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Original Communications.

CHRONIC BRIGHT'S DISEASE.

A Clinical Lecture delivered at the Montreal General Hospital, December 8th, 1885.

By FRANCIS W. CAMPBELL, M.D., L.R.C.P., LOND.,
Dean of, and Professor of the Theory and Practice of Medicine in Bishop's College Faculty of Medicine.

GENTLEMEN.—The patient now before you is 42 years of age, married, and a father. He is by trade a blacksmith, and has been much exposed to heat and sudden chills. His temperament is decidedly strumous, and there are on his legs and arms cicatrices of old ulcers, which I believe were of a strumous character. For the past twenty years he has been a hard drinker, going very often on protracted sprees, though at times he would sober off and not touch liquor for several months. His drink was at first whiskey, but being told that gin was better he took it instead. For the last couple of years he returned to whiskey. His appetite was always bad, but when on sprees would not eat at all, and very little for a considerable time after. About two months ago he noticed that his feet were swollen at night, but that in the morning the swelling was gone. This continued for two or three weeks, when the swelling in the legs increased, and, although lessened by rest in bed, did not disappear in the morning as formerly. Then he noticed that his abdomen was swelling, and that his face on the side on which he slept was swollen when he got out of bed in the morning. About a month ago he came to the Out-door Clinic, and there presented the following condition as taken down by Mr. Punchard,

my clinical clerk: Both legs swollen, up to about three inches above the knee; pressure by the finger causes deep pits; abdomen swollen and tense. Tapping the abdomen with the fingers causes a distinct wave to be communicated to the hand placed flatly on opposite side of abdominal parietes. Scrotum swollen to about the size of an ordinary child's head at birth. Penis all but lost in the swelling; face pale, flabby, and swollen, especially so in the loose areolar tissue under each eye; slight headache; exertion causes slight breathlessness; bowels regular but motions are costive; pulse soft and about 70 per minute. Hepatic dullness if anything slightly decreased. Passing about an average amount of urine, which is of a deep amber color. On examination the urine was found of a sp. gr. of 1030, acid in reaction, and to contain about 60 per cent. of albumen. I placed him on a mixture of liquor ammonia acetatis, tincture of the muriate of iron and tincture of digitalis. The first constituent was given in large doses, so as to act freely on the skin. I was rather afraid of this patient continuing as an out-patient, exposing himself, in his visits to the Hospital, to the cold wind of this season of the year, and advised his coming into Hospital. As he declined, however, I gave him directions to clothe his body very warmly when he visited the Hospital and to select mild days for his visits.

Those who saw him down stairs will to-day notice a marked improvement. The swelling in the legs is not half what it was, the swelling on the scrotum is entirely gone, and the puffiness of the face, as well as its pasty character, have all but disappeared and, in its place, there is a more healthy hue of the skin. The headache is also better, though

it sometimes bothers him yet. He himself declares that he is very much improved, and remarks that he can now walk fairly rapidly without much breathlessness. I will get him to pass some urine and will test it in your presence. The specimen of urine now before you was just passed by the patient, and its sp. gr. is 1025. Its color is not so deep as the specimen he gave us some weeks ago. I have now boiled the urine, and added two or three drops of nitric acid. As you perceive, the amount of albumen has much diminished, there not being now more than 10 per cent. Altogether the case so far, is a most satisfactory one. I look upon it as a case of chronic Bright's disease. The causes of this disease are :

1. Succeeding acute attack. 2. Constant exposure to cold. Wet and sudden changes of temperature. 3. Abuse of alcohol, especially spirits. 4. Constitutional diathesis: (1, gouty; 2, syphilitic; 3, tubercular.) 5. Pregnancy—about 5th to 7th month of utero-gestation. It is met with more in males on account of their exposure.

Symptoms.—Frequent micturition, especially at night, dropsical accumulations, liable to disappear and return, skin deficient in action, dry, rough and harsh, is pale or sallow, shortness of breath. Uneasiness over region of kidney. A headache and dizziness, and serious uremic symptoms may occur at any moment. Derangement of digestion, accompanied with flatulence and constipation, with alternating diarrhoea. There is often gradual loss of sight, and ophthalmological examination of eye shows an albuminuric retinitis and hæmorrhage.

In this disease we meet with several varieties of pathological changes in the kidney :

1. LARGE, WHITE, SMOOTH KIDNEY.

This is met with in cases following an acute attack, or it may come on gradually from taking cold. The organs are large and pale with smooth surfaces. In this variety urine generally deficient, pale, turbid, sometimes smoky—sp. gr. either normal or rather high; contains albumen and various casts, the chief casts being epithelial and granular. Anasarca is a prominent symptom, and effusion into serous cavities. General surface, especially face, is dull, white, puffy, pasty, smooth and glossy.

2. GRANULAR, CONTRACTED OR CIRRHOTIC KIDNEY.

The onset of this form is very chronic and insidious. It is chiefly associated with gout and chronic alcoholism, and in persons well up in years.

The kidney is contracted and atrophied, sometimes only weighs an ounce or two; granulations on the surface. The urine generally abundant, at times very copious, color light, sp. gr. low, amount of albumen slight, sometimes none at all; casts are few, and are generally what are termed hyaline or waxy and granular. Towards the close the urine is scanty, at times suppressed. Generally dropsy is absent; if present is slight; skin is harsh and dry, but not pale, puffy or pasty; face sometimes pinched. There is also marked debility.

3. FATTY KIDNEY.

The kidney is the seat of fatty infiltration, while fatty changes are at the same time going on in other portions of the body—notably the liver. Under the microscope fatty casts are seen.

4. LARDACEOUS OR ALBUMINOID KIDNEY.

Kidneys generally enlarged, surface smooth, consistence tough and hard. There is evidence of previous deposit of albuminoid material in other organs; the kidney only as a rule being secondarily affected. At first urine is very copious, pale, no sediment; low sp. gr., 1005 to 1012. Albumen at first either absent or present in small quantity. Later the albumen becomes abundant and the urine diminishes, and its sp. gr. increases considerably. General dropsy is a prominent symptom. Most cases terminate fatally. Lasts from 6 months to a year and a half; very often some intercurrent disease cuts them off, such as pneumonia, pericarditis and œdema of the glottis.

Treatment.—The therapeutical indications relate to the dropsy and the prevention of uremia. If dropsy is slight saline cathartics, as sulphate of magnesia or sulphate of soda or citrate of magnesia; if effusion of fluid is large what are called hydrogogue cathartics are necessary—as elaterium in $\frac{1}{16}$ to $\frac{1}{4}$ of a grain, every hour till it acts. It should then be at once stopped to prevent vomiting. Gamboge or compound jalap powder, either alone or combined with pot. bitart or 5 to 10 gr. of calomel. Diuretics are not very reliable. Of this class, give pot. bitart., in doses not large enough to purge or potas. acet. with the infusion of digitalis. Infusion of Parsley root said to be very good. An infusion of digitalis $\mathfrak{z}j$ in $\mathfrak{z}xx$ of aqua and applied on spongio-pilira over the kidneys is useful. Digitalis leaves in a linseed poultice also over kidneys.

A liniment of digitalis, iodine and squills, rubbed over the loins and legs often increases the urine enormously. It is apt, however, to produce

soreness of skin. Cannot be continued long. Sudorifics are useful. Hot-air bath; introduce hot-air under the bed-clothes, free perspiration, then cover with plenty of clothes. Care must be taken not to produce prostration. Dover's powders, liquor ammonia acetatis, pilocarpine the active principle of jaborandi.

Punctures, in case of excessive distention of skin and genitals, must be superficial, and not draw blood. The quantity of water which can thus be drawn away is surprising. If erysipelas is prevalent do not puncture; the punctures are apt to be attacked with erysipelas. Look out for uremic symptoms, and treat them actively. They are indicated by somnolence, coma and convulsions; use active purgation and hot-air baths, if they come on. Skim milk treatment is good in all forms; best in large white kidney. Hygienic measures, change to a warm climate and warm woollen clothing. Overtasking of mind or body, exposure to the vicissitudes of the weather, the use of alcoholic liquors, must be interdicted.

WEID OR EPHEMERAL FEVER.

Read before the Medico-Chirurgical Society, Feb. 5, 1884.

By R. A. KENNEDY, M.D.

MR. PRESIDENT AND GENTLEMEN,

In looking over a number of reports of cases of puerperal fever, I found several relating to that condition known as weid, or, as it is sometimes called, ephemeral fever. It has occurred to me to bring this subject before you, as it is not without considerable practical importance from the possibility of mistaking it for that grave obstetrical disease, puerperal fever.

In the different text-books on midwifery but little more than mention is made of the condition vulgarly called weid. Indeed, nearly all these works include it with milk fever, evidently regarding it as an exaggerated state of that disorder. Having, when in charge of the obstetrical department of the Western Hospital met with several severe forms of weid, I have been led to look upon it as something more than an exaggerated milk fever, and something entirely apart from the graver disease, puerperal fever. As a matter of common experience, the first flow of milk is in many cases accompanied by some feverish disturbance, and this is usually termed milk fever. The symptoms and sequence of weid are, however, of such a decided character, that the ordinary denomination of milk

fever does not appear to me a sufficient definition, but rather indicates a mere passing disturbance. On the other hand, the occurrence of a weid with its pronounced stages is apparently an indication that some specific occurrence has been induced.

Older authorities gave the subject some importance, but modern authors, I think, err in assuming its non-existence, some consigning it to oblivion as a "legend no longer to be believed in." No doubt our improved treatment of lying-in patients, and better knowledge of the physiological requirements of lactation, gives us fewer opportunities to observe such cases, for I am sure the older members will agree with me that it was much more common in the earlier days of their practice than it is now. The term Ephemeral Fever is misleading, unless remembered in this restricted sense, because we find the word used in other than obstetric authors to indicate a febricula, or slight fever occurring in children and young persons. The word weid is so widely used by experienced women to designate this specific fever that I am surprised not to find any definition of it in Thomas' New Medical Dictionary; and Dunglison defines it only as "Mastitis or inflammation of the breast, or what is vulgarly called a weid."

I would define a weid as a specific ephemeral fever occurring in women of nervous temperament during the earlier periods of lactation, commencing by severe chill, and ending in profuse diaphoresis, such attacks seldom exceeding twenty-four or thirty-six hours.

That character and temperament favor its development is shown by its occurrence chiefly in patients of the nervous class—such patients, when weakened by loss of blood, want of nourishment, or exhausting labors, to which may be added mental depression, being mostly liable to it. And just such cases are met with entering Hospital or amongst the poor. For the same reasons I have met with it most often from the third to the fifth day coincident with the fluxion occurring in the mammary glands, but under other circumstances I have seen it at much later periods, when the functions of the breasts were fully established. An attack is generally attributed to some exciting cause, such as cold, mental emotion, or some derangement of the stomach or bowels, though usually the patient exhibits some inquietude or slight feverishness for a few days previous, yawning, and stretching, with pains in the limbs and soreness of the breasts. The attack commences with a marked chill, beginning in

the back, between the shoulders, and from there rapidly extending over the body, accompanied with great pain in the head and large joints. This cold stage usually lasts from an hour to an hour and a half and is succeeded by a hot, dry fever. The face is flushed, throbbing temples, rapid pulse, and very high temperature; mental confusion also is present and sometimes active delirium. This soon passes into the third stage in which there occurs a most profuse diaphoresis lasting many hours until, finally, the fever and pains are relieved. Throughout, the tongue is more or less coated and constipation exists. The breasts are sore, but not distended, as the milk is generally suppressed. If the lochial discharge is continuing this is lessened in quantity, and there may be some tenderness over the uterus.

The temperature rarely rises above 103° and the pulse above 100, but in severe cases it may exceed these figures. Very few of these cases occur without some other local complication, but as such are not constant they cannot be looked upon as factors in this complaint. Recurrences are apt to take place, and such often assume a resemblance to intermitting fever.

From the severity of the symptoms a case of the kind might be mistaken for puerperal fever until the marked character of its stages, and period of duration had cleared up the diagnosis. A doubt might also arise on the occurrence of the chill, but enquiry as to the part in which this is first felt will soon enable an opinion to be formed. In my experience this chill differs entirely from anything observed in the cases of puerperal fever which I have treated.

The chill invariably commences in the back, between the shoulders—patients will often indicate the exact spot—and from there it rapidly extends over the entire body. In puerperal fever the chills often are insidious in their approach, slower in extension, not violent, and are first noticed in the extremities. I would draw your attention particularly to this difference not only from a diagnostic point of view, but also as a very strong indication of there, being a radical difference in these two conditions.

It is stated to be due to a septicemic absorption from the uterus, having no connection with the breasts, except that of coincidence, and therefore regarded as a mild form of septicemia or puerperal fever. Such is the view of Playfair and others.

