation or complicated by constipation, marked and rapid improvement can be obtained from the use of minute doses of calomel, alone or combined with a small quantity of jalap resin.

R.	Hydrag. Chlor. mitis.	1 grain
	Resinæ jalapæ	1 grain
	Sacchari albæ	10 grains
	M. Make 6 powders.	

Sig. One powder every other day.

Podopyllin and leptandrin will also be found serviceable. Castor-oil is a time-honored and an effective remedy. Small doses of syrup of rhubarb or carbonate of magnesia are frequently beneficial. In acute cases accompanied by fever and an increase of the circulation, aconite is potent for good. It will be noticed that I have said nothing as to the use of arsenic in the treatment of the various forms of infantile eczema. The omission was intentional. Arsenic is sometimes requisite in the treatment of obstinate forms of eczema in adults, but in the eczema of childhood it is not only unnecessary, but frequently injurious. For many years I have not employed arsenic in cases of infantile eczema which have come under my observation. I would advise that arsenic be avoided in the treatment of infantile eczema, as its use is often productive of more injury than any benefit it may produce on the disease.

Local Treatment.—In cases in which the itching is a marked symptom, various soothing and anti-pruritic lotions and ointments may be employed. Those which I most frequently order are:

R. Acid carbolic	2 grains
Hydrag. chlor. mitis	10 grains
Ung. zinci oxide benz	1 ounce
M. Ft. ungt.	
R. Creasoti	3 minims
Aquæ	3 ounces
M. Ft. loto	
R. Chloral hydrat	5 grains
Aquæ menth. pip	2 ounces
M. Ft. loto.	

Applications of cold water, ice-water, lead-water and laudanum, or a saturated solution of bicarbonate of soda, will also be found grateful and calmative.

When the eruption has become subacute and chronic, and the integument is covered with crusts, it would be folly to expect any improvement until the diseased surface is exposed to view. The affected region should be covered with a starch poultice, or saturated with oil to loosen the crusts and scales, which must be carefully picked off. Various stimulating ointments may then be applied to the exposed, denuded surface, but care must be taken to avoid increasing the irritation and inflammation. The medicaments employed should be such as will constrict the capillaries and reduce the congestion, while they at the same time form a protective covering for the raw and oozing corium. The subnitrate and the oleate of bismuth and the oleate of zinc, either in powder or ointment form, are excellent applications for this purpose. The ordinary benzoated oxide of zinc ointment alone, with 5 grains of camphor to the ounce, is also serviceable. The following ointment will be found valuable:

R. Pulv. opii	3 grains
Acidi tannici	½ ounce
Plumbi carbonatis	1 drachm
Olei anthemidis	5 drops
Adipis	1 ounce

Another excellent procedure is to brush a 25 per cent. solution of the fluid extract of geranium over the surface after the scales have been removed. Diachylon ointment, weak tar ointment, cucumber ointment, weak salicylic acid ointment, and the ointment of the carbonate of lead, may also be employed with benefit. Harsh and irritating applications must be studiously avoided, as they are certain to protract the disease. Cases due to external irritation usually require nothing more than the removal of the irritant and the application of a soothing ointment or lotion to the part affected. Tight, dyed, woollen or flannel clothing should be replaced by articles of wear composed of some less offending material. If wet diapers are at fault they should be removed as soon as soiled, the parts gently mopped dry with a soft cloth, and then dusted with zinc oxide, bismuth subnitrate, or lead carbonate, or painted with a dilute solution of geranium maculatum. If the eruption is due to the scratching and irritation consequent upon the presence of lice, the hair should be cut short, and any of the following ointments rubbed well into the scalp.

R. Hydrag chlor. mitis	10 grains
Acidi carbolic	3 grains
Ungt. zinci oxidi	1 ounce
R. Naphthalithol	10 grains
Ungt. zinci oxidi	1 ounce
R. Sulphuris sublimata	2 scruples
Pulv. marantæ	1 drachm
Ungt. aquæ rosæ	1 ounce

Cases that are the result of too free use of soap and water will usually spontaneously subside upon the suspension of the practice. An infant's body should be bathed every day in tepid or warm water, but soap should not be applied to its delicate skin more than two or three times a week.

WHEN AND HOW TO USE MYDRIATICS IN THE EYE.*

By EDWARD JACKSON, A.M., M.D.,
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Nowhere in the medical application of drugs is clear and definite knowledge more important than in the use of mydriatics in the eye, and in very few directions has so much clear and definite knowledge been accumulated.

Besides their therapeutic applications to this organ, mydriatics are even more frequently used for diagnostic purposes. Before making such use of a mydriatic, one should always consider the possible presence of *contra-indications*. In an eye apparently normal the most important of these is an incipient or latent glaucoma. Glaucoma is an affection always tending toward functional destruction of the eye, only to be finally checked

*Read before the Medical Society of the State of Pennsylvania, at Bedford Springs, June 30th, 1887.

in the great majority of cases by severe operative procedure, and often uncontrollable even by the most radical measures. To hasten or bring about an acute manifestation of such a disease in an eye hitherto apparently free from it, must always be to the surgeon an occasion of deep annoyance and regret. And well-attested cases show that each mydriatic, with the possible exception of cocaine, is liable to produce such acute manifestations in the course of this disease. To use a mydriatic in an eye suffering from an acute outbreak of primary glaucoma, as, I regret to say, I have known to be done, is to be guilty of practice comparable to the feeding of a typhoid fever patient on violent purgatives or practicing free venesections on one in collapse. I will not here rehearse the symptoms of glaucoma; but remember, that it is a disease of middle and advanced life, that it often presents a pericorneal zone of hyperæmia, and may otherwise closely simulate some of the conditions in which mydriatics are most strongly indicated.

A second contraindication to its use is the interference with vision which a mydriatic occasions. The importance of this is to be weighed with the circumstances of each individual case, and such a mydriatic should be chosen, and it should be so applied, that the inconvenience may be reduced to the minimum. But it is always to be remembered that when a patient comes to a physician, he has generally made up his mind that his trouble is serious enough to warrant some expenditure of time and money to get relief, and that to get the clearest possible conception of his case is the first duty the physician owes his patient.

Of contraindications in eyes manifestly diseased may be mentioned, besides glaucoma, ulcers perforating the cornea at or near its periphery, where myotics will often be more useful.

Diagnostically, mydriatics are used to dilate the pupil, to determine the condition of the iris or the structures back of it, or to paralyze the accommodation. In normal eyes, to fully dilate the pupil requires very much less of the drug than to paralyze the accommodation. Simply to dilate the normal pupil, a single drop of either of the following solutions will suffice:—

Cocaine hydrochlorate, gr. j, water, mxxv,
or about 1 to 25;
Homatropine hydrobromate, gr. j, water, f ̄j,
or about 1 to 500;
Atropine sulphate, gr. j, water, f ̄j, v,
or about 1 to 2500;
Duboisine sulphate, gr. j, water, f ̄j, x,
or about 1 to 5000;
or daturine, hyoscyamine, or hyoscine salts used,
of the same strength as duboisine.

Of the above the homatropine solution will render the pupil rather the most rigid, and its effects will pass off in from twenty to fifty hours. But *cocain* is the most generally valuable dilator of the pupil. The dilatation it produces lasts but ten or twenty hours, is never so great in strong as in

feeble light, so that there is less annoyance from exposure to the light; it produces proportionately the smallest impairment of accommodation, interfering least with near vision; and the dilatation it produces can be promptly overcome by the use of eserine, making it especially valuable after middle life, when there is a chance of the occurrence of glaucoma. And it is after middle life that a dilator of the pupil is most frequently needed; for as age advances the pupil normally grows smaller, and at the same time there is an increasing liability to those degenerative changes in the posterior-media and coats of the eye that require a somewhat dilated pupil for their thorough study. But this drug has yet another advantage. In spite of the readiness with which it yields to myotics, in spite of its inability to entirely prevent the reaction to bright light, tested in a weak or moderate light, *cocaine produces a wider dilatation of the pupil than any other mydriatic*. And this superior power of cocaine is especially manifest in old people, whose pupils often do not dilate well under other mydriatics.

Paralysis of accommodation is produced both as a diagnostic and as a therapeutic measure. It is not, as a rule, called for after fifty, although some cases do occur after that age in which such an action of a mydriatic is absolutely necessary. The difficulty of producing complete paralysis of accommodation does not greatly diminish with the approach of the age at which the power of accommodation is lost. The strength of solution required is not materially less at forty-five than at fifteen. And this is not surprising when we remember that accommodative power is lost primarily by increased resistance in the lens, rather than diminished power in the ciliary muscle. Yet early childhood, probably because of interference with the absorption of the drug and extreme activity of excretion, presents special difficulty in securing complete abeyance of the function of the ciliary muscle.