The difference in the character of the chill and its occasional occurrence long after a uterine sep-

sis would be expected, seems to me to disprove this theory, so that I cannot look upon it as a septicemia proper. Leishman, Schroder and other writers agree to its being due solely to over-distension of the breasts. If this is the chief and only offence we would find it an exceedingly common affection in our daily practice, and it would occur more often in Hospital cases, for the majority of such patients never put the child to the breast. Indeed I do not remember to have seen a case other than in nursing women, and in the case to be cited the mother nursed her child up to the time of attack, when it was removed for prudential reasons. Having met with cases at varying periods of lactation, and in some after the functions of the breasts have been well established, the inquiry has naturally suggested itself to me as to the cause of the profound disturbance. I am at a loss for a solution, but have no doubt that it springs from, or is intimately connected with, some abnormal occurrence in the mammary glands. Whether over-distension of the breasts, or, what I have most generally observed, suppression of the secretion of milk develops some change or new product in the fluid, or whether it is due to a reflex action, and therefore, in its nature, a nervous fever only, are matters for discussion. I am inclined to think that both occur, but the latter chiefly. Any exciting cause acting on a patient so predisposed, thereby inducing a sudden disturbance in the activity of glands susceptible of such great sympathetic relations, must affect the whole nervous system very profoundly. The chill seems to point to some such explanation, and is analogous to the rigor occurring after an amputation, or the passage of a catheter, or even urine through the urethra, though here the continuance of the irritation prolongs the chill. The after-stages, especially the profuse diaphoresis, indicate also the deep impression made upon the vaso-motor centres, whilst the shortness in duration of the fever is hardly compatible with septicemia. The following case is condensed from a very full report taken by a student in the Western Hospital:

A. A., æt. 20. S. Admitted Oct. 30th, labor having set in the day previous. On the 31st, at 11 a. m., after a tedious labor, a male child was born. No special difficulties attended her labor. For six weeks before entering hospital she had lived in a cold, damp house and with insufficient food. Prior to this period she had resided in the country, and was always healthy and strong. All through her preg-

nancy she had been particularly well. For the first five days after the child was born no special symptoms occurred beyond a dull pain at the top of the head, with a tendency to restlessness, and the breasts were tender. The child was nursed at the breast up to the time of the attack, when it was removed altogether. Until the attack the temperature had not risen above 100, or the pulse 90.

On Nov. 4th, at 5. a. m., five days after delivery, she was taken with a violent chill. And I now quote the exact words of the report: "This seemed to begin from a spot about as large as a hand, between her shoulders and gradually spread over her body to the extremities. Accompanying the chill a sudden severe pain at the top of the head, just back of the coronal suture, was felt. The headache and chill continued without intermission for the space of about an hour and a half. Warm applications and hot drinks were of no avail against it. About 6.30 the shivering ceased, being immediately followed by a violent fever, great thirst, delirium. Temperature 106; pulse 120, rapid and shallow breathing. Headache still complained of. This state continued for a short time when a profuse perspiration set in, great drops of sweat covering her body; headache and delirium ceased at 9 a. m. She was placed upon tinct aconite. and liq. ammon acet., gradually improving through the day. At two p. m. she felt a slight return of the chill on the right side. Sweating profuse all day, and an uneasy, cold feeling still remaining between the shoulders. At eight p. m. temperature 104; pulse 108. Diet beef tea and broth; the milk was suppressed, breast tender but not distended. Lochia considerably diminished in quantity but not offensive; no marked tenderness of the abdomen.

Nov. 5th (2nd day of fever) 8 a. m., Temperature 105. pulse 100; slept well latter part of night. Says she feels first-rate. Had slight pain on urination, face still flushed, skin hot and moist, no headache or pain elsewhere, great thirst, tongue coated and constipation, respiration slightly hurried and sighing, breast soft and flaccid milk, having been drawn off by breast pump.

No pain in abdomen except on deep pressure, feels soft and involution of uterus progressing normally. Lochia much diminished but not offensive. An enema was given this morning and brought away considerable fecal matters. Treatment continued. To get hot vaginal douches and allowed acidulated drinks. 8 p. m. continues to

improve, temperature 101; pulse 90. Five grains of quinine was given as ordered.

November 6, 8 a. m., Slept well all night, mind clear, no pain; temperature 100, pulse 95, and feels well. Skin hot and moist, tongue clearing, thirst not so marked, breast soft, and not painful. No abdominal pain whatever. Lochial discharge increased. 8 p. m. temperature 100; pulse 96.

From this time onward the patient continued to improve; she was placed upon tonics and nourishing diet, the breast gave no further trouble, the usual ward treatment of ungu. plumbi, Iod. and pressure being carried out. By the 15th she was allowed up daily, being then convalescent.

Progress of Science.

NOTES ON THE USE OF ANTIMONIALS

(J. B. Nias, M.B., M.R.C.P., in the *London Practitioner*.)

Antimony is not at the present date a favorite drug. I have very rarely seen it used, and perhaps should never have been led to use it myself, if I had not read the "First Principles of Medicine" of the late Dr. A. Billing, a text-book old-fashioned now in its terms, and in its references to physiology, but still a most excellent clinical guide.

Dr. Billing's favorite prescription was a combination of tartar emetic with sulphate of magnesia. It is still official in the St. Bartholomew's Hospital Pharmacopœia under the name of haustus antimoni cum magnesiæ sulphate: little used of late years, it was near to being left out, as I learn from Mr. Jeffs, at the last revision. This was the first preparation that I used. From old out-patient letters I find that the first cases in which I employed it were those of patients suffering from acute pleurisy. There come to St. Bartholomew's, as to all London hospitals, numbers of such from among water-side laborers, stokers at gas works, and others who, in their work, are exposed to vicissitudes of temperature; complaining, as is usual, of cough, more or less fever and pain in the side, the latter being pretty severe, and the chief cause of their seeking relief. These men (they are mostly males) are unwilling to lie up. They are not, as a rule, fit cases for admission as in-patients, and of any remedy that hinders them from work they are singularly impatient. In short, one has to try to cure them while letting them go about their work. Viewed by the light of what is expected in private practice, this may appear futile. If one sets to work rightly, it is not so. At the same time one must be prepared to have failure punished by the presence at the next visit of a pint or more of fluid in the pleural cavity; so that inconsiderate treatment, or, what has happened to me, failure in diagnosis, entails considerable trouble. I quote a case combining both faults:

On September 20 last there came to me, at the Western General Dispensary, W.R., aged 59, a strong, healthy, temperate man, employed at a coal wharf on the Paddington canal, complaining of a slight cough without expectoration, great tenderness over the right mamma, pain on moving the arm and a stitch on drawing a deep breath. He thought that he had strained himself when pushing a barge along the canal with a pole, which rested against his right shoulder. No pleural friction sound was detected, or any morbid sound in the lung. He thought he might have been chilled while sweating, but did not remember anything of the kind. Though there were no marks of injury, I accepted his version, and as he was unwilling to lie up, confined myself to ordering belladonna liniment to the side, and a draught three times a day containing 120 grs. sulphate of magnesia, 50 ms. of liquor morphia acetatis, and one drachm of liquor ammoniæ acetatis—not, perhaps, very erroneous treatment, still, if I had recognized the case as one of pleurisy, I should have prescribed otherwise.

On September 27 I saw him again. He had been at work all week, but the pain had compelled him to knock off on one day. His appetite was bad, otherwise he confessed himself easier. I examined his side, and noted a friction sound in the right axillary line at the fifth intercostal space, nothing more. Puzzled, but persisting in my previous diagnosis, I repeated the liniment, changing the medicine for a draught containing one grain of quinine and three grains of iodide of potassium, three times a day.

When next I saw him he had an effusion into the right pleura up to the level of the nipple. I will not detail the progress of the case, except to say he recovered after three weeks' attendance upon him at his home. This case has been a lesson to me. I hold that if a case of simple pleurisy goes on to effusion under the care of a practitioner, he should blame himself largely, if not entirely, for it. The effusion of serum is the second means whereby Nature keeps the inflamed pleural surfaces at rest, if agglutination by lymph has failed; and any one who considers himself a competent practitioner will hold, I think, that he should not let it fail.

In contrast to this case I quote another in which, in spite of misleading appearances, the malady was recognized, and the treatment, in consequence, directed with success:—

On March 10 last, there came to the assistant physician's department at St. Bartholomew's Hospital, where I was acting at the time, R. C., aged 37, a laborer of intemperate habits, depressed in appearance, and with the general look of a broken constitution. Twelve months before he had been in the hospital with pleurisy accompanied by effusion on the right side. His complaint was of pain in the left side under the edge of the ribs; of cough, shortness of breath, and loss of voice; very bad appetite, retching and vomiting on arising in the morning. Tongue flabby, clean at the edges, fur-

red on the dorsum. Bowels very loose. Urine clear, dark, giving much red coloration with nitric acid. Pulse 120, soft, regular. Temperature normal. On the whole, he presented the picture of alcoholic dyspepsia. Physical examination showed traces of old pleurisy at the base of right lung in impaired percussion note, vocal resonance and thrill. At the base of the left lung I noticed doubtful crepitations and friction sound. This ailment had come on gradually for five days; he could not assign any cause for it. He had continued at work until the day before. Diagnosis was made of diaphragmatic pleurisy. He was ordered a large mustard poultice to the left side, and a draught containing one-eighth of a grain of acetate of morphia one eighth grain of tartar emetic, and sixty grs. sulphate of magnesia three times a day. Three days after he returned much better, the pain, friction sound and crepitus gone, complaining only of a little cough and distaste for food. He was given the haustus cinchonæ acidus, and a morphia linctus and continued to improve rapidly until he ceased attendance.

Inconclusive by themselves, these two cases are selected from a series out of which I have been able to draw some conclusions. Had I to treat these cases over again, I should employ the treatment which I employed with the second, feeling certain that I should have met with equal success.

Of local applications I have come to rely on two only: a mustard plaster not less than four inches square, kept on as long as the patient can bear it, and a mild vesication to the same extent with acetum cantharidis, or linimentum saponis compositum, painted on if necessary more than once. Stronger vesication makes a sore long in healing, and is more than is necessary for the cure.

Before, and for some time after I used tartar emetic, I was in the habit of prescribing the hospital mixtures containing acetate of ammonia with camphor water, sulphate of magnesia or vinegar of squill respectively, adding morphia when required, in a manner which may be condemned as routine, but which is in a large hospital found to be unavoidable. The effect of these I found uncertain, the patients as often returning worse as better. I can hardly convey an idea of the confidence with which I permit myself to treat these cases since my adoption of Dr. Billings's mixture. The quantity of antimony employed should not produce any purgative, emetic, or sudorific effects; if it does it should be diminished, or entirely stopped. Its action is to be appreciated by comparison with the use of other drugs. The alleviation of the pain is not due solely to the morphia, nor to the counter-irritant employed. For it appears in cases where neither has been used; and I myself put it down to a restoration of circulation in the inflamed parts, similar to what I have seen produced in more than one case of erysipelas attendant on varicose veins in the leg, where the same remedy was employed.

Antimony appears to be a tonic to several nerve-centres in the medulla (a point to which I shall

again refer), among them to the vaso motor; an action which is reversed by poisonous doses. That it has also a local action on the blood-vessels I think highly probable, but am unable to define in terms of physiology what that action is. My belief in the existence of such a property, however, led me to try the drug in a case of pleurisy with effusion, in the hope of favoring absorption; after the manner in which mercury used to be prescribed. The result was successful: how far it was due to the treatment cannot with certainty be pronounced. —

H. C., aged fourteen, walked to Mortlake from Paddington to see the Oxford and Cambridge boat-race; and, arrived there, while heated sat down upon the grass. On the way home he felt chilly and giddy and sick; the same evening he had rigors, and a cough appeared. On April 2nd he was brought to me at the Western General Dispensary, and was found to have an effusion in the right pleural cavity to the level of the nipple. His heart was displaced one inch to the left. The temperature was $102^{\circ}.4$. The pulse beat 130 to the minute. I ordered mustard poultices to the right side, and a draught containing 15 ms. of antimonial wine, that is 1-16 gr. of tartar emetic, and 60 grs. of sulphate of magnesia in an ounce of spearmint water three times a day. He was also to take a teaspoonful of the dispensary linctus when the cough was troublesome; to have low diet, and to stay in bed. On April 4th I visited him at his home. I found him much easier, the cough much less, the temperature 101° ; the bowels were inclined to be loose. Absence of appetite was the chief thing complained of. This I have noticed in nearly every case in which I have given antimony for a day or so. It is not by the patient's description, nausea, nor the anorexy of fever, but a "feeling of not being ready for the meal when it arrives." Being a spoilt child, he had not allowed his mother to keep on the poultices, and they produced little effect, not reddening the skin. The mixture was continued in half the dose. On the 8th he professed himself quite well. His heart had receded to its normal situation. The area of dulness to percussion had diminished by one inch. Vocal vibration was restored, nearly equal to that of the healthy side. Moist râles were heard over base of right lung. He had refused to stay in bed, and had made himself sick on raw apples; the consequent stomach-ache was his sole complaint. I will not detail the subsequent progress of the case; his recovery was complete and rapid. Ten days afterward there remained of the effusion no sign but a flatness of the percussion note, and rhonchi with an occasional friction sound over the affected area. He continued on the same medicine throughout.

Now, though an advocate for the removal by aspiration of the pleural effusions, whenever practicable, I find that it is often not possible to persuade those who are treated at their own homes to

submit to the operation: and in such cases any drug which is reputed to promote absorption should receive a trial. The impression left on my mind by this case is that the antimony did act, as mercury is reputed to act, as an absorbent, and at my next opportunity I will repeat the trial.