To completely paralyze the accommodation usually requires from two to five instillations of a drop of either of the following solutions:—

Homatropine hydrobromate, gr. x, water f ̄j,
or about 1 to 50;
Atropine sulphate, gr. iv, water f ̄j, j,
or about 1 to 120;
Duboisine sulphate, gr. ij, water f ̄j;
or about 1 to 240;
or daturine, hyoscyamine, or hyoscine in the same strength as duboisine. Homatropine should be instilled at intervals of from five to fifteen minutes; with the other mydriatics, to avoid constitutional effects, the intervals must be much longer. Cocaine in any strength cannot, in most cases, completely control the accommodation.

Of the above, for diagnostic purposes, homatropine is greatly to be preferred. It reduces to a minimum the period of disability for eye work, recovery from it being nearly complete in from thirty-six to forty-eight hours against five or six

days for duboisine or ten or twelve days for atropine. Then, too, homatropine causes no noticeable and distressing symptoms, like the dryness of the throat, flushing of the surface, incoordination of motion, or even delirium, which are liable to follow the use of the other mydriatics. Although, as I have elsewhere pointed out (*Medical News*, July 24, 1886), this drug does usually to some extent influence the action of the heart.

When as a therapeutic measure the power of accommodation is paralyzed, such paralysis should always be made complete. Strain of accommodation occurs when the power of the ciliary muscle is insufficient for the performance required of it. In such a condition nothing could be more irrational than to lessen still further its power while still requiring it to do some work, as inevitably happens when an eye is placed partially under the influence of a mydriatic. When in doubt as to the propriety of a certain measure, it seems natural not to push it very vigorously. So physicians, uncertain as to whether or not a mydriatic should be used, say in a case of strain of the accommodation or in commencing convergent squint, are rather apt to use a weak solution of the drug, or make the application at long intervals; thinking, by such a tentative employment of the remedy, to discover if indeed it is likely to give relief. I have even seen in cases of headache belladonna given by the mouth (causing paresis of accommodation), with a vague notion that it was especially indicated by the eye symptoms. Now, as the mydriatic used in these ineffective ways can only weaken still further the already relatively weak ciliary muscle, the result must be still greater suffering on the part of the patient, and still greater confusion on the part of the doctor. If you use a mydriatic to relieve strain of accommodation, use it so that complete paralysis of accommodation will be secured as soon as possible, for only then does accommodative effort cease. Homatropine is inferior to atropine or duboisine where the influence over the accommodation is to be long maintained; for after each instillation of the former, recovery of ciliary power will begin within two or three hours, and the instillations must be repeated at least that often, to prevent the alternation of periods of rest. With the other mydriatic solutions recommended for this purpose, at least eight to twelve hours elapse before there is any noticeable lessening of the influence of the drug, so that three instillations a day will be sufficient to uniformly sustain their action. Again, the period after the use of the drug is suspended, when the eye is but partially under its influence, is one of especial danger. Even with careful, intelligent patients, much of the benefit that would otherwise accrue from prolonged mydriasis is often lost at this time.

As a therapeutic measure, dilatation of the pupil is resorted to in cataract, mainly involving the centre of the lens; and in breaking up posterior, or central anterior, iritic adhesions. For the former purpose one of the weaker solutions of atro-

pine, duboisine, etc., applied once, every one, two, or three days, is sufficient; cocaine not being well suited to this purpose on account of the evanescence of its action, and its inability to maintain dilatation against a strong light.

To maintain dilatation of the pupil against a congested or inflamed iris, or to break up iritic adhesions, use the strongest mydriatic solutions that need ever be applied to the eye. For such purposes one may employ the following, or even stronger solutions:—

Atropine sulphate, gr. j.	water f ℥ j,	or 1 to 60;
Duboisine sulphate, gr. j,	" f ℥ ij,	or 1 to 120.

Here we wish to develop the maximum effect of the drug upon the iris, and the instillations should be repeated at short intervals, say every half-hour or hour, until the pupil becomes fully dilated, or the symptoms of mydriatic intoxication become so pronounced that the use of the drug can be pressed no further.