Whilst following the practice of the Paris hospitals, I several times witnessed good results from a practice of M. Jaccoud's at the Hopital de la Pitié. In cases of serous inflammation complicating rheumatic fever, where he apprehends effusion, he prescribes 30 centigrammes of tartar emetic in 100 grammes of julep, a tablespoonful every hour until the whole has been taken. This produces vomiting and diarrhæa, which cease towards evening. Then the patient receives three grammes (I may misstate the quantity) of extract of cinchona in a cordial. In one case, the subject of a clinical lecture, as a result of this treatment, an effusion had disappeared by the next day. On the day after it reappeared, and the evening temperature rose to 39.4 C. The treatment was repeated with a dose of only 20 centigrammes of tartar emetic, with relief. It was finally necessary in this case to repeat the treatment four successive times, always with a day's interval between each. This is M. Jaccoud's rule: not to trust the benefit obtained on the first day, unless the following morning and evening temperatures be normal. If not, the prescription is repeated on the third day with a diminished dose of tartar emetic; and when the symptoms are subdued, the previous treatment of the joint affection is resumed.

Of thirteen cases of acute rheumatism, complicated with effusions into the cavities of the chest or meninges, and treated with salicylate of soda, in the course of the year 1877, three died. In 1882, of 23 cases similarly complicated, treated, as is above described, he lost one. A decidedly good result. It is generally supposed in England that the treatment of medical cases at least, in France is nihilistic and inefficient; but in dangerous crises it is as energetic or more so than ours, and on the whole justified by the result. I left Paris with more faith in antiphlogistic remedies than I possessed when I went there. It is the general custom in England to leave effusion in the serous cavities, complicating rheumatic fever, alone; some few blisters or abstraction of blood. Aspiration is generally avoided, I believe. Therefore I think this practice of M. Jaccoud should be recorded in the list of remedies.

Though vomiting and purging take the principal part in this treatment, an impression doubtless is also made on the system by the antimony absorbed, by which the course of the disease is permanently modified, a modification which would not be effected by any simply vomito-purgative drug. I cannot render my meaning more plain than by relating the following case:

On February 16th last I was asked by the gentleman who was at that time acting as house surgeon to the Western General Dispensary to see I

W., a carman aged 33, an old patient, but who for his present illness had been under treatment four days only, and was progressing badly. Going to the house at once, I found him in bed, propped up with pillows, gasping for breath, his lips swollen and purple, his tongue the same, so large that he could hardly protrude it, and covered with flakes of yellow fur; his face ghastly, dusky and puffy; his eyes glistening and congested. The pulse beat 100 in a minute, large, heaving, regular. The respirations were 40 in the minute. All over the chest were loud, moist rhonchi. The percussion note was good throughout. The pulse of tricuspid regurgitation showed in the jugular veins. I have never, even afterwards, completely satisfied myself as to the lesions in his heart: mitral and tricuspid regurgitation there certainly were; whether there was aortic too I could not decide. All that I made out at the time was that the apex beat was one inch outside the nipple line, and a strong pulsation in the epigastrium. The action of the heart was forcible, tumultuous; both sounds prolonged and indistinct, without diastolic pause. His legs and his hands were œdematous and cold. For some nights he had not slept for fear of suffocation. He complained greatly of wishing to be sick, wanting solid food (which had been forbidden), as it eased the sensations in his stomach and refusing slops. Poultices (which had been ordered) suffocated him, he said; and if the case had not been so serious, it would have been laughable to see, what I once saw on my entrance, the nurse holding a large jacket poultice and his wife a basin of broth, beseeching him to be reasonable and to take what was ordered. That the man was likely to die in a few hours of cardiac dyspnoea, unless promptly relieved, was very plain. He had been taking from the first a mixture containing 5 grains ammonium carbonate, 8 ms. tincture digitalis, sulphuric ether $1\frac{1}{2}$ drachms, infusion of senegas one ounce, every three hours. Sixty grains of compound jalap powder had been ordered on the 12th without producing any effect, also brandy four ounces a day. This stimulating treatment had, apparently, increased the congestion. I thought venesection indicated, but difficulties were in the way. I therefore decided on an emetic, having read of its efficacy in similar cases. From fear of overdoing it, I prescribed what proved barely sufficient. For I ordered antimonial wine fʒss, ipecacuanha wine fʒii, in sufficient water, to be taken at once, and when it should have acted a draught of spirit of ether and aromatic spirit of ammonia, of each fʒss, in water in case he should faint; and, for food, toast, and a brandy-and-egg mixture. And then I took my leave, telling the friends that I had very little hopes of his recovery. Next morning I called, fearing to find him dead. What was my comfort to find him propped up on his pillows, soundly sleeping, sweating copiously, and learned that the emetic had been taken about noon but had not produced vomiting, only two fluid motions. In accordance with my instructions,

they had waited for the vomiting before giving him any food or medicine, so that he had been until the evening without taking any. Then he had taken of both and fell asleep, and slept for several hours. I woke him up by listening to his chest. He professed himself much better, the feeling of nausea was gone, and he asked for a chop for dinner. The tongue in particular had shrunk to half the size it was on the previous day. The chest signs were unchanged, and the dropsy not diminished. He was ordered a hot bottle to the feet, the foot of the bed to be raised, to continue the ether draught, and to have the chop for dinner. On the next day but one, the 19th, I found he must needs get up to sit near the open window for fresh air (fortunately the weather was mild and fine), professing himself comfortable. He ultimately recovered, and went back to his work.

Now here was a case in which a very small quantity of tartar emetic, one-eighth of a grain, aided by the equivalent of six grains of ipecacuanha, which may be taken as another eighth of a grain of tartar emetic, sufficed to produce a radical alteration in a malady. The symptoms pointed to his stomach being congested, full of mucus and saliva, and distended with flatus, by which digestion was prevented and respiration was impeded, and the rest of the alimentary canal no doubt was in a similar condition. Partial though the action of the remedy was, it cleared the bowels. No doubt it depleted the blood of a certain quantity of serum, and so prevented further exudation into the bronchi. But it did more: it gave the patient several hours' sleep, and a feeling of comfort and safety which he had not had. This means that his system had not been enabled to accommodate itself to his impaired circulation and hæmatisis until time had been gained to improve them. And the satisfactory conduct of his digestion on the following day shows that the mucous membrane of his alimentary canal had nearly resumed its natural state. Stimulating drugs and a considerable quantity of alcohol and liquids were simply embarrassing this man's malady; and I have no doubt now, looking back at the case, that venesection also would have fulfilled some of the indications of the case; though not, I think, everything that was performed by the tartar emetic practically unaided.

Ipecacuanha resembles antimony in nearly every respect. We are recommended it in preference to the latter, when we require a milder action. This milder action, I believe, is due to a deficiency of emetin in the specimen used, and when the powder is administered in bulk, to the necessity of its extraction by the gastric juice. The experiments of Dr. Duckworth with emetin, related in Vol. V. of the St. Bartholomew Hospital Reports, show that its toxic action is powerful and very similar to that of antimony. As long as the high price of emetin excludes it from general use, it is very desirable that the galenic preparations should be standardised before sale. The use of ipecacuanha in powder as an emetic is wasteful,

and when the stomach, as in the case of J. W., is not in a condition to secrete, its action is tardy or wanting. From these defects tartar emetic is free, and a judicious alteration in the amounts of the doses prescribed by the *Pharmacopœia* would reveal merits now denied to it. Its purgative effect is an additional advantage, and one that is often overlooked in its use.

Before passing from tartar emetic I would draw attention to the benefit which medical men may derive from a study of veterinary practice. Veterinary practice is simply a vast field of pathological experiments untrammelled by Vivisection Acts, and the use of antimony as a tonic, familiar to every groom, is worthy our best attention. Its effects, thus used, are exactly those of arsenic as currently related, upon the Styrian arsenic eaters; improvement of the wind, of the circulation, of the functions of the skin, increase in weight, and plumpness of the muscles, the latter being probably the result of diminished tissue change.

Many preparations, all formed by oxidation of the sulphide of antimony, such as the kermes, the glass of antimony, and the golden sulphide have been official, as also various antimonites and antimonites. All these may be found described in Hooper's Medical Dictionary and similar works. Uncertain by their composition, and by their modes of preparation, they have fallen into disuse. They depend for solution on the acid of the stomach for absorption; whence, as is well-known, violent irritant effects often followed their introduction when accompanied by acid medicines or solid food. The oxide of antimony, which seems to be the active part of all, has superseded them. To this James' powder owes its efficacy, but is reputed, and as far as my experience goes, justly, far superior to the *pulvis antimonialis* of the *Pharmacopœia*, which is a simple mixture of the oxide with phosphate of lime. This is, I think, due to the physical condition of the ingredients of the proprietary powder, being more apt to excite the flow of solvent fluid, taken as the powder usually is, on an empty stomach, at bedtime.

For the production of diaphoresis this slow absorption of a considerable quantity of antimony is better than a single minute dose of tartar emetic more quickly absorbed. The same object is attained by administering Dover's powder in a solid form, instead of presenting the active ingredients to the stomach in solution. Trousseau and Pidoux point out that the sedative effects of antimony are greatly aided by low diet, and that with full diet its irritative qualities appear. Depletion aids similarly, so that the most favorable results in sedation are to be observed in those on whom depletion can be most safely practiced, namely, male adults. Trousseau believed strongly in alteration of the constitution of diseases, and I will refer to the article quoted for some interesting notes of the consequent alterations which he found necessary in the prescription of antimonials. I owe to witnessing the practice of my colleague,

Dr. Stocker, at the Western General Dispensary, my first use of the *pulvis antimonialis* and the James' powder, both of which have been to me the means, alone or combined with other drugs, of conferring many a good night's rest.

Antimony is not an anodyne, and is, therefore, useless against pain. Nor do I anticipate much benefit from it in delirium, from the slightness of its action on the cerebrum; though I am not unmindful of Graves' combination of it with opium for his fever cases. But it possesses a tonic action on the medulla similar to that of zinc, of phosphorus, of atropine, and of picrotoxine; by which it is indicated in cases where wakefulness is due to exhaustion, alone or as an adjunct to alcohol and opium. The sudorific action for which this preparation is noted depends, I think, on the stimulation, mainly of the sweat centres in the medulla, but also, without doubt, of the sweat glands and their distributed nerves. In harmony with this idea is the fact, which I have often noticed, that antimonial powder checks the night sweats of phthisis; which is also a property of Dover's powder and of alcohol. By Dr. Bunton these sweats have been shown to be most probably due to exhaustion of the respiratory centre by coughing, aided by a reduction in the area of functional tissue in the lungs; by which carbonic acid is permitted to accumulate in the blood, and to produce that sweating which is one of its poisonous symptoms. Thus it is that very diverse drugs, all of which possess the power of raising the tone of the nerve centers, may have a common use. I cannot do better than quote an illustrative case:

There came to me at the Western General Dispensary on August 30th last, Eliza H——, unmarried, aged 29, a shirt maker, born in London. All her brothers and sisters died in infancy. She has long been subject to cough, and now complains that it is worse, with much yellow phlegm. She has lost her voice, and has night sweats. Examination showed her chest to be barrel-shaped, with a very limited range of expansion; "breathes with her diaphragm," says my note. The respiratory sounds were very feeble at the apex of the right lung, and the expiratory sound was morbidly prolonged; moist crepitus extended from the apex to the nipple. The heart's action was rapid and feeble. She was ordered a draught containing 1 gr. of sulphate of iron, 10 grs. of sulphate of magnesia, 5 ms. of dilute sulphuric acid, three times a day; at bedtime, a powder of three grains of liquorice with one of *pulvis antimonialis*. Seen September 6th for me by Dr. Stoker, who noted "much better" and repeated powder mixture. On the 10th I saw her myself, and noted "much better; no night sweats now; very little cough; complains of bad appetite;" that is, the curious absence of the proper sensation at meal time, which I have above noticed. I therefore discontinued the antimonial powder, and repeated the draught with two grains of sulphate of iron, and two grains of sulphate of quinine. She did not come again.

A drug which is a most suitable adjuvant to antimony, where cough is present, is conium. It has been under a cloud since Dr. Harley's examination of its properties, and passes for one of the most inert articles in the Pharmacopœia. Doubtless, its effects are variable, since they are due to a very volatile alkaloid; this, however, is a reason not for abandoning the use of the drug, but for rendering its composition more uniform. The action of conium on sensation resembles that of curare and of camphor; it paralyzes nerve endings, both motor and sensory. Now it is plain that a drug which heightens the action of the respiratory centre will probably renew the cough, which had exhausted that centre; to it we may therefore very conveniently add one which will numb to the required degree the nerves that are distributed to the point of irritation. Opium and alcohol both have this anæsthetic property; atropine and hyoscyamine to a much less extent. All, no doubt, have seen cases of phthisis in which atropia has arrested the sweats, without conferring relief from cough; or has even increased it. I take this to be the physiological explanation of the favorite combination of camphor with hyoscyamus. As a tranquillising remedy in various affections, I have certainly witnessed excellent results from the addition of 4 or 5 grs. of extract of conium to antimonial or James' powder.