To get the maximum effect on the eye with the least absorption of the drug into the general system, as little of it as possible must be permitted to enter the tear passages, and find its way to the mucous surfaces of the nose and throat. To hinder such escape of the solution, the nasal extremities of the lids, including the canaliculi, may, as is often recommended, be firmly pressed against the nasal process of the superior maxilla. But I think it is much more effective to evert the lachrymal puncta, and keep in contact with the adjoining surface a bit of absorbent cotton. To aid in securing the same object, it is important to use a very strong solution of the drug, and place but a single small drop upon the cornea at once. I use a dropper with a small end, that will give less than a half-minim of water to the drop. When larger amounts of fluid are instilled a greater proportion runs off with the tears. When both eyes are affected with iritis, it is sometimes wise to concentrate the mydriatic attack upon one of them one day, and upon the other the next; in order to get the full force of the drug in tearing loose adhesions. The power of atropine or duboisine in this direction may be somewhat supplemented by the simultaneous use of cocaine; though on account of its effect on the cornea I would not continue the applications of cocaine more than a few hours, nor repeat them before the second or third day.

All the mydriatics mentioned, except cocaine, seem to exert a direct influence over the nutritive processes of inflammation, which gives them great value in the treatment of many inflammatory affections of the eye. I will not now attempt to cover this field of their application, both because it is so extensive and because I do not feel that I can here speak so definitely. It may, however, be mentioned that, subject to the contraindication of glaucoma, and aside from their influence on iritic adhesions, the most obvious indication for the use of a mydriatic in an inflammatory disease of the

eye is the presence of a pericorneal zone of redness, either partial or complete. In proportion as the inflammation is plastic in character will be the benefit derived. And for its direct influence on the nutrition of the part, the largest amount of the mydriatic does not always give the best result.

It may seem that I have busied myself with the discussion of very small details; but ignorance of details nullifies the value of more pretentious knowledge, and nowhere more frequently than in the application of mydriatics to the eye.

215 South 17th Street.

SUPPURATIVE PERITONITIS; OPENING, WASHING, AND SPONGING THE PERITONEUM; RECOVERY.

At the meeting of the Clinical Society of London, on October 28, Mr. Richard Barwell read notes of this case. The man, æt. 42, accustomed to drink a good deal, was admitted into Charing Cross Hospital June 21, 1887. Six days previously he fell and struck the left lower part of the abdomen, but seemed very little hurt. Five days afterwards he, in stooping, felt severe pain in the lower part of the abdomen; he vomited and passed a little very dark-colored urine. (Absence or presence of blood could not be verified.) He went to bed; his abdomen swelled, he passed very little urine; vomited after, and sometimes without, taking food. On admission he was placed in a warm bath; while in it he passed what may, he thinks, have amounted to a wine-glassful of urine. At 2 p.m. Mr. Barwell found him with pinched, anxious countenance, pulse small, hard, and quick, and temperature 100.4° , dry skin, tongue somewhat coated, vomiting, abdomen slightly tender, save in left iliac region, much swollen, very tympanitic quite down to the pubes; tapping it produced a peculiar thrill not like that of flatulence. A No. 12 catheter brought away no urine, even though pressed far back, but the instrument when withdrawn was full of urine deeply stained with blood. June 25. On three occasions 10 ounces of urine had been passed, at first with blood, the last sample free of blood, but slightly albuminous, specific gravity 1022; temperature 89° ; pulse 130; abdomen more distended. It being evident that the man had a bad type of acute peritonitis, Mr. Barwell opened the abdomen in the middle line below the umbilicus. A large quantity of gas, not of feculent odor, escaped. No rupture of any viscus was found, but in its lower part the peritoneum contained a quantity of thick pus. There were no adhesions; parts of the intestines were congested, and the membrane was somewhat thickened. Three sponges passed into the lower part of the cavity were withdrawn covered with tenacious flocculent pus. A smooth-nozzled glass funnel was then deeply introduced, and the part of the cavity washed out with 10 pints of distilled water, temperature 99° , bringing away quantities of pus and flocculi. After sponging, a second smaller

washing and sponging was directed to the upper part. The abdomen was then sewn close without any drain. The whole operation, including the anæsthetic and dressing, lasted an hour. June 26. During the night and day the patient frequently vomited a brown fluid with darker concretæ; pulse rather fuller, 110; abdomen scarcely distended, and tender only in immediate neighborhood of the wound. He was lying flat, save for a small pillow under the knees; said he was quite well, and wanted to go home. July 28. The vomiting slowly decreased during the night; the bowels acted rather copiously four times. The vomiting ceased and all symptoms passed rapidly away. The rest of the history was that of rapid convalescence, the man being very importunate in requesting to be discharged. In his remarks Mr. Barwell, referring to a paper by Mr. Hancock, claimed for Charing Cross Hospital the first conception of the idea of opening the peritoneum for acute peritonitis (*Lancet*, 1848, "Meeting of Medical Society"). He also pointed out that this operation had been performed fourteen times, though the operator had not always known what was the precise nature of the case and the circumstances had been very various, ulcers or rupture of some part of the intestinal tract, or of an ovarian cyst. He emphasized the impossibility of draining the lower part of the peritoneum through a wound in the front of the abdomen, and advised that no drainage-tube should be inserted immediately after operation, but that if distention recurred to remove the lower stitches and permit escape. The presence of a tube, which could not in that position act as a drain, might be injurious rather than beneficial. In the female, drainage *per vaginam* would probably be the most valuable treatment as the best wash, since disinfectant lotions, strong enough to act as germicides, could not be brought into contact with any large surface of the peritoneum without injurious effects, local, systemic, or both.—*British Medical Journal*, November 5, 1887.