In this paper I have not sought to advance new theories so much as to draw attention to the neglect of a remedy which has held a place in therapeutics for a very long time, and which has enjoyed the favor of the greatest physicians. What was sanctioned by Sydenham, by Huxham, and by Trousseau, must be possessed of qualities which should challenge our attention. Like my knowledge the notes are not exhaustive; I hope hereafter to extend both.

MODERN METHODS OF TREATMENT OF PULMONARY PHTHISIS.*

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A Clinical Lecture delivered at the Bellevue Hospital Medical College, October 27, 1885.

GENTLEMEN:—The subject of my lecture before you to-day is to me a most interesting one. It is especially attractive because I believe, by the general adoption among practitioners of the means to be referred to, a positive and great benefit may be afforded to a vast number of individuals who are now sufferers from an otherwise almost hopeless disease. Let me say to you, at the beginning of my remarks, so as to avoid any possible misapprehension, that I am of the opinion at the present time, just as much as ever before, that all the usual means of treatment in pulmonary phthisis which have been proved to be practically useful are none the less advantageous because something

newer and further can be added. By all means advise your phthisical patients to observe strictly well-determined hygienic rules—to breathe, habitually if possible, a high, dry, pure, equable atmosphere; give them cod-liver oil, as much as they can properly digest and assimilate; let all undue mental and physical fatigue be eliminated, if it may be, from their daily existence; locate them in a large, sunny, well-ventilated apartments; see to it that their food and drink are nutritious and suitable—in short, do whatever you can to retard the march of disease in the lungs or to promote and obtain absolute cure. Admitted, then, that this plain duty is set before us; admitted that what our classical text-books teach is sound doctrine, and should be unerringly followed, still, may we not go beyond their teachings and try new methods which reason encourages and clinical observation and experience obviously support?

The answer is evident. The three methods, then to which I call your attention, taken in the rank of what I believe to be their relative importance are—

1. Increased alimentation.
2. Continuous antiseptic inhalations.
3. Intra-pulmonary injections.

One of the symptoms most to be dreaded in the course of pulmonary phthisis is anorexia. When this condition is insurmountable, the patient's condition is well-nigh hopeless. Food must be taken so as to preserve life. But at times the repugnance to food is so great among phthisical patients that they turn from it in sheer disgust. No matter how temptingly the dish is prepared, there still remains the inability to swallow it. Now, then, how can the appetite be awakened, especially when its complete absence is already feared at an early stage of pulmonary phthisis? Of course, we may, and should, first try the different vegetable bitters combined or not, with an acid or an alkali; but if these fail—and very often they will, despite our best directed endeavor—what then shall we do?

Under these circumstances, and in view of what my reading and personal experience show me I now recommend *washing out the stomach* by means of a soft-rubber tube connected with a funnel. After a very short period—sometimes within a few days from the time daily washing is begun—the patient will gladly say that his appetite is already much improved. Take another instance—that for example, of a patient whose appetite is not good, it is true, but who, nevertheless, forces himself to eat, and who within a few minutes or hours after food is taken voluntarily, vomits it up. How are such patients to be treated? As I have said in regard to my first exampled—by washing out the stomach daily until stomachal tolerance is, at least, acquired for easily-assimilable food. Further, there is a class of cases in which the anorexia is only moderate and the power of digestion for food not completely lost. Of course, it is an effort to eat, and there is certainly no desire for food. Besides, soon after food is swallowed the

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patient suffers from weight or pain in the stomach, acid eructations or extreme flatulence, which are about equally unpleasant, and render the patient unwilling to eat food unless forced to do so by his own convictions or the urgent appeals of friends. Manifestly, in these instances the patients do not take sufficient food, or do not assimilate it well enough to hold their own, far less to repair the daily damages that are affected by the wasting disease of which they are victims. Here, again, I counsel daily washing of the stomach. In the beginning I do not advise so-called forced feeding by means of the soft rubber tube. I believe it is wiser, in many instances, to wait some days before commencing alimentation in this manner; still, there are exceptions. In certain cases, even after repeated washing of the stomach, the patient will be unable to retain food after swallowing it. He may feel that he needs food, and he may be perfectly willing to take it, and yet every time he attempts to swallow even a few mouthfuls, the food is almost instantly rejected by an effort of retching or vomiting.

Singular to say, the mere act of swallowing appears sometimes to occasion the subsequent feeling of nausea and vomiting. If we introduce food into the stomach with the stomach tube, even in tolerably large quantities, the food is retained, and not only is it retained, but it is digested and assimilated, and the patient soon feels better and stronger. And with the repeated administration of food in this manner the appetite returns by degrees and in a relatively short time, and the stomachal digestion continues daily to improve. After the lapse of several weeks, a month or two, or perhaps longer, daily washings of the stomach are no longer necessary. These may be repeated at longer intervals, finally to be stopped altogether. In regard to the forced feeding, it is somewhat different. The rule is to super-aliment, if possible—to give the patient more than he can possibly crave or desire, to make him digest and assimilate more food than he would be willing to, or, indeed, could swallow. Now, this may be accomplished by pouring into the stomach once, twice or even three times a day milk, milk and eggs, milk, eggs and beef peptonoids, in smaller or larger quantity. The main indication is, after all, to *stuff* the patient to his or her utmost capacity, short of causing actual distress or incompetence on the part of the digestive organs.

It is again, a remarkable fact, that, within an hour or two after the time when a pint or two of milk, two or three eggs, half to an ounce of beef peptonoids have been poured into the stomach of a phthical patient, he or she will have quite as good appetite as, if not better than, there would have been if no nutriment had been taken. When this forced alimentation, together with the regular daily meals, has been continued for some days, the patient's weight will commence slowly to increase; and, so far as his general condition is concerned, it will be manifestly improved. While this is true

—and although flesh and muscular vigor are both obviously on the increase—the intra-pulmonary condition will remain absolutely stationary. It may also progress slowly or rapidly. It may, fortunately, become retrogressive and markedly improved. An instance of the former kind was fully reported by me last June, at a meeting of the American Laryngological Association, and I do not wish at the present time to repeat this history. I have not been able to bring before you to-day a case of pulmonary phthisis in which washing the stomach and forced alimentation are being carried out, although I have two such cases (in women) under my care at St. Luke's Hospital.

In place of *cases of phthisis* being thus treated and in order to show you the ease and effectiveness of the plan of *forced alimentation*, allow me to present to you this man. The patient, J. P., is forty years old, single and a cigar-maker. He has suffered for a long while from asthma that followed a bronchial attack, which occurred during the war of the Rebellion. He has had dyspepsia during three years, which has frequently been accompanied by vomiting of very offensive liquids. Occasionally he has felt much depressed, and even ill, from the repetition and severity of these paroxysms. All the food he ate lay like a dead weight on his stomach or gave him intense pain. His power of digestion seemed completely gone, and he suffered continued misery unless he recurred almost daily to the use of purgative pills. In this case the stomach-pump was first used on October 22, 1885, and the stomach washed out thoroughly with warm water slightly alkalized by means of borax. After the first washing, twenty-two ounces of milk were poured into the stomach and easily retained. The operation of washing and feeding with the tube has been repeated twice since, until to-day (October 27th), and to the milk two or three eggs have been added. Already affirms, as you hear, that he has now no pain in his stomach after eating, that food does not lie as a load in his epigastrium, and his appetite has improved. Yesterday he ate and digested some meat without difficulty, which is the first experience of this kind he has had within several months.

Now, then, what this man states I have heard repeatedly before, and had several light cases under my care at different times. For your benefit I will now show you how easily my patient swallows his tube, how easily his stomach is washed out and how acceptable milk received into his stomach through the tube appears to be. A word or two, before I leave this subject, in regard, 1, to the apparatus employed; 2, to the best manner of using it. Simple instruments are often the best, and so it is in this instance. The instrument I show you is, in my opinion, the best one for combined washing and feeding with which I am acquainted. There are several—others invented or modified by different physicians—each one having its special advantage, perhaps, but each somewhat complicated; at all events, none

quite so simple as the one here shown, which, to all intents, is little more than a long rubber flexible tube, with a vulcanite funnel at one end. To be more particular, I would add that the stomach-tube is similar, except for increased calibre and length, to those made by Tiemann or Ford for catheterization of the urethra. This one is twenty-eight inches long and about one-third of an inch in diameter. It is connected at its proximal extremity, by means of two inches of glass tubing, with a soft rubber tubing of similar size, five feet in length. This latter piece of tubing is terminated by a funnel.

The stomach-tube may be dipped into warm water before passing it, in order to lubricate its surface or make its passage easier. It is then introduced in the median line beyond the base of the tongue, and the patient is told to swallow. At each repeated effort of deglutition the catheter is pushed further on, until from eighteen to twenty-one inches are introduced. We are then quite sure the tube has penetrated into the stomach beyond the "eyes" by which the food pours into the stomach. So soon as this is accomplished, we raise the funnel to a suitable height—usually the level of the patient's head is sufficient—and pour into it slowly water of about blood-heat, or a little warmer—with the addition of borax. The proportion of the latter may be one drachm to two quarts of water. When we have poured about a pint of fluid into the stomach, or when the patient himself makes a sign, or says that his stomach feels distended, we quickly lower the funnel near the floor while *pinching* the soft tube near the funnel with the index finger and thumb of the right hand, so as to retain fluid in the entire length of the tube. So soon as the funnel is lowered into an empty receiving-vessel, on the ground, pressure on the tube is relaxed, and the water containing the washings from the stomach is siphoned off. After repeated washings, or until the stomach is quite clean and the water comes away clear, we pour in the alimentary substances in the same manner we did the hot water for washing. In withdrawing the stomach-tube we should do it quite rapidly, in order to avoid possible rejection of the food. We should also pinch the tube near its proximal extremity in withdrawing it, so that none of its contents will fall upon the carpet or floor.

Of course it is understood that the daily washing of the stomach should take place in the early morning or at a time when it is comparatively or entirely free from food; otherwise, the tube is liable to be choked up by bits of undigested food. Besides, such pieces may be rejected alongside the tube, and possibly become impacted in the larynx or trachea, causing symptoms of asphyxia. Whenever it is inconvenient to perform the washing at a very early hour in the morning, the patient may be allowed some peptonized milk, and the washing may then be delayed for an hour or two. After a certain number of washings, the

patient himself may be able to accomplish this little feat quite as well as the doctor. As regards the mere passage of the tube, he frequently learns how to introduce it with greater ease to himself than the physician can command, and, while introducing the tube is perfectly able to make a passing intelligible remark or two.

We now come to the second part of our lecture, viz., the subject of *Continuous Antiseptic Inhalations*. This, gentlemen, has been a subject which I have studied very attentively during the past two or three years. I have examined many different kinds of oro-nasal inhalers, but I know of none so simple, so cheap and so effective as the one I have in my hand. These inhalers were originally made in London, and sold by Squire. I imported a large number of them for use at the New York Hospital, in the out-patient department, and within a brief period, finding them so useful, I have requested Mr. Ford, of Caswell, Hazard & Co., to manufacture a lot for sale to the public generally. The inhaler itself is nothing but a simple sheet of light zinc perforated with numerous small holes and bent into a somewhat pyramidal shape of suitable size to cover the nose and mouth. The apex of the pyramid—which is the part of the inhaler furthest separated from the mouth and nares—contains a small sponge, held in place by thread upon which the inhalant is poured. The inhaler is held fixed before the nose and mouth by two light elastics, which go around the ears.

I have employed, at different times, a large number of inhaling fluids, and many different combinations. The fluid and combination to which I now give the preference is creasote and alcohol, equal parts, to which I also frequently add a like proportion of spirits of chloroform. This combination is certainly very useful in allaying cough and modifying the quantity and quality of the sputa in pulmonary phthisis. I therefore recommend it very warmly. The alcohol is added to the creasote for the double purpose of diluting it and making it more volatile; the spirits of chloroform are added, in view of the experience of Dr. Cohen, of Philadelphia, to diminish local irritation and excessive cough. The inhaler must not be worn too long at first, nor should too much fluid be poured on the sponge at any single time. In either event, instead of giving relief, disturbance is caused; the throat is rendered more irritable, and the patient complains of increased soreness and tightness in the chest. Properly and judiciously employed, the creasote inhalant relieves symptoms notably, and in the beginning, at least, of pulmonary phthisis is, I believe, a means of decided utility so far as the possible arrest of the disease is concerned. It is important that beechwood creasote be employed. At first the inhaler should be worn ten to fifteen minutes every two or three hours; afterward, it may be worn half an hour or an hour at a time, or even longer. When the length of time is gradually increased, only positive benefit will result. From ten to twenty

drops of fluid should be added to the sponge at any one time. If more is added, it will cause undue irritation. The fluid should not be poured on the sponge more than two or three times in twenty-four hours. Precisely the way in which creasote is most useful is, perhaps, difficult to state. By its antiseptic action, it is possibly destructive of bacilli; by its local action and general effect, it is certainly of value in combating catarrhal conditions. Where purulent cavities exist, it tends to destroy or neutralize putridity. These are certainly sufficiently good reasons for its use without pursuing the enquiry further. At all events, these inhalations do good. The physician notices it and the patient affirms it. In many instances they allay cough better than any cough-mixture, and they are certainly free from great objection of destroying appetite, as opium and morphine so frequently do.

We now come to the third and last topic of to-day's lecture and that is, *The Utility of Intra-pulmonary Injections in Pulmonary Phthisis*. I, for one, gentlemen, believe they do good. I also believe they rarely do any harm. They may occasion localized pleuritis, slight hæmoptisis or cutaneous emphysema—but that is about all. They certainly allay cough, diminish the quantity and change the character of the sputa, and in some remarkable manner, have at times manifest power in lessening the distressing symptom *dyspnoea*. This method of treating lung cavities was first employed in this country by Professor Pepper in 1874; since that time, and except by Dr. Pepper himself, I am not aware that any one but myself has practiced these injections any considerable number of times. I have now made between forty and fifty intra-pulmonary injections, and am disposed to continue them in favorable cases. Of course, it is often a difficult thing to follow up any particular line of treatment in private or hospital practice on account of the prejudices or fears of patients. Thus it is with intra-pulmonary injections and in a similar degree, perhaps, with forced alimentation already fully described. Whenever this little operation can be performed, it is, in reality, a very simple matter.

The point of a fine cannulated needle should be inserted in the first, second or third intercostal spaces, anteriorly, or in the axillary region. While there is no risk in making injections upon or outside of a vertical line passing through the nipple on either side, there is danger in injecting at any measurable distance within this line, for fear lest we penetrate the pericardium or one of the great thoracic vessels. The needle should be inserted from two and a half to three inches. Of course, if considered necessary, the slight pain of the puncture may be annulled by the use of local anæsthesia. I have made use of iodine usually in my injections, and am now employing a solution of the compound tincture, of the strength of one part to four parts of distilled water. From ten to twenty minims may be injected upon each occa-

sion, and the injection may be advantageously repeated in four or five days. Previous to the introduction of the needle of the Pravaz syringe, the patient fully expands his lungs, and retains the air in them during the few moments it takes to make the injection. Slight or moderate cough, some expectoration, streaked or not with blood, may follow the injection, and for a day or two there may be slight localized pain in the region where the injection was made. Further than these symptoms, little or no reaction accompanies or follows the injections. In many cases, as in that of the man whose chest I have just injected for the *third* time within ten days, there is no reaction whatsoever at the time of the injection, inasmuch as he does not even cough. I have told you this patient has a cavity at the right apex.

One of the gentlemen wishes to know how I am assured that the point of my needle has penetrated the cavity. The answer is very simple: By giving a slight movement in different directions to the body of the syringe, we can readily appreciate whether or not the point of the needle encounters any resistance, or is perfectly movable in an empty space, or one only partially filled with semi-fluid material. But, presuming for a moment that I cannot be always confident that I have struck the cavity, does it matter? Practically, and according to me, no. That is to say, if you fear any bad results simply because the injection has been made into solidified tissue about the cavity. Indeed, I am more and more convinced that the best indication for these injections is in cases where the apices are *solidified*, and not *softened*. I am borne out in this belief by my own experience. I have already injected in nearly as many cases of phthisical infiltration at its first stage as at a later period, and I have ordinarily seen apparent benefit result. As to the slight accidents that do occur, they can be easily allayed by an anodyne, external irritation of the chest or rest in bed for a day or two. Of course, when we inject a cavity, we have distinct objects in view, and, if we do not reach the cavity, we fall short of doing what we purposed to do. These objects are, mainly, to disinfect the sputa and to modify the walls of the cavity, so that it will, little by little, tend to close up and cicatrize; and, in producing this result, we shall also expect the amount and character of the secretions from the lung cavity to be sensibly changed for the better. When we inject solidified lung tissue we expect something very different. If there is an underlying inflammatory cause, in very many cases of phthisis—and I still believe there is—we shall modify this inflammatory exudation considerably. We shall, perhaps produce such changes in it as to render it fluid and easier of resorption or expectoration. As to the influence of iodine or other injections on the growth or vitality of bacilli, I have yet no very positive and determined views—any more, indeed, at this moment, than I feel perfectly sure in regard to the real, active rôle of the bacillus itself. Only a few months ago, the chorus

of the supporters of Koch was somewhat after this fashion :

"What is consumption? The bacillus.

What is the bacillus? Consumption.

But what causes consumption? Why, the bacillus.

But what causes the bacillus? Consumption?"

And now I ask, in the words of Professor Loomis, "whether they [these microbes] are the *cause* or the *scavengers* of disease?"

Clinically, of one thing I am quite confident, viz., intra-pulmonary injections of iodine benefit phthisical sufferers. Why not, therefore, give them the opportunity of the treatment, and await patiently the auspicious day when even changing theory may be wholly favorable to their use.

In conclusion, let me urge upon you all to earnestly consider the facts brought to your attention in this lecture. It is a subject pregnant with the most vital interest. Our hospitals and dispensaries show a fearful death-rate from phthisis. Ordinary methods of treatment are confessedly disheartening, by reason of their very slight influence in arresting the march of a dread disease, when, moreover, the odds are, for other and manifest reasons, many against the poor sufferers.

I have studied with you a series of topics which makes me more hopeful of what I may be able to do for the arrest or cure of pulmonary phthisis. In this line of research may all of you find renewed courage and conviction. Perhaps some one among my hearers may yet discover the "arcana" of science in its conflict with this destroyer of our fellows.—*College and Clinical Record.*

ON THE THERAPEUTICS OF NASAL DISEASES.*

BY DR. GEORGE CATTI,

Assistant at the Vienna Laryngoscopic Clinic.

Within the last few years great progress has been made in the therapeutics of the disease of the nasal cavities, and many morbid conditions of these regions, formerly considered as incurable, can now be treated successfully by proper patience and perseverance. The therapeutic procedures to this end, consist in the thorough cleansing and washing out of the nasal passages by suitable measures, and in the direct application of different medicaments.

As regards the first methods referred to; the snuffing of liquids, the drawing in of fluids through the nose (Siegle, Stork, Wendt), the syringing of the nasal passages (Schrotter), and the various forms of nasal douches (O. Weber, Wendt), have all been recommended as eminent suitable methods of procedure, and their employment has been productive of more or less satisfactory results, so that there is no necessity of entering into their further consideration. Medicinal remedies have

been employed in various forms, either after, or without, the previously mentioned measures for cleansing the passages. Remedies can be applied with ease and certainty to the anterior parts of the nasal cavity by means of the camel's-hair paint brush, or also with very excellent results by means of long tampons of charpie, smeared with ointments, or impregnated with suitably medicated liquids, as recommended by Hebra. We also, by the mouth, can treat directly, either with a suitably bent probang, sponge-holder, brush, or portecaustic (Semeleder, Turck, Stork, Schrotter, W. Myer) the diseases of the naso-pharynx, and the various pathological conditions which may occur in the posterior parts of the septum and turbinated bones.

The middle and upper parts of the nasal passages, however, are very difficult of approach for the purposes of direct and thorough local medication, and when we consider the obstinate character of the diseases affecting these last named regions, and the obstacles to be encountered in their treatment, it is not to be wondered that all therapeutic measures yet proposed have met with but scant success. Any progress in this direction is therefore to be hailed with gratification.

The snuffing of liquids and powders, the insufflation of powdered drugs, and the "douching" of medicated fluids through the nasal passages, are open to these serious objections: *first*, but a small portion of the affected surface can be reached; and, *second*, that the diseased mucous membranes come in contact with the remedies for only a short space of time. Indeed, for excessive hypertrophy of the mucous membranes and for ulcerations, Prof. Schrotter uses the porte-caustic entirely, with the most satisfactory results. (*See Laryngologische Mittheilungen. Wien, 1875.*)

About fifteen years ago Professors Sigmund and Schuh, who were not entirely satisfied with suppositories of cacao-butter, sought for a more satisfactory vehicle. This was found in *gelatin*, and various bougies and suppositories were made with this material, and were found by experiment to keep extremely well. About two years ago, also, Prof. Braun employed gelatin vaginal suppositories, made in the shape of a ball.

Several months ago I had prepared for me some gelatin bougies suitable for introduction in the nose. These nasal bougies were from 8-12 centimetres long (3-4½ inches), 4-6 millimetres in thickness (¼-½ inch), conical in shape, and very soft and smooth. When employed, the smaller, pointed end of the bougie is placed in the nose and then rotating, pushed gently backwards until it is completely in the nasal passage.

If the bougie is pushed backwards in a horizontal direction, as it should be, so that it enters the inferior nasal meatus, by examination with the rhinoscope we can see clearly the smaller end of the bougie projecting from between the septum and the middle turbinated bone. The length of the nasal passages varies greatly at different ages and in different individuals, so that when the passage

is short and the bougie pushed in too far, it projects more or less (1-4 centimetres) into the nasopharynx, and hangs down back of the soft palate. When in this situation, the patient is sensible of a disagreeable tickling in the neighborhood of the soft palate, producing an unpleasant sensation of strangling. Through contraction of the levator and tensor-palati muscles, the bougie will gradually be forced more and more backward, until, finally, it falls into the pharynx or the mouth. This can, however, be entirely avoided, if we previously measure the length of the nasal passage with a sound, and cut off the bougie accordingly.

If the bougie is wrongly placed in the nasal cavity, we will see in the rhinoscope image its smaller end projecting from between the middle and lower turbinated bones. If it should be pushed in vertically, it can not be seen with the rhinoscope at all, as it will lay more or less curled up, entirely concealed in the anterior nares.

The introduction of a foreign body into the nose almost always causes increased secretion, and from this cause the gelatin becomes liquefied and flows out of the anterior nares. This is to be prevented by tamponing the two apertures with some charpie, so that the melted gelatin is caused to flow out through the posterior nares and into the vault of the pharynx, from whence it is to be removed by coughing or "hawking." In from one-half to two hours the bougie will be entirely dissolved.

The employment of these gelatin bougies for the treatment of diseases of the nasal passages would seem to be extremely rational; *first*, they afford a means by which medicaments can be kept in contact a long time with the diseased mucous membrane; *secondly*, they are easily tolerated by the patients; and, *thirdly*, they produce, even if in only a slight degree, a mechanical pressure upon the nasal mucosa. The introduction of the bougie can be accomplished very quickly and easily, so much so that every patient can learn, without trouble, to apply them. They should be used every day or every other day, in one or both nostrils, as the case may require, or they can be employed in both nasal passages at the same time.

I have now, for a number of months, treated various cases of nasal disease by this method. The most excellent results were obtained in cases of obstructions of the nasal passages following chronic catarrhs.

Patients who for a long time had been treated unsuccessfully according to various other methods, were completely relieved of their troubles by the employment, for comparatively short periods, of the gelatin bougies. The principal remedies employed were copper sulphate, and zinc sulphate, 0.02 grammes (3-10 grain) in each bougie, and other astringents.

This method I believe will also be found to be particularly valuable in the treatment of those obstinate chronic catarrhs which periodically affect many persons in winter. Many of these

individuals, such as public singers, actors, teachers, etc., who often find themselves in this miserable condition, can be practically relieved of their difficulty in breathing, etc., by the regular employment of these nasal bougies.

In such cases we find on examining the nasal passages from the front, only an excessive redness of the mucous membrane, accompanied by a moderate amount of swelling. The rhinoscopic image shows more or less extensive swelling of the mucous membrane on one or both sides of the septum, accompanied, perhaps, with a moderate amount of swelling of the one or the other turbinated bone. This condition, therefore, does not explain the true cause of the great difficulty in breathing through the nose, which is such a troublesome and annoying accompaniment of these cases. The real seat of the trouble lies in the middle and upper parts of the nasal passages, and consequently in locations where a direct examination can not be made except with a delicate probe: this easily makes a passage for itself between the soft and slippery (*succulenten*) adenoid tissue.

The employment of the medicated gelatin nasal bougies, has furthermore produced moderately good results, in the treatment of chronic catarrhs of the naso-pharynx (post-nasal catarrh) accompanied with hypertrophy of the pharyngeal tonsil. Excessive hypertrophy of this gland, so that it entirely obstructs and overhangs the posterior nares, is seldom seen. In three years' experience amongst the great mass of materials present at the clinic of Prof. Schrotter, I have noticed it but twice. For the most part, the hypertrophied tonsil does not reach over the septum, and overhangs the upper third or at most the upper half of the posterior nares. The deafness and difficulty of breathing through the nose, which accompany these cases, are in consequence of the simultaneous presence of chronic catarrh of the mucous membrane of the eustachian tube, and chronic catarrh of the nasal passages. Through treatment of the last trouble, with the nasal bougies and by painting the pharyngeal tonsil with tincture of iodine, we can often bring about enough of a cure to at least cause a great amelioration in the previous condition of the parts. Cauterization of the gland with the solid stick of nitrate of silver has also been often employed in Schrotter's clinic; less frequently the application of caustic potassa. The employment of the galvano-cautery, and the extirpation of the pharyngeal tonsil (Michel, Schrotter, W. Meyer, Stork) are, besides, methods well known and approved. In many cases, however, owing to the youth or the nervous condition of the patient, their performance is impossible, and resort must be had to the previously described methods of treatment.