THE TREATMENT OF OPHTHALMIA NEONATORUM.

Mules, of the Manchester Eye Hospital, in a Prize Essay published in the *Medical Chronicle* for January, 1888, describes the following treatment:

The mother or nurse should first wash the eyes in warm water to remove the secretion and free the lids. The surgeon should be seated in a convenient chair, with a folded towel across his knees and with medical appliances within reach of his hand. These appliances are: (1) A plentiful supply of pieces of clean rag; (2) solutions of argenti. nit., 5 grs. to oz., and 10 grs. to 1 oz.; (3) vessel of clean water; (4) two camel's-hair pencils to apply the solutions and wash the excess of fluid away; (5) a bottle of eserine, 5 grs. to 1 oz., and dropper; (6) lid elevators. He then receives the head between his knees, yet

supported by the towel. The nurse, tucking the child's legs under her left arm, supports the body on her raised knee, holds the child's hands with one hand, and has the other at liberty to assist the surgeon. The surgeon first proceeds to examine the condition of the cornea by gently raising the upper lid with his finger—if there is any difficulty in this manœuvre he uses an elevator. A bent hair-pin often answers admirably. He next everts the lids, wipes them dry, paints them with the silver solution of the required strength, taking special care to get the *back folds of the conjunctiva*, and washing off the excess of solution with clean water, carefully replaces the lid by drawing them downward and away from the globe. This process is repeated by the surgeon every morning until the disease is arrested, his object being to produce a slight eschar, which either destroys the micro-organisms or prevents their multiplication. The effect lasts about twelve hours. In severe cases the solutions can be re-applied at night. However careful a surgeon may be his efforts are of little avail unless he is ably seconded by the nurse. Her duties are—to prevent the re-collection of pus, by constantly opening the lids and wiping the matter away with clean rags; to wash the conjunctivæ with a weak alum or boracic acid solution, 3 grs. to 1 oz.; to anoint the lid margin with cerate to prevent adherence, and to combat the feverish restlessness by fresh air and careful attention to diet.

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A NEW TREATMENT FOR BOILS AND CARBUNCLES.

The ordinary methods of treating boils and carbuncles by a "free, bold incision" often leads to good results, but the anticipation of this cutting is always such a terror to patients that surgeons would most gladly use a milder treatment, if certain that cure would follow. M. Verneuil, with an experience of half a century, has noticed with interest the different phases through which the treatment of these painful maladies has passed. Following in

the footsteps of his teachers, he freely used the knife, to give it up only when the thermo cautery came into use. Cauterization, with subsequent application of carbolated dressings, gave him such good results that his rule was to use the knife only exceptionally, in the gravest cases, and then to use it unsparingly. In 1883 he observed a case which made him reflect and change his mode of treatment. Since that time he has confined his treatment absolutely to the application of carbolated powders, and these for all kinds of boils and carbuncles, large, small, diabetic, painful or indolent, closed or open, and covered with gangrene. For the small and medium-sized carbuncles, this method of treatment has been very successful, without pain or extension of the inflammation.

THE CANCER-BACILLUS, AND THE SARCOMA-BACILLUS.

The New York Medical Record of February 25th says:

Dr. Carl Francke, assistant to professor Von Ziemssen at the Clinical Institute, at Munich, reports to the Munich Society of Morphology and Physiology that he has confirmed the discovery of Scheuerlen regarding the bacillus of cancer. He has also discovered, himself, a bacillus of sarcoma (*Munch. Med. Wochenschr.*).

Dr. Francke's experiments began last November, and he had already seen and demonstrated the bacillus of sarcoma when Scheuerlen's discovery was announced. Francke has examined nine cancers since then, and in all has observed the carcinoma-bacillus and its spores essentially as described by Scheuerlen.