The gelatin nasal bougies have been also used in the treatment of scrofulous and syphilitic ozœna, a thorough cleansing of the nasal cavities and the removal of the decomposed purulent secretions having preceded their application. Some very

remarkable and satisfactory results were obtained, but as the subject is yet under investigation, its consideration will be deferred until a fuller report can be made.

Finally, this method was employed with the most excellent results in the oozena following ulcerations and necrotic processes in the nasal cavities. Often was it noted that after the removal of some offending sequestrum of bone, the difficulty of cleansing the passages and the acute pain still continued. This was caused by the unhealthy and foul-smelling purulent discharges, which drying very quickly into broad, thick black scabs, could not be removed by the ordinary "douching" process, so that the dressing forceps, or some other forcible means, had to be employed to effect their removal. These scabs obstructed the free flow of the liquids and gave rise to the pain. The regular and continual employment of the gelatin bougies, medicated with carbolic acid or iodoform, and the plugging up of both anterior and posterior nares so as to prevent the access of air, so hindered and interfered with the formation of these scabs that a speedy healing of the parts was the result:—*Clinical Notes.*

TREATMENT OF LUPUS.

Dr. Scwimmer reports that after trial of the various methods of treatment for lupus, he has found none which, taken singly, can be pronounced suited to every case. Severe local measures are capable in certain cases of doing more harm than good. Among the most useful means of treatment must be reckoned pyrogallic acid. Applied in the form of a ten or fifteen per cent ointment, three or four times daily, it soon transforms the morbid growth into a pulpy, grayish substance. Although the cicatrix looks clean after this treatment, it almost always contains tubercles, which in many cases renew the disease. To prevent this result he hit upon mercurial plaster, which he employed in conjunction with the former. The pyrogallic acid is seldom able to produce total destruction of lupus tissue alone, and it is well known that the gray plaster has little influence upon the lupoid infiltration by itself; but by using the acid to destroy the lupus tissue, and the plaster afterwards to promote absorption, they act very efficiently. In a series of very malignant cases he pursued the following course with success:

For several days after admission the diseased surfaces were kept completely covered with vaseline smeared on cloths, in order to facilitate the removal of all secondary morbid products, such as scabs, etc. A ten per cent pyrogallic ointment is then applied over the same area, and renewed two or three times in the twenty-four hours. This dressing was employed from four to six days, or, in cases where the cutaneous tissues were insensitive, from six to seven days. On its removal, vaseline was again applied for one day, after which the entire

suppurating surface was covered with mercurial plaster. Healing began in from ten days to a fortnight in most localities, but isolated nodes and tubercles could still be detected in the cicatrized integument. Pyrogallic acid should once more be applied for three or four days, causing renewed suppuration of the recently-healed infiltrations, while those more firmly skinned over remained unaffected. When treatment was repeated, so much pain was experienced in many cases on the second day, that mercurial plaster had to be substituted for the ointment; but if this was not the case, the latter was left on for two days longer. The gray plaster was allowed to remain—being changed once daily if the suppuration was trifling, twice or thrice if it was more profuse—until cicatrization was complete, which sometimes required four weeks. If the complaint was peculiarly indolent and obstinate the same process was gone over for the third time, but treatment never extended further than this.

An accurate and unprejudiced comparison of the results obtained in this way, with those following other methods, has proved decidedly favorable to the former. A speedier and much better resolution of the more advanced and wide-spreading growths was found to occur under the combined pyrogallic and mercurial treatment than could have been brought about by the united agencies of scarification and the thermo-cautery.

In conclusion, he states that, "in order to make our estimate more precise, and to obviate any misconception which might cause the means I have recommended to be regarded in the light of a lupus panacea, I present the following summary of the objects which they may be reasonably expected to accomplish:

1. The severest and most extensive forms of lupus—those hitherto most difficult and frequently impossible to manage—may be often sensibly ameliorated by these simple and comparatively painful procedures.

2. The application of mercurial plaster immediately after several days' use of pyrogallic acid, is able to bring about complete absorption of the tubercles and infiltrated cells at some points, while at others it is remarkably effective in arresting the morbid growth, and forming complete and smooth cicatrices, results which are not obtained by the use of either remedy alone. The combined treatment may be employed two or three times in succession without inconvenient consequences.

3. The more circumscribed forms of lupus are less amenable to this method than the diffuse serpiginous, and ulcerated varieties,—perhaps for the reason that in the latter the corium affords a less congenial breeding-place for the morbid cells. Yet sometimes in these same cases, better results are obtained by a previous deep scarification of the affected parts, although scarification alone will prove entirely ineffectual.

4. The duration of treatment is shorter than by other methods, not exceeding three or four months in the worst cases.

5. Relapses are to be looked for here no less than after other processes, but are to be least apprehended when the treatment has been thoroughly carried out—i. e., has terminated in complete and uniform cicatrization.

6. This method is indicated in the most extended form of lupus, whether occurring on the face, the body or the extremities, and is especially suitable in neglected cases which have received little or no previous treatment.

7. The affected surfaces after healing retain their redness for a considerable period. The discoloration gradually fades, however, and its disappearance can sometimes be hastened by using an ointment of bismuth of zinc.—*Glasgow Med. Jour.*

A NEW METHOD FOR APPLYING REMEDIES TO THE EAR.

BY C. L. MITCHELL, M. D.

Under the title "Ear Cones" the writer desires to call attention to a new series of preparations for the local treatment of diseases of the ear. They are especially fitted for the application of remedies in otitis externa; acute, sub-acute and chronic otitis media purulenta; sub-acute complicated and chronic inflammation of the cavity of the tympanum; and in fact all sub-acute or chronic aural inflammations attended with muco-purulent discharges. also offer a convenient and efficient method for applying different sedative remedies in painful conditions, and for treating the various forms of eczema, pruritus, and other troubles which affect the external auditory canal.

These remedies as their name implies, are in the shape of a truncated cone $\frac{3}{4}$ inch long; $\frac{3}{16}$ inch in diameter at the larger end, and $\frac{1}{16}$ inch in diameter at the smaller end, which is rounded.

These cones are made of medicated gelatin and when placed in the cavity of the ear, melt slowly and thus bring the medicating ingredient into operation upon the surrounding parts. When used they should be greased or dipped in warm water for a few seconds, and then gently pushed into the ear (the small end first), either by the fingers or with a small pair of forceps.

The idea of these preparations is not original with the writer, for he is familiar with the fact that for a number of years similar preparations have been in use in the Ear Clinic of the Vienna general hospital, by Prof. Joseph Gruber, the distinguished aurist. He believes, however, he is the first one to introduce them to the American medical profession, and considers that the conical shape, as above suggested, will be found to be more convenient and advantageous than that of the balls almonds, as employed by Prof. Gruber.

The Ear Cones should be a very convenient method of treatment for aural troubles, and by the length of time they remain in the auricular cavity should cause a very thorough and prolonged action of the remedy. Drops and solutions exercise but a transient effect, ointments are troublesome to apply, and act slowly, so that there would seem to be ample room in the therapeutics of the

ear for a better method of local treatment. With children and nervous patients particularly they should obviate much troublesome manipulation and hence be very gratifying to both patient and doctor.

As regards their actual therapeutic value the writer is not yet able to speak with authority. They have been employed to a limited extent by Prof. Lawrence Turnbull, in the ear clinics of the Jefferson College Hospital, with excellent results, but a more extended and thorough trial is necessary before positive and authoritative statements can be made. Attention is now called to their evident advantage, and the future verdict remains to be pronounced by the members of the medical profession, who will doubtless give them a careful and thorough trial. In conclusion, a short abstract from the pen of Prof. Gruber, (*Wiener Allegemeine Zeitung*) concerning these gelatin ear preparations, may not be considered out of place:

"I have recently been investigating some new methods of treating diseases of the ear by means of medicated gelatin preparations. These were prepared for the external auditory canal in a manner similar to the nasal bougies suggested by Prof. Catti, and which have been spoken of in the highest terms. According to my instructions they were made in the shape of little balls, or of almonds, and contained different quantities of various remedies, such as sulphate zinc, boric acid, bichloride mercury, iodoform, etc. In painful affections, I employed those medicated with ext. opium aq., or with morphia.

"These preparations can be applied with the utmost ease. After suitable cleansing or syringing of the auditory canal, they are put in position by the fingers, or, with the assistance of a small pair of forceps, and then pushed back into the auditoroy cavity, if necessary, by a small camel's hair brush. The external orifice is then to be plugged up with charpie and the remedy left in the passage. There it gradually liquefies and operates gently and for a long time on the diseased structures.

"As the result of my employment of these preparations, I unhesitatingly say that I consider them necessary and even indispensable in otological practice. In properly selected cases I have obtained better results by their employment than by any other method of applying remedies which I have ever followed. Especially can I commend their use in exudative inflammation of the middle ear attended with perforation of the tympanum; in these cases the swollen and stiffened mucuous membrane of the cavum tympani renders such remedies exceedingly desirable.

"By the gentle and gradual liquefaction of these remedies they can be allowed to remain in the passage for a long time without harm to the patient, and their indicated effect is so augmented by the protracted contact of the gelatin, that the medicated applications require to be made with much less frequency.—*Clinical Notes.*

THE TREATMENT OF MEMBRANOUS DYSMENORRHEA.

The treatment of this affection is necessarily both palliative and curative. While the patient is suffering during the expulsion of the membrane, it is very necessary to relieve the pain as far as possible. This, of course, can be most promptly done by the use of opium, which should be avoided, if possible, however, because of its after-effects.

Chloral hydrate answers fairly well in some cases. I am not sure that it has any advantages over chloroform, camphor, and belladonna, or conium and, *Cannabis indica*: in fact, in the majority of cases, one has an opportunity to try several agents, and of course, the patient will decide which gives most relief. Indications for general treatment are to quiet all nervous disturbance and to improve the general nutrition of the mucous membrane. It so happens that when the first part is attended to the latter will follow in due order.

To quiet the nervous irritation and disturbance there is nothing that equals the bromide of sodium. This should be given in twenty or thirty-grain doses, three times a day, for ten days or two weeks before the menstrual period. And, if the pain is not severe enough to require the addition of some of the remedies already named to relieve pain, it may be continued throughout the menstrual period and several days after. From this it would appear that the bromide is to be used continuously; but one or two weeks in each month it can be omitted. When the bromide has been employed for some time, and it seems desirable to give it up, conium may be given in moderate doses combined with camphor, if the patient is weak. If there is any evidence of the rheumatic diathesis, the bromide of lithium should be given. Next to quieting the nervous system, any debility that may exist should be overcome by nerve tonics. Undue nervous excitation so often goes hand in hand with nervous depression that in many cases it is necessary to combine the tonic and sedative treatment.

After subduing all nervous disturbances, I give the patient the iodide of sodium in case she is in fair strength and inclined to flesh. If there is anemia, I prefer the iodide of iron. If these did not accomplish the object, I have employed mercury, giving it in small doses, never continued long enough to produce salivation, carefully watching to avoid this. In cases of anemia where I have feared the debilitating effect of this alternative, I have given the bichloride of mercury with iron. After keeping them upon this treatment until I could see some evidence of its effects, I have then put them upon iodine and arsenic.

In regard to local treatment, I have employed alteratives and sedatives almost exclusively. Of these I have found iodoform most effectual. I have also used iodine and mercury with advantage. In cases where I have found any complications I have carefully attended to them, restoring displacements and correcting flexions, and so on. When

the canal of the cervix has been at all constricted I have enlarged it by incision and dilatation.

When the congestion which occurs at the menstrual period does not subside in a few days, I have employed the warm-water douche. After this, I have applied to the cavity of the uterus small bougies of cocoa-butter with as much iodoform as it would take up. Three or four grains of iodoform mixed with vaseline that has been liquefied by heat, and introduced through the pipette, is perhaps the best method of applying it. These have been introduced once a week or once every five days. When there has been much tenderness, and the use of the pencils has caused pain, I formerly used aconite and opium and iodine; this I have introduced into the cavity of the uterus. I am now trying cocaine to subdue the tenderness as a preparatory means to the use of iodoform. But so far this new remedy has not been a perfect success.

In cases where this has failed and the uterus was not especially sensitive to intra-uterine medication, I have instilled into the uterine cavity a few drops of a five-per-cent solution of carbolic acid, making one application a few days after the menstrual flow and not repeating it until the next period. In the interval I have used the iodoform. I have also used the fluid extract of conium and *Hydrastis canadensis*; but this I have found gives more pain than any of the other applications that I have used; and so of late I have used an infusion of the hydrastis alone, which appears to answer as well and gives less pain.

BROMIDE OF ARSENIC IN ACNE.

Dr. Henry G. Piffard, writing in *Journal of Cutaneous and Venereal Diseases*, says:

Conceiving, from purely theoretical considerations, that it might be useful in certain cases, I first tried it in the spring of 1878 in a case of pustular acne vulgaris of moderate severity, and gave it in doses of one milligram ($\text{gr. } \frac{1}{5}$) three times a day. Within a week the patient, a young lady, returned, complaining that her face was much worse. On examination, I found on each side of the face a crop of military pustules in addition to the acne. The arsenic was discontinued, and a placebo prescribed. This was followed by improvement for a week, when the arsenic was resumed in much smaller doses, and in three or four weeks the case was substantially well. In a second case I had a similar experience, and in a third case I prescribed an alcoholic solution, containing one grain to the ounce, and directed that two drops should be taken night and morning. This patient I did not again see for nearly six months, when she informed me that the medicine had, in a few weeks, accomplished all that she desired. Since then I have used bromide of arsenic with much satisfaction in pustular acne, but have not tried it in other varieties of this affection, nor in other cutaneous diseases.

CONSTIPATION HABIT.

The subject of constipation is so extensive, involving the discussion of so many diseases and remedies, and with its diarrhea of literature covering so much ground, that I forbear, for want of time, if nothing more, from entering into a full consideration of the subject.

That it is often a symptom of disease or a disturbance arising from disease, I need not discuss; but I wish at this time to call brief attention to it as a disease in and of itself, in order to elicit discussion, and thereby enlarge our ideas.

The constipation habit is certainly a perversion of an important function, and is often productive of great harm and suffering. The normal act of defecation, as a rule, occurs regularly once every twenty-four hours, and with a majority in the early part of the day, before or soon after breakfast. In health the call to evacuate the bowels is a peculiar sensation that cannot be understood. If not heeded it may soon cease, and the call not return for an indefinite length of time. Immediately preceding this sensation is the peristaltic contraction of the sigmoid flexure which ejects its contents into the rectum, from which arises the warning and call for voluntary muscular assistance, that is so often unheeded or put off to a more convenient season. But the rectum must be relieved, and if not in the natural way, then anti-peristaltic action takes place, and the load is sent back whence it came, a burden and a log, blunting that delicate sense of the bowels.

Women, I think, neglect the function more than men. This is often from a false sense of modesty, their natural delicacy leading them to endure while away from home, traveling or in society, rather than to withdraw with eyes upon them to a strange shrine devoted to *cloacina*. Even at their own homes, where there is a lacking of modern conveniences, the inclemency of the weather, the exposure to cold, and the foul breath of the vault cause so much dread of the simple act of defecation, as to lead them to procrastinate, to the utter demoralization of the normal defective act. I have no doubt that the trammels of fashionable clothing also interfere to some extent. The considerable straining which is sometimes required to complete the act, may be unattainable from the clothing limiting too much the action of the diaphragm and abdominal muscles.

Sedentary habits which deprive the bowels of the gentle stimulus of exercise is one cause of constipation; and when to the sedentary habits is added position of posture which cramps and crowds the bowels, as is the case with the shoemaker, habitual constipation is almost sure to follow.

The abuse of cathartics is a fruitful cause to induce and confirm this habit. What with the anti-constipation pill, wafers and pellets flooding the land to dredge the *prima via* on the first indication of its filling up, or to be used from the fear that it will fill up, it is a wonder that nature's *cloaca* is maintained at all.

Errors of diet, though not mentioned first, are not least in causing this habit, which is, perhaps, more prevalent in this country than in any other; and some one has said that it is because we eat too little soup. Water as a solvent and a diluent acts in the alimentary canal a very important part, and soup eating should certainly be encouraged in order to counteract the tendency to take our food too solid, and to favor the fecal current.

Whatever line of diet we are in the habit of taking, and the bowels are normal, if we make a sudden or marked change in our diet, it is often attended by bowel disturbances in one way or the other. I have been in a position to observe a great many persons who have made sudden changes, particularly from a mixed, generous diet, to a vegetarian diet, which, from its bulky nature, imposes more work on the bowels than they are used to, often beyond their working capacity, and the result would often be acute constipation. The next step then, was to use the much-abused water enema, which to the overworked bowels, seemed a God-send, but by frequent repetition proved a blight to their work, making them a sluggard in the human economy.

I give one case to illustrate:

Mr. S. had been a vegetarian for five years or more, and had adopted two meals a day. He was in fair general health for one of such habits, but his great difficulty was no natural action of the bowels, which had existed for the last five years. His sole reliance for a movement was the coarse food and water enemata, which he had come to take regularly.

He consulted me, ostensibly for hemorrhoids, which he said the doctor who had treated him told him he had had, and who had expected to operate on him. On making a thorough exploration of the rectum, I was not surprised to find no hemorrhoids, for he gave no symptoms of any. I found, however, a very large, pouch-shaped rectum, with flabby, relaxed and attenuated walls, which I attributed to the protracted use of the water enemata.

I changed his diet, stopped the enemata, gave him three meals a day, had him drink four or five goblets of water per day, and had him inject on retiring one third of a cup of cold water to be retained. Ordered daily massage and kneading of the bowels, with a mild faradisation of the same; also ten drops of *fld. ext. casc. sag.* four times a day. In four weeks' time he had natural stools, without the use of medicine or treatment of any kind.

A too concentrated diet may cause this habit, but I have observed no danger in this direction. A variable appetite, which makes extremes in quantity and quality of food, is sometimes a cause, but as this would lead us to discussion not intended at the time we desist. I have often observed that a long journey by rail will produce a severe constipation; and have wondered if the constant jarring of the cars have anything to do with it.

The more difficult a disease is to treat successfully the longer the list of remedies employed; that judging from the length of the list in this case, one would be almost discouraged from attempting a cure.

Yet with clear ideas of causes, the indications for treatment are simple, and with the hearty co-operation of the patient the physician may feel quite certain of gaining, sooner or later, the desired result.

The following I give as a general outline of the treatment, which of course must be varied somewhat according to the special indications of each case:

Regulate the diet, having three meals per day of palatable, nutritious food, not too bulky or too concentrated. Have soup at least one meal each day.

On rising, at least an hour before breakfast, drink one or two large goblets of water. If the stomach is weak and inclined to chronic gastritis, I order the water to be drunk hot. Twenty or thirty minutes following the water, give the bowels a thorough kneading for ten minutes. Then assume erect position, with arms above the head and left foot on a line with the right and placed in front of it, bend forward until the knuckles of the closed hands touch the floor, then back to the first position, repeating this five or six times; then, reversing the position of the feet, repeat the movements. This is an excellent exercise for the abdominal muscles and an inactive liver.

At night, also, before retiring, drink a goblet of water, and if there are indications of dryness of lower bowels I use an enemata of one-third to one half cup of water, to be retained.

Flushing the sewer may be a good practice with some, making the stomach the flooding tank; but we must use great care not to interfere with digestion.

When it is available, I often order a fifteen minutes' daily application of electricity to the abdomen, using the Faradic current.

If any medicine is demanded, the first on the list is cascara sagrada. I think it is an excellent "peristaltic persuader." It renders in my hands the most efficient service in small and repeated doses.

I impress it upon my patients to make it a daily practice to go stool at a regular hour, to induce if possible, by voluntary muscular effort, a movement, remembering that this measure alone, if persisted in, will oftentimes overcome this deplorable habit. Perhaps the best time of the day for this is soon after breakfast. Patient continuation in this line of treatment will do a great deal to dispel this *bet noir* of medical practice.—*Detroit Lancet*.

A SIMPLE FORM OF NASAL DOUCHE.

Frank Woodbury, M.D. *Medical Times*.

The douche consists of an A shaped elbow of

glass tube, to which is attached a short (about three inches) piece of ordinary rubber tubing on one arm, and a long (twenty inches) piece from the other, the latter having a hollow, somewhat conical, glass nozzle, so as to occlude the nostril when pressed into it, and keep in the fluid delivered through a central opening. The short end is also tipped with a glass tube so as to hold it open and prevent collapsing. When not in use the entire apparatus is contained in a small paper box ($2\frac{1}{4} \times 1\frac{1}{4} \times 1$ inch), which may be conveniently carried in the pocket, or may be carried in a valise without breaking. In order to use the douche, a glass tumbler, or any similar receptacle, should have placed in it the required amount of warm water (100° F.), medicated as desired; the douche should be immersed in the fluid, and then the long tube (tightly pinched between the fingers so as to retain its contents) is drawn out of the reservoir until the glass elbow hooks over the edge of the cup, where it is self-retaining; the fluid will flow from the nozzle as long as it is depressed below the level of that in the receiver. The flow can be interrupted by simply dropping the nozzle back into the tumbler. It fulfils perfectly the purposes of a nasal douche, where such an instrument is desired. The douche may also be used for acute affections of the ear (after scarlet fever, etc.), for the eye, and generally for such purposes as an instrument of this size is adapted; among these may be mentioned the administration of milk, broth, etc., to patients unable to sit up, and too weak to drink in the ordinary way.

The advantages of this form of nasal douche are: (1) its simplicity, there being no parts that can rust or get out of order; if any portion is broken it can be replaced at a trifling cost; (2) its convenience, being compact in form, occupying little space, taking but a moment to put into operation; (3) its safety, the stream being delivered without force, simply by gravity, it is almost impossible that the fluid should be forced into the middle ear; and (4) its efficiency being granted, its chief advantage is that it is the most economical douche that is in the market, its cost being insignificant.

In common with every one engaged in general practice, I have found patients for whom a nasal douche might be useful for a short time, but the comparative expensiveness of the Thudichum's douche, and its danger of breakage, have often made me hesitate before ordering it. Any one can make one for himself in a few minutes at a cost of about twenty-five cents. The rubber tubing costs ten cents per foot, and the glass a trifle only. Having given it to Mr. Hayes, of the St. George Pharmacy, with the request that they should be made and sold at this price (twenty-five cents) to patients, he very kindly consented; so that if any one does not wish to take the trouble of making the douche, he can get it by sending this amount to Mr. Hayes, Broad and Walnut streets, Philadelphia.

THE TREATMENT OF TYPHOID FEVER.

Dr. N. S. Davis, in speaking of his treatment of typhoid fever at the Mercy Hospital, Chicago, recognizes fever indications to be fulfilled, or objects to be accomplished.

First, it is desirable to suspend, as far as practicable, the further action upon the patient of all the causes that may have contributed to the development of the disease.

Second, to restore the natural condition of the general properties of the tissues, and thereby retard or arrest those perverted molecular movements which constitute the disturbances of nutrition, secretion, excretion, etc.

Third, to promote the action of certain excretory organs, and thereby deterioration of the blood by the accumulation of the products of tissue-changes or waste matter.

Fourth, to counteract the development of important local diseases, either in the head, chest, or abdomen.

Fifth, to sustain the patient with nourishment suitably adjusted, both in quality and quantity, to the different stages of the disease.

The first indication is fulfilled by proper regulation of the patient's hygienic surroundings, and the exhibition of *potassium chlorate* in dilute acidulated solution. If this indication be fulfilled, and if the patient be supplied with "proper nourishment, in proper quantities," twenty-nine out of every thirty will recover without medication of any kind.

To fulfill the second indication, chief reliance is placed upon the "exciters of vital affinity," oxygen, potassium chlorate, sodium chloride, mercury bichloride, iodine, the mineral acids and cold water.

The third indication is met by nitrous ether, *liquor ammonii acetatis*, and digitalis.

Under the fourth indication, attention must be directed to a number of organs.

1. The impairment of the functions of the brain and important nervous centres, "more especially those centres that govern the action of the vaso-motor, cardiac and respiratory nerves," is best remedied by the selection of those agents which increase the oxygenation and decarbonization of the blood. Strychnine and the mineral acids are the most effective drugs in this connection.

2. Hypostatic congestion of the lungs, muscular weakness of the heart, capillary bronchitis, and broncho-pneumonia are conditions which contraindicate alcohol in any form. Milk, beer, tea, eggs, coffee meet the indication.

3. The changes in the alimentary canal, mesentery, spleen and liver demand the most rigid scrutiny.

The pathological changes in the glands of Peyer and Brunner are of greatest importance.

The mineral acids, nitrate of silver, oil of turpentine, and strychnine "improve the tonicity of the smaller vessels, lessen passive congestion and exudation, and arrest the tendency to softening

and disintegration by increasing the general property of the tissues, called vital affinity, or by increasing the vaso-motor nervous influence, or by both.

The fifth indication is fulfilled by the administration of proper food. Three propositions may govern the practitioner in this matter.

"First, choose such articles for nourishment as, either separately or conjoined, shall contain all the elementary constituents entering into the composition of the blood and organized structures of the human body.

"Second, the article or articles selected should be so prepared that when taken into the stomach they are capable of being taken up and assimilated with but little influence from the gastric and other secretions usually required for the digestion and absorption of ordinary food in health, because these secretions are generally much diminished, especially during the middle and later stages of the disease.

"Third, the quantity given at any one time should be so limited that it will be all absorbed or assimilated before any part of it has time to undergo fermentation or putrefactive changes, by which tympanites and the irritation of the glandular patches in the ileum might be increased, sufficient to afford the patient a fair degree of support."

Meat broths, from either mutton, beef, or chicken, seasoned with salt, milk, buttermilk, milk-whey, tea, coffee and water, correspond to these conditions.—*Ther. Gaz.*

TREATMENT OF CROUP WITH MURIATE OF PILOCARPINE.

Charles Ultes, M.D., Lansing, Mich., communicates the following to the *Therapeutic Gazette*:

I have treated in all five cases of the membranous variety, four cases of mild or night croup, and three cases of diphtheritic croup (laryngeal stenosis), all of which recovered, with the exception of one, the child being attacked the two previous nights, playing during the day. On the morning of the third night I was called and found the child in a condition in which neither tracheotomy nor pilocarpine would be effective; the child died with convulsions two hours after my arrival.