His observation on the sarcoma-bacillus were based on the examination of three cases. In each instance he found a bacillus which resembled the cancer-bacillus very closely only it was thinner and longer. The cancer-bacillus are, on the average, 2 micro-millimetres long, and 0.4 micro-millimetre broad, while the sarcoma bacillus measures 3 to 4 by 0.4 micro-millimetres. The sarcoma spores also resemble those of carcinoma, except that they are a little larger and have a sharply contoured pole. The two organisms develop alike in culture-media, producing a reddish-brown pigment. Inoculations of the pure cultures of the sarcoma-bacillus have produced no result as yet, but Francke thinks that four weeks is too short a time for sarcoma to develop, and he will make another report later.

PERSONAL.

Dr. McClure, Medical Superintendent of the Montreal General Hospital, has tendered his resignation, to take effect on the 1st of May.

Dr. Geralde Howard, son of Dr. R. P. Howard, Dean of the Faculty of Medicine, McGill University, is to be married on the 8th of March to the adopted daughter of Sir Donald Smith of Montreal. Dr. Geralde Howard's many friends will congratulate him on obtaining as his partner in life a lady so highly esteemed by all who have the pleasure of her acquaintance.

Dr. C. A. Wood (C.M., M.D., Bishop's College 1877), who so ably filled for several years the Chair of Pathology in the Medical Faculty of his Alma Mater on the completion of his course for this session, tendered his resignation, which has been accepted with deep regret. Dr. Wood had gained a most extensive but a very laborious practice, and it was telling seriously on his health. It was therefore necessary for him to cease his work for a time. He early last month proceeded to New York, where in attendance at the Poly-clinics, he devoted his time in special investigation. On the 22nd of this month, Dr. Wood sailed from New York, accompanied by his wife, for Hamburg from whence he will proceed to Berlin. It is his intention to remain abroad two years, during which time he will devote himself to special work, which he will follow in the future. His friends have every reason to believe that he will return to Montreal, and practice his specialty. Dr. Wood was admittedly one of Montreal's brightest medical men, so that his departure was witnessed with regret, and his return will be hailed with enthusiasm. In this issue we publish a letter by Dr. Wood from New York, and our pages will often be enriched with communications from Berlin.

REVIEW.

A synopsis of the Physiological Action of Medicines, prepared for the special use of the Students of the Medical Department of the University of Pennsylvania. By Louis Stare, M.D., and Jas. B. Walker, M.D. Third edition. Philadelphia. P. Blakiston, Son & Co., 1888.

One can hardly imagine why it took three authors to produce this little book of seventy-two pages; but whatever the reason they have suc-

ceeded admirably. In a very small compass they have compressed a vast amount of information on the physiological action of medicines, and have thus rendered medical students their debtors. We advise every student to purchase a copy.

Nasal Polypus, with Neuralgia; Hay Fever and Asthma in relation to Ethmoiditis. By Edward Woakes, M.D., London, Senior Aural Surgeon, and Lecturer on Diseases of the Ear at London Hospital, Surgeon to the London throat Hospital, with illustrations, Philadelphia, P. Blakiston, Son & Co., 1888. Price, \$1.25.

We have examined this work pretty thoroughly, and are satisfied that it is a very important addition to the literature of the subject. He elucidates an entirely new theory as to the origin of Nasal Polypi, if facts which have been patent to his eye can be designated theory. It is a volume which is sure to attract attention, and its perusal will whet the reader's appetite for the fuller volume, which is in course of preparation. It should be very carefully studied by all nasal specialists.

JOSEF HOFMANN.

This is the name of the marvelous boy pianist, who has been creating such a *furor* in New York and Boston, and other places, since last summer. His exact age we cannot give, but it is somewhat in the neighborhood of eight years, and the amount of work he has performed during the last nine months has been prodigious. Almost daily, and almost nightly also, he has performed before large audiences, amid great excitement and corresponding nerve strain. Playing the most difficult compositions of the great masters, improvising and leading orchestres, there has developed in him, as the result of this increased mental activity, a condition of nervous prostration, which threatens to blight a most wonderful genius. According to the *New York Medical Record*, a consultation of medical men has taken place, and the result is that the little fellow has been ordered complete rest. It is to be hoped that this will have the desired effect, but it is a matter of sincere regret that the little fellow has been as it were forced to the very brink of destruction. No matter what the character of the strain, it should fall but gently on a growing child.