In severe cases it sometimes takes from four to five days until the severe symptoms are passed. The medicine must be used vigorously until relief is obtained.

When the bronchial tubes are filled up, and cyanosis and choking sensations prevail, a dose of syrup or the powder of ipecac should be used to throw off the partially-dissolved membrane and accumulated phlegm. The nausea caused by the ipecac passes off as soon as the vomiting is over, leaving no debility whatever.

It is astonishing what large doses of ipecac may be taken sometimes by children without producing emesis.

The dose of muriate of pilocarpine is from one-fifteenth to one-sixth of a grain, rubbed up in sugar of milk, according to the age and susceptibility, one tenth of a grain being the average. It is probable that the hypodermic method would act quicker and more energetically, but I am well satisfied with the effects obtained when given by the mouth; but I should not hesitate at all to use it hypodermically in desperate cases, mainly with convulsions.

Sweating is not very excessive, even when large doses are administered, and I never saw a case of croup in which the medicine produced any flow of saliva, such as we are accustomed to see in adults. In mild cases, or cases of night croup, mainly in cases of second or third attack, the effect of the pilocarpine (one tenth of a grain) is a sweeping one; a few powders in hourly doses will act like a charm, allaying cough and discomfort, producing rest and sleep.

Diphtheritic croup (laryngeal stenosis) should be treated like any other case of diphtheria, only pilocarpine added to it. In my three cases, to avoid sepsis I used calcium sulphide, one tenth of a grain, every three hours, in conjunction with pilocarpine. But in this variety I think the pilocarpine only acted as an auxiliary, as former cases treated with pilocarpine alone died.

I do not want to be understood that pilocarpine is the only agent in croup to be relied upon; on the contrary, we must treat the symptoms and meet the complications to obtain the best of results.

When the action of the heart becomes weak, as it frequently does, whiskey or brandy are indispensable, either diluted in sweetened water, or in the form of milk-punch, etc. Milk is the main diet in croup, and should be given *ad libitum*.

When the temperature is elevated open the bowels with a few small doses of calomel and prescribe the following:

℞. Acid salicylic ʒ ii;
Sodii bicarbon..... ʒ i;
Glycerinæ,..... ʒ i;
Aquæ, q. s. ad., ʒ iv; M.

S. Take one teaspoonful every two or three hours.

If the urine is high colored and scalding on passing, a little nitrate and chlorate of potassium added will relieve these symptoms promptly.

In some cases I tried the fluid extract of jaborandi, but I never obtained such decisive effects as I did with pilocarpine. I am quite confident that if the muriate of pilocarpine is used in this disease, as stated above, loss of life will be cut down to a minimum.

NOVEL METHOD OF BLEEDING.

Charles Coppinger, F.R.C.S., 114 Upper Merion st., Dublin. *British Medical Journal*, Sept. 15, 1883.

The patient had been in a state of stupor for twenty-four hours, breathing heavily, but rousing

when spoken to, after which she relapsed again. She presented all the symptoms of high arterial tension and an overloaded vascular system; and bleeding seemed clearly indicated. Leeches could not, at once, be obtained, and the lady friends of the patient were horrified at the idea of an operation. Under these circumstances the following plan was adopted, the accomplishment being facilitated by the fact that the patient had been treated, a short time before, for hemicrania, by hypodermic injections of morphia. She was roused up and told that "the needle" was to be inserted into her neck, to which she at once consented. The needle, not of a hypodermic syringe, but of an aspirator, was then introduced into her left jugular vein, which was much distended, and four ounces of blood were withdrawn without difficulty. The result was so satisfactory that, after half an hour, the puncture was repeated, and six ounces drawn off, being the full capacity of the aspirator. The patient recovered, and neither she nor her nervous lady friends in the room had any idea that she had been bled, until the matter was subsequently explained to them.

This method seems one that could be resorted to in many cases, especially where the patient is afraid of an operation, even though slight; and it avoids the display of blood, which is so alarming and distressing to those unaccustomed to the sight.

A NEW METHOD OF TREATING SPRAINS.

Dr. Thomas L. Shearer thus writes in the *Lancet*.

Every one who has had sprains to treat in practice must have been at times annoyed by the slowness of recovery to the injured part. This is not so important in hospital patients, many of whom, enjoying the life, diet, etc., of these institutions, do not object to prolonged treatment; but in the wealthier classes in private practice the surgeon must often hear complaints that the injury is so long in recovery. I have had a considerable number of sprained limbs to treat, and, after employing the usual plans of treatment, was led to adopt a new agent—clay. The clay is simply that used for making bricks, free from gravel, dried, and finely pulverized in a mortar. The powdered clay is mixed with water so as to form a thick and moist consistence. This is spread on muslin to the depth of a quarter of an inch, and applied entirely around the part. Over this is placed a rubber roller bandage, just lightly enough to keep the dressing from shifting and to retain the moisture. At the end of twenty-four or thirty-six hours the dressing must be renewed. It may be well to relate a few cases by way of illustration.

Case 1. Mr. T—, aged fifty-eight, was thrown from his carriage, and, in addition to other injuries, received a severe sprain of his ankle, completely incapacitating him from motion of any kind. The part was hard, swollen, intensely painful, and throbbing. The dressing, as above described,

was applied, and in twenty-four hours the pain was almost entirely gone, and the swelling to a great degree had subsided. The dressing was renewed daily, and in eight days the patient was going about attending to his business. The part was free from pain and natural in every respect.

Case 2. Mr. McC—, aged sixty, slipped and sprained his ankle so severely as to confine him to bed. The treatment was the same as that employed in Case 1, and the patient was out and walking in the streets in ten days.

Case 3. Mrs. A—, aged seventy-four, in stepping from her carriage missed her footing, and twisted her left knee violently. In a few hours the part was greatly swollen, hot, throbbing and painful; the least motion of the joint caused excruciating agony. Pressure over the ligament was especially painful. Next day I saw the patient, and applied the clay dressing. The day after the patient was much easier, the swelling rapidly subsiding. The pain was almost *nihil*, and movement of the part was not followed by such distress. The lady was walking in her house in ten days after the injury.

Dr. Hewson, of Philadelphia, about ten years ago, introduced earth as a means of treating fibroid tumors of the uterus, and also sprinkled burns with the dry earth, claiming that the tendency to deformity in the latter cases was lessened. However, I am not aware of sprains being previously dressed with clay, and it was thought as well to lay the efficacy of the method before the profession. A number of other cases could be cited, but they would simply be a repetition of those already mentioned. While speaking of clay, it would, perhaps, not be amiss to state that the powdered dried earth sprinkled on the surface of an ulcer, and adhesive straps applied over it, is a capital dressing for cases which are so weak, that even the weakest ointments tend to break down the granulations.

CATHETERS.

A male catheter may be improvised from a piece of wire bent double upon itself, the blunt double end passing readily through the urethral tract to the bladder. The distention of the urethra by the wire will allow the urine to pass.

A female catheter may be made from a short piece of straw, the end being closely wrapped with a piece of thread; or the end of the straw may be dipped into melted sealing-wax. The stem of an ordinary tobacco-pipe is also efficient. Such crude substitutes, if well oiled, are readily introduced. (Levis.)

Catheters may be improvised from hollow flower-stalks and stems, as a dandelion-stem, or from hollow sticks, as elder. Lacking other material, a piece of macaroni may answer for temporary use; but it should not be left long in situ, and must be thoroughly oiled before introduction. A lead-pencil may be soaked in water or steamed, and split at the joint where the two pieces are put

together in the process of manufacture; the lead can then be scooped out with a knife, and the two pieces be tied together with fine thread wrapped around them. If the end of this is rounded and the whole well-oiled, a very serviceable catheter may be made. It is not necessary that a catheter should be hollow, for a stick grooved on the outside will answer as well. The grooves may be spiral or longitudinal. A piece of coarse cord, wrapped spirally around a stick or lead-pencil, is a ready means of forming such grooves. A glass tube, the ends of which have been rounded in a flame, will often be available; it is hardly necessary to caution one against the liability of breakage in the urethra. A feather stripped of the feathery portion, and all roughness taken off by singeing, the end being opened and the pith pushed out, will often be available. A rubber tube well oiled, can be used; the sharp corners of the tube may be blunted by holding the tube in a flame for a second or two, or a plug with a shoulder may be fitted to the tube. This hollow plug can be made of lead or wood, and in all cases must be tied into the tube. A rubber catheter of this description, or any catheter for that matter, may often be readily introduced by injecting water through it very gently, so as to open up the canal in advance of the point of the catheter. Even so simple a thing as a paper lamp-lighter may be pressed into the service. This should be made from a strip of stiff writing-paper and tightly rolled spirally. If the strip is covered with paste before rolling, the spiral turns will be tightly held together when the paste is dry. To make sure that the bore is open, the strip may be wound over a string to be withdrawn after winding. If the smaller end of the lighter is dipped into melted sealing-wax, a very fair catheter may be made.

Whatever may be used for a catheter, care should be taken that no portion of it is left in the bladder. Whenever any substance is passed into the urethra for purposes of mechanically relieving existing trouble, the instrument should be freely oiled or greased. Vaseline is the best, if procurable; but, wanting it, lard or oil may be used, or even soap. Oil is injurious to all rubber goods, and will destroy rubber catheters in a short time; but the alternative of using soap as a lubricant is rather harsh on the mucous lining of the urethra. Other things being equal, a given expedient used for a catheter will be more useful the better the lubricant. Even water is better than nothing to facilitate the passage of a catheter.

FOREIGN BODIES IN THE OESOPHAGUS.

An ordinary riding-whip, knotted far enough from the end to insure the proper degree of flexibility, may be an efficient expedient in forcing down a body caught in the oesophagus. (Levis.)

A skein of floss silk, or a small skein of worsted doubled, and tied firmly to a string, may be of use in snaring some foreign bodies, and thus extracting them.

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THE SMALL-POX EPIDEMIC.

At last Montreal is free from small-pox, and, so far as this disease is concerned, she has a clean bill of health. This most desirable end has not been accomplished without a vast amount of work, in which several agencies have played an important part. While we have not failed to state our opinion that, in the early part of the epidemic, the Health Department of the city was not equal to the work, we cannot, now that matters are once more bright, but give our praise to the work it did during the terrible month of October, 1885, and since. Alderman Gray, in the direction of his Board of Health, is deserving of the warmest thanks of every citizen of Montreal. It may be true, perhaps, that in the early history of the epidemic, neither he, and for that matter, others, did not at first realize the possibilities of the future; but in this connection it must be remembered that the chairman of the Board of Health, although elected to that position because of his believed aptitude for its duties, is a gentleman engaged in a business which demanded a large share of his attention. While we had a right to anticipate that its functions would be more scientifically looked after than they had been, we had not the right to ask that his own business interests should suffer. Alderman Gray, however, so soon as it became evident that the scourge was taking a firm foothold among us, realized the position, and, throwing aside all his private interests, devoted himself all but wholly and entirely to the work of stamping out the disease. It was he, we believe, that induced the Government to issue its proclamation, establishing the Central

Board of Health, and the wisdom of this action no one now doubts. His re-election to the same position this year is an expression of confidence on the part of his confrères in the City Council, and it is endorsed by those of our citizens whose good opinion is worth having.

In the working out of all these multitudinous details which fall to the lot of the Board of Health, especially after the opening of the Mount Royal Hospitals, the able hand of a noble citizen, Mr. Tremble, was constantly seen. This gentleman, without fee or expected reward, was a volunteer of which our citizens may be proud. The members of the Citizens' Committee on the Board of Health were also useful, and did their part in restoring the good name of Montreal. The Citizens' Committee, also, were useful. It had many excellent members, but one or two cranks at times threatened to spoil some of its work. The good sense of the majority, however, kept them to their proper sphere, and the result proved their wisdom. The immense number of vaccinations performed by their Vaccination Committee was an important factor in arresting its spread. The money they spent was well placed. In hospital work at the Mount Royal Hospitals the noble self-denying labor of both the Roman Catholic and Protestant nurses should never be forgotten. It is beyond all praise. Dr. De Bonald and Dr. Gardner did their duty conscientiously and well—we need not say more concerning them. In the Justices of the Health Court, Montreal was fortunate in having two such fearless and upright men. Their judgments were above suspicion, and exercised an influence which extended far beyond the City of Montreal. The Central Board of Health, brought into existence on the 4th of September, 1885, by Proclamation of the Lieut-Governor, was the focus from which all power emanated. Their rules and regulations—which had and still have the force of law—are perhaps the most comprehensive and severe that have ever been created to stamp out a small-pox epidemic. Their power was well illustrated when, under one of its rules, St. Cunegonde was brought to terms by the erection of barricades at all the streets entering into Montreal. It has still a heavy work on its hand, for small-pox is still epidemic in many parts of the Province. And, lastly, Montreal was more than fortunate in having as its mayor Mr. H. Beaugrand—a man of rare energy and decision of character. His action was ever most opportune, and throughout the whole epidemic he was never once found wanting. The gratitude of every sensible man in the city is his, and as his return for a second period by a large majority, is well assured, we trust a more tranquil and peaceful time is in store for him